

#### KPMG Actuaries Pty Limited

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# VALUATION OF

# ASBESTOS-RELATED DISEASE LIABILITIES

# OF FORMER JAMES HARDIE ENTITIES

# ("THE LIABLE ENTITIES")

# TO BE MET BY THE AICF TRUST

# EFFECTIVE AS AT 31 MARCH 2009

# PREPARED FOR ASBESTOS INJURIES COMPENSATION FUND LIMITED (AICFL)

20 MAY 2009



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20 May 2009

Dallas Booth Chief Executive Officer Asbestos Injuries Compensation Fund Limited Suite 1, Level 7, 233 Castlereagh Street Sydney NSW 2000

Cc Russell Chenu, Chief Financial Officer, James Hardie Industries NV Leigh Sanderson, Deputy-Director General (Legal), The State of New South Wales, c/- The Cabinet Office The Board of Directors, Asbestos Injuries Compensation Fund Limited

Dear Dallas

#### Valuation of asbestos-related disease liabilities of former James Hardie entities ("The Liable Entities") to be met by the AICF Trust

We are pleased to provide you with our actuarial valuation report relating to the asbestos-related disease liabilities of the Liable Entities which are to be met by the AICF Trust.

The report is effective as at 31 March 2009 and has taken into account claims data and information provided to us by AICFL as at 31 March 2009.

If you have any questions with respect to the contents of this report, please do not hesitate to contact us.

Yours sincerely

N Donlung

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Daid Whittle

David Whittle BSc (Hons.) BEc FIAA Director KPMG Actuaries Pty Limited Fellow of the Institute of Actuaries of Australia



## **EXECUTIVE SUMMARY**

#### Important Note: Basis of Report

This valuation report ("the Report") has been prepared by KPMG Actuaries Pty Limited (A.B.N. 77 002 882 000) ("KPMG Actuaries") in accordance with an "Amended and Restated Final Funding Agreement in respect of the provision of long-term funding for compensation arrangements for certain victims of Asbestos-related diseases in Australia" (hereafter referred to as "the Amended Final Funding Agreement") between James Hardie Industries NV ("JHINV"), James Hardie 117 Pty Limited, the State of New South Wales and Asbestos Injuries Compensation Fund Limited ("AICFL") which was signed on 21 November 2006.

This Report is intended to meet the requirements of the Amended Final Funding Agreement and values the asbestos-related disease liabilities of the Liable Entities to be met by the AICF Trust.

This Report is not intended to be used for any other purpose and may not be suitable, and should not be used, for any other purpose. Opinions and estimates contained in the Report constitute our judgement as of the date of the Report.

In preparing the Report, KPMG Actuaries has relied on information supplied to it from various sources and has assumed that that information is accurate and complete in all material respects. KPMG Actuaries has not independently verified the accuracy or completeness of the data and information used for this Report.

Except insofar as liability under statute cannot be excluded, KPMG Actuaries, its directors, employees and agents will not be held liable for any loss or damage of any kind arising as a consequence of any use of the Report or purported reliance on the Report including any errors in, or omissions from, the valuation models.

The Report must be read in its entirety. Individual sections of the Report, including the Executive Summary, could be misleading if considered in isolation. In particular, the opinions expressed in the Report are based on a number of assumptions and qualifications which are set out in the full Report.



#### Introduction

The Amended Final Funding Agreement requires the completion of an Annual Actuarial Report evaluating the potential asbestos-related disease liabilities of the Liable Entities to be met by the AICF Trust. KPMG Actuaries has been retained by AICFL to provide this actuarial valuation report as required under the Amended Final Funding Agreement and this is detailed in our Engagement Letter dated 9 February 2009.

The Liable Entities are defined as being the following entities:

- Amaca Pty Ltd (formerly James Hardie & Coy);
- Amaba Pty Ltd (formerly Jsekarb, James Hardie Brakes and Better Brakes); and
- ABN60 Pty Ltd (formerly James Hardie Industries Ltd).

In addition, the liability for Baryulgil claims is deemed to be a liability of Amaca by virtue of the James Hardie (Civil Liability) Act 2005 (NSW). Under Part 4 of that Act, Amaca is liable for "Marlew Asbestos Claims" or "Marlew Contribution Claims" as defined in that Act.

Our valuation is on a central estimate basis and is intended to be effective as at 31 March 2009. It has been based on claims data and information as at 31 March 2009 provided to us by AICFL.

# Overview of Recent Claims Experience and comparison with previous forecasts

#### Claim Numbers

Claims reporting activity for mesothelioma has shown a significant increase in the year. There were 298 claims reported in 2008/09 compared with 272 claims reported in 2007/08. In broad terms this is an increase of just under 10%.

The increase in claims reporting activity has mainly arisen in NSW, SA and WA.

Largely because of the increase in mesothelioma claims, claims activity in 2008/09 has been at its highest annual level to date. There have been 607 claims reported 2008/09, compared to 565 claims reported in 2007/08.

The following table shows the comparison of actual experience with that which had previously been forecast.



	Actual	Expected	Ratio of Actual to Expected (%)
Mesothelioma	298	252	118%
Asbestosis	159	168	95%
Lung Cancer	33	30	110%
ARPD & Other	47	36	131%
Wharf	11	6	183%
Workers	59	48	123%
Total	607	540	112%

#### Table E.1: Comparison of claim numbers

#### Average Claim Awards

Claim awards for mesothelioma have shown a degree of stability in the last five years and continue to be broadly in line with prior expectations. For other disease types, average claim awards have exhibited greater volatility, which is not unexpected given the smaller numbers of claim settlements of those disease types. However, claims awards in 2008/09 for other disease types have typically been below, or in line with, expectations.

There have been three large mesothelioma claim settlements (being claims in excess of \$1m) in 2008/09, compared to our annual allowance of five large claims. Total expenditure on large claims has also been slightly below expectations.

The following table shows the comparison of actual experience with that forecast.

	Actual (\$)	Expected (\$)	Ratio of Actual to Expected (%)
Mesothelioma	271,291	266,500	102%
Asbestosis	91,907	98,600	93%
Lung Cancer	102,063	127,900	80%
ARPD & Other	91,481	90,600	101%
Wharf	145,262	95,900	151%
Workers	33,333	159,900	21%
Mesothelioma Large Claims Costs	3 claims @ \$2,501,667 = \$7,505,000	5 claims @ \$1,758,900 = \$8,794,500	85%

#### Table E.2: Comparison of average claim size



#### Cashflow expenditure: gross and net

Gross cashflow expenditure, at \$112m, was considerably ahead of our prior expectations.

Net cashflow expenditure, at \$91m, has also been significantly above our prior expectations.

	Actual (\$M)	Expected (\$M)	Ratio of Actual to Expected (%)
Gross Cashflow	111.6	85.3	131%
Insurance and Other Recoveries	(20.8)	(14.2)	147%
Net Cashflow	90.8	71.2	128%

#### Table E.3: Comparison of cashflow

The primary reason for this increase has been the significant acceleration in settlements of claims which were open at the previous financial year-end together with a speeding up of settlements in relation to claims reported in the financial year.

The following chart shows this acceleration of settlements.



# Figure E.1: Composition of claims payments between current and prior years' reported claims



The chart shows that there was a 36% increase in settlements due to prior years' reported claims (and this was both in number and amounts).

The chart also shows that whilst overall claims reporting was around 12% higher in 2008/09 compared to 2007/08, claims payments for newly reported claims were 72% (or \$23m) higher.

Further analysis indicated that the \$23m increase in claims expenditure relating to newly reported claims was almost entirely attributable to mesothelioma claims expenditure.

This increase was attributable as follows:

- A higher number of mesothelioma claims being reported led to an increase in expenditure by around \$3m.
- The faster settlement of newly reported mesothelioma claims increased expenditure by around \$7m.
- The incidence of a higher number and amount of large mesothelioma claims (being those in excess of \$1m in 2005/06 money terms) increased expenditure by around \$6m.
- The impact of a change in the mix of claims leading to a higher overall average claim size for claims settled in the period, and the lower nil settlement rate, increased expenditure by around \$7m.

Acceleration in the settlement of claims has limited impact on the total expenditure and on the Discounted Central Estimate but has a more significant impact upon the timing of the cashflow expenditure.



#### **Liability Assessment**

At 31 March 2009, our projected central estimate of the liabilities of the Liable Entities (the Discounted Central Estimate) to be met by the AICF Trust is \$1,781.6m (March 2008: \$1,426.3m).

We have not allowed for the future Operating Expenses of the AICF Trust or the Liable Entities in the liability assessment.

		Mar-08 \$m		
	Gross of insurance recoveries	Insurance recoveries	Net of insurance recoveries	Net of insurance recoveries
Total projected cashflows (uninflated)	1,757.9	233.6	1,524.3	1,386.2
Future inflation allowance	1,827.9	228.7	1,599.2	1,641.1
Total projected cash-flows with inflation	3,585.7	462.3	3,123.5	3,027.3
Discounting allowance	(1,547.4)	(205.6)	(1,341.8)	(1,601.0)
Net present value liabilities	2,038.3	256.7	1,781.6	1,426.3

#### Table E.4: Comparison of central estimate of liabilities

We observe that the Discounted Central Estimate has grown considerably since March 2008, increasing by \$355.3m (or 24%) to \$1,781.6m, whilst the total projected cashflows (with inflation) have grown by a lesser amount.

The total projected cashflows (with inflation) have increased by \$96.2m to \$3,123.5m. When taking into account the actual net claims payments of \$90.8m in the 2008/09 financial year, this means there has been a like-for-like increase in total projected future cashflows of \$187.0m (i.e. a 6% increase).



#### Comparison with previous valuation

In the absence of any change to the claim projection assumptions from our 31 March 2008 valuation, other than allowing for the changes in the discount rate, we would have projected a Discounted Central Estimate liability of \$1,634.8m as at 31 March 2009.

Consequently, our assessment at 31 March 2009 represents an increase of \$146.8m from that assessment.

The increase in that net liability estimate is principally a consequence of:

- An increase in the projected number of future mesothelioma claims;
- The impact of a speeding-up in claims settlement patterns; and
- Changes to the assumed nil settlement rates for most disease types;

offset by

- A reduction in average claim awards and legal costs for some disease types;
- Higher payments than forecast resulting in lower residual liabilities; and
- Actual experience in the 12-month period being better than forecast, with savings being achieved on claims which were not settled as at the previous valuation.

The following chart shows an analysis of the change in our liability assessments from March 2008 to March 2009.



#### Figure E.2: Analysis of change in central estimate liability



#### **Amended Final Funding Agreement calculations**

The Amended Final Funding Agreement sets out the basis on which payments will be made to the AICF Trust.

Additionally, there are a number of other figures specified within the Amended Final Funding Agreement that we are required to calculate. These are<sup>1</sup>:

- Discounted Central Estimate;
- Term Central Estimate; and
- Period Actuarial Estimate.

#### Table E.5: Amended Final Funding Agreement calculations

	\$m
Discounted Central Estimate (net of cross-claim recoveries, Insurance and Other Recoveries)	1,781.6
Period Actuarial Estimate (net of cross-claim recoveries, gross of Insurance and Other Recoveries) comprising:	341.6
Discounted value of cashflow in 2009/10	110.2
Discounted value of cashflow in 2010/11	114.3
Discounted value of cashflow in 2011/12	117.2
Term Central Estimate (net of cross-claim recoveries, Insurance and Other Recoveries)	1,777.8

It should be noted that the actual funding required at a particular date will depend upon a number of factors, including:

- the net asset position of the AICF Trust at that time;
- the free cash flow amount of the JHINV Group in the preceding financial year; and
- the Period Actuarial Estimate in the latest Annual Actuarial Report.

<sup>&</sup>lt;sup>1</sup> See Glossary of Terms in Appendix G for description of these items



#### Uncertainty

Estimates of asbestos-related disease liabilities are subject to considerable uncertainty, significantly more than personal injury liabilities in relation to other causes, such as CTP or Workers Compensation claims.

It should therefore be expected that the actual emergence of the liabilities will vary from any estimate. As indicated in Figure E.3, depending on the actual out-turn of experience relative to that currently forecast the variation could potentially be substantial. Thus, no assurance can be given that the actual liabilities of the Liable Entities to be met by the AICF Trust will not ultimately exceed the estimates contained in this report and any such variation may be significant.

#### Figure: E.3 Sensitivity testing results – Impact around the Discounted Central Estimate (in \$m)



\* The superimposed inflation sensitivity tests are for 6.25% per annum for 5 years reducing to 2.25% per annum; and 2.25% per annum for 5 years reducing to 0% per annum.

The above chart implies that the single most sensitive assumption is potentially the peak year of mesothelioma claims reporting against the Liable Entities. Shifting the peak year of mesothelioma claims reporting by 5 years from 2010/11 to 2015/2016 for mesothelioma would imply an increase in the future number of mesothelioma claims reported of around 50%.



	Undiscounted	Discounted
Central estimate	\$3.12bn	\$1.78bn
Range around the central estimate	-\$1.2bn to \$2.4bn	-\$0.6bn to \$0.8bn
Range of liability estimates	\$1.9bn to \$5.5bn	\$1.2bn to \$2.6bn

#### Table E.6: Summary results of sensitivity analysis

Whilst the table above indicates a range around the discounted central estimate of liabilities of -\$600m and +\$800m, the actual cost of liabilities could fall outside that range depending on the out-turn of the actual experience.

#### **Data, Reliances and Limitations**

We have been provided with the following information by AICFL:

- Claims database at 31 March 2009 with individual claims listings;
- Accounting database at 31 March 2009 (which includes individual claims payment details);
- Home Renovator Reports at various dates; and
- Detailed insurance bordereaux information (being a listing of claims filed with the insurers of the Liable Entities) produced by Capita Insurance Services (London) as at 31 March 2009.

While we have tested the consistency of the various data sets provided, we have not otherwise verified the data nor have we undertaken any auditing of the data at source. We have relied on the data provided as being complete and accurate in all material respects. Consequently, should there be material errors or incompleteness in the data, our assessment could be affected materially.

#### **Executive Summary Not Report**

Please note that this executive summary is intended as a brief overview of our report. To properly understand our analysis and the basis of our liability assessment requires examination of our report in full.



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# 1 SCOPE AND PURPOSE

#### Important Note: Basis of Report

This valuation report ("the Report") has been prepared by KPMG Actuaries Pty Limited (A.B.N. 77 002 882 000) ("KPMG Actuaries") in accordance with an "Amended and Restated Final Funding Agreement in respect of the provision of long-term funding for compensation arrangements for certain victims of Asbestos-related diseases in Australia" (hereafter referred to as "the Amended Final Funding Agreement") between James Hardie Industries NV ("JHINV"), James Hardie 117 Pty Limited, the State of New South Wales and Asbestos Injuries Compensation Fund Limited ("AICFL"), which was signed on 21 November 2006.

This Report is intended to meet the requirements of the Amended Final Funding Agreement and values the asbestos-related disease liabilities of the Liable Entities to be met by the AICF Trust.

This Report is not intended to be used for any other purpose and may not be suitable, and should not be used, for any other purpose. Opinions and estimates contained in the Report constitute our judgement as of the date of the Report.

In preparing the Report, KPMG Actuaries has relied on information supplied to it from various sources and has assumed that that information is accurate and complete in all material respects. KPMG Actuaries has not independently verified the accuracy or completeness of the data and information used for this Report.

Except insofar as liability under statute cannot be excluded, KPMG Actuaries, its directors, employees and agents will not be held liable for any loss or damage of any kind arising as a consequence of any use of the Report or purported reliance on the Report including any errors in, or omissions from, the valuation models.

The Report must be read in its entirety. Individual sections of the Report, including the Executive Summary, could be misleading if considered in isolation. In particular, the opinions expressed in the Report are based on a number of assumptions and qualifications which are set out in the full Report.



#### 1.1 Introduction

The Amended Final Funding Agreement requires the completion of an Annual Actuarial Report evaluating the potential asbestos-related disease liabilities of the Liable Entities to be met by the AICF Trust.

#### 1.1.1 Liable Entities

The Liable Entities are defined as being the following entities:

- Amaca Pty Ltd (formerly James Hardie & Coy);
- Amaba Pty Ltd (formerly Jsekarb, James Hardie Brakes and Better Brakes); and
- ABN60 Pty Ltd (formerly James Hardie Industries Ltd).

In addition, the liability for Baryulgil claims is deemed to be a liability of Amaca by virtue of the James Hardie (Civil Liability) Act 2005 (NSW). Under Part 4 of that Act, Amaca is liable for "Marlew Asbestos Claims" or "Marlew Contribution Claims" as defined in that Act.

#### 1.1.2 Personal asbestos claims

Under the Amended Final Funding Agreement, the liabilities to be met by the AICF Trust relate to personal asbestos-related disease liabilities of the Liable Entities.

Such claims must relate to exposure which took place in Australia and which have been brought in a Court in Australia.

The precise scope of the liabilities is detailed in Section 1.2 and in Appendix G.  $\,$ 

#### 1.1.3 Purpose of report

KPMG Actuaries has been retained by AICFL to provide an actuarial valuation report as required under the Amended Final Funding Agreement and this is detailed in our Engagement Letter dated 9 February 2009.

The prior written consent of KPMG Actuaries is required for any other use of this report or the information contained in it.

Our valuation is intended to be effective as at 31 March 2009 and has been based on claims data and information as at 31 March 2009 provided to us by AICFL.



#### 1.2 Scope of report

We have been requested to provide an actuarial assessment as at 31 March 2009 of the asbestos-related disease liabilities of the Liable Entities to be met by the AICF Trust, consistent with the terms of the Amended Final Funding Agreement.

The assessment is on a central estimate basis and is based on the claims experience as at 31 March 2009.

A "central estimate" liability assessment is an estimate of the expected value of the range of potential future liability outcomes. In other words, if all the possible values of the liabilities are expressed as a statistical distribution, the central estimate is an estimate of the mean of that distribution.

It is of note that our liability assessment:

- Relates to the Liable Entities and Marlew (in relation to Marlew Claims arising from asbestos mining activities at Baryulgil).
- Is intended to cover:
  - The amount of settlements, judgments or awards for all Personal Asbestos Claims.
  - Claims Legal Costs incurred by the AICF Trust in connection with the settlement of Personal Asbestos Claims.
- Is not intended to cover:
  - Personal injury or death claims arising from exposure to asbestos which took place outside Australia.
  - Personal injury or death claims, arising from exposure to Asbestos, which are brought in Courts outside Australia.
  - Claims for economic loss, other than any economic loss forming part of an award for damages for personal injury and/or death.
  - Claims for loss of property, including those relating to land remediation.
  - The costs of asbestos or asbestos product removal relating to asbestos or asbestos products manufactured or used by or on behalf of the Liable Entities.
- Includes an allowance for:



- Compensation to the NSW Dust Diseases Board or a Workers Compensation Scheme by way of a claim by such parties for contribution or reimbursement from the Liable Entities, but only to the extent that the cost of such claims is less than the limits of funding for such claims as outlined within the Amended Final Funding Agreement.
- Workers Compensation claims, being claims from current and former employees of the Liable Entities, but only to the extent that such liabilities are not met by a Workers Compensation Scheme or Policy (see section 1.2.1).
- Assumes that the product and public liability insurance policies of the Liable Entities will continue to respond to claims as and when they fall due. We have not made any allowance for the impact of any disputation concerning Insurance Recoveries nor of any legal costs that may be incurred in resolving such disputes.
- Makes no allowance for potential Insurance Recoveries that could be made on product and public liability insurance contracts placed from 1986 onwards which were placed on a "claims made" basis.
- Makes no allowance for the future Operating Expenses of the Liable Entities or the AICF Trust. Separate allowance for future Operating Expenses needs to be made by the management of AICFL.
- Assumes a continuation of the existing legal environment in relation to claims settlements.
- Makes no additional allowance for the inherent uncertainty of the liability assessment. That is, no additional provision has been included in excess of a central estimate.

Readers of this report may refer to our previous reports which are available at <u>www.ir.jameshardie.com.au</u>.

#### 1.2.1 Workers Compensation

Workers Compensation claims are claims made by current and former employees of the Liable Entities. Such past, current and future reported claims were insured with, amongst others, Allianz Australia Limited ("Allianz") and the various State-based Workers Compensation Schemes.



Under the Amended Final Funding Agreement, the part of future Workers Compensation claims that are met by a Workers Compensation Scheme or Policy of the Liable Entities are outside of the AICF Trust. The AICF Trust is, however, to provide for any part of a claim not covered by a Workers Compensation Scheme or Policy (e.g. as a result of the existence of limits of indemnity and policy deductibles on those contracts of insurance).

On this basis our liability assessment in relation to Workers Compensation claims and which relates to the AICF Trust, includes only the amount borne by the Liable Entities in excess of the anticipated recoveries due from a Workers Compensation Scheme or Policy.

In making our assessment we have assumed that the Workers Compensation insurance programme will continue to respond to claims by current and former employees of the Liable Entities as and when they fall due. To the extent that they were not to respond owing to (say) insurer insolvency, Insurer Guarantee Funds should be available to meet such obligations.

#### 1.2.2 Dust Diseases Board and Other Reimbursements

There exists a right under Section 8E (Reimbursement Provisions) of the Dust Diseases Act 1942 for the NSW Dust Diseases Board ("DDB") to recover certain costs from common law defendants, excluding the employer of the claimant.

This component of cost is implicitly included within our liability assessment as the claims awards made in recent periods and in recent settlements contain allowance for DDB reimbursement where applicable. Furthermore, currently reported open claims have allowance within their case estimates for the costs of DDB reimbursement where relevant and applicable.

The Amended Final Funding Agreement indicates that the AICF Trust is intended to meet Personal Asbestos Claims and that claims by the DDB or a Workers Compensation Scheme for reimbursement will only be met up to a certain specified limit, being:

- In the first financial year (2006/07) a limit of \$750,000 applied;
- In respect of each financial year thereafter, that limit will be indexed annually in line with the Consumer Price Index;
- There will be an overall unindexed aggregate cap of \$30m.

The cashflow and liability figures contained within this report have already removed that component of reimbursements that will not be met by the AICF Trust owing to the application of these caps.



#### 1.2.3 Baryulgil ("Marlew Claims")

"Marlew Asbestos Claims" and "Marlew Contribution Claims" are deemed to be liabilities of Amaca. These claims specifically include:

- Claims made against Amaca Pty Ltd or ABN60 resulting from their past ownership of the mine, or in the case of Amaca also in relation to the joint venture (Asbestos Mines Pty Ltd) established with Wunderlich in 1944 to begin mining at Baryulgil, are to be covered by the AICF Trust.
- Claims made against the subsequent owner of the mine (following its sale by James Hardie Industries to Woodsreef in 1976), being Marlew Mining Pty Ltd ("Marlew") which is in liquidation, are to be met by the AICF Trust except where such claims are Excluded Marlew Claims, which are recoverable by the Claimant from other sources.

These claims are discussed further in Section 4.10.

#### 1.2.4 Risk Margins

Australian-licensed insurance companies are required to, and non-insurance companies may elect to, hold claims provisions at a level above the central estimate basis to reflect the uncertainty attaching to the liability assessment and to include an allowance in respect of that uncertainty.

A risk margin is an additional amount held, above the central estimate, which is held so as to increase the likelihood of adequacy of the provisions to meet the ultimate cost of settlement of those liabilities.

We note that the Amended Final Funding Agreement envisages the ongoing financing of the AICF Trust is to be based on a "central estimate" approach and that the Annual Actuarial Report should provide a Discounted Central Estimate valuation.

Accordingly, we have made no allowance for any risk margins within this Report.

#### 1.2.5 Discounting

We have determined a Discounted Central Estimate in this report by discounting the projected future cashflows to 31 March 2009 using yields on Commonwealth Government Bonds.



Conceptually, the Discounted Central Estimate would normally represent an amount of money which, if fully provided in advance (i.e. as of 31 March 2009) and invested in risk-free assets (such as Commonwealth Government Bonds) of term and currency appropriate to the liabilities, would generate the necessary investment income such that (together with the capital value of those assets) would be expected to be sufficient to pay for the liabilities as they fall due.

To the extent that the actual investments are:

- of different terms; and/or
- in different currencies; and/or
- provide different expected rates of return

investment profits or losses would emerge.

Mainly as a result of the Global Financial Crisis, expected future rates of investment return have fallen dramatically, with the lowering of prospective bond yields by between 1.0 and 4.0 percentage points at most durations (see Table 7.2).

A fall in the discount rate leads to an increase in the valuation result.

One of the uncertainties in our valuation is the fact that fixed interest Commonwealth Government Bonds do not exist at most of the durations of our cashflow projection, with the maximum term of bonds being around 10 to 15 years.

This means we need to take a long-term view that is not measured by marketobservable rates of return.

Our approach at this valuation has been to take the bond yields implied by bond market prices, without adjustment, up to 10 years.

Thereafter, we have set the spot rate to be 1.25 percentage points above our underlying long-term wage inflation assumption of 4.75% per annum (before ageing allowance).

The combined effect is that our long-term spot rate is 6.00% per annum at durations 10+.

In this regard, we also note that the actual funding mechanism under the Amended Final Funding Agreement only provides for three years' worth of projected Claims and Claims Legal Costs expenditure and one year's worth of Operating Expenses at any one time.



#### 1.3 Areas of potential exposure

As identified in Section 1.2, there are other potential sources of claims exposure beyond those directly considered within this report. However, while many of them are possible they are by no means certain and in a number of cases they are unquantifiable even if they have the potential to generate claims. This is especially the case for those sources of future claim where there has been no evidence of claims to date.

Areas of potential changes in claims exposure we have not explicitly allowed for in our valuation include:

- Future significant individual landmark and precedent-setting judicial decisions;
- Significant medical advancements;
- Unimpaired claims, i.e. claims for fear, stress, pure nervous shock or psychological illness;
- A change in the basis of compensation for asymptomatic pleural plaques for which no associated physical impairment is exhibited;
- A proliferation (compared to past and current levels of activity) of "third-wave" claims, i.e. claims arising as a result of indirect exposure such as home renovation, washing clothes of family members that worked with asbestos, or from workers involved in removal of asbestos or demolition of buildings containing asbestos;
- Changes in legislation, especially those relating to tort reform for asbestos sufferers;
- Introduction of new, or elimination of existing, heads of damage;
- Exemplary and aggravated or punitive damages (being damages awarded for personal injuries caused as a result of negligence or reckless conduct);
- Changes in the basis of apportionment of awards for asbestos-related diseases for claimants who have smoked;
- Any changes to GST or other taxes; and
- Future bankruptcies of other asbestos claim defendants (i.e. other liable manufacturers or distributors).



Nonetheless, some implicit allowance is made in respect of some of these items in the allowance for superimposed inflation included in our liability assessment and to the extent that some of these have emerged in past claims experience.

We have made no allowance for the risk of further development in relation to New Zealand exposures and the rights of claims from New Zealand claimants in Australian courts (as per *Frost vs. Amaca Pty Ltd* (2005), NSWDDT 36 although this decision was successfully appealed by Amaca in August 2006) nor for the risk of additional exposures from overseas. This is because, as noted in Section 1.2, the AICF Trust will not meet the cost of these claims as they are Excluded Claims.

We have made some implicit allowance for so-called "third-wave" claims. These are claims for personal injury and / or death arising from asbestos exposure during home renovations by individuals or to builders involved in such renovations. Such claims are allowed for within the projections to the extent to which they have arisen to date and to the extent our exposure model factors in such tertiary exposures in its extrapolation.

Over the last five years, pure home renovator claims have made up approximately 14% of mesothelioma claims by number. The reporting activity of pure home renovator claims has not shown any significant upward trend over the period, whilst "family" type exposures (e.g. childhood exposures, exposure through clothes washing) have been the main source of increase in claims reporting since 2004/05.



#### Figure 1.1: Mix of claims reported by nature of exposure



We have not allowed for a surge in such claims in the future arising from renovations, but conversely we have not allowed for a tempering of those third-wave claims already included within our projection as a result of improved education of individuals of the risks of such home renovations, or of any local Councils or State Governments passing laws in this regard.

It should be noted that claims for the cost of asbestos or asbestos product removal from homes and properties or any claims for economic loss arising from asbestos or asbestos products being within such homes and properties will not be met by the AICF Trust.

#### 1.4 Data reliances and limitations

KPMG Actuaries has relied upon the accuracy and completeness of the data with which it has been provided. KPMG Actuaries has not verified the accuracy or completeness of the data, although we have undertaken steps to ensure its consistency with data previously received. However, KPMG Actuaries has placed reliance on the data previously received, and currently provided, as being accurate and complete in all material respects.

#### 1.5 Uncertainty

It must be understood that estimates of asbestos-related disease liabilities are subject to considerable uncertainty.

This is due to the fact that the ultimate disposition of future claims will be subject to the outcome of events that have not yet occurred. Examples of these events, as noted in Section 1.3, include jury decisions, court interpretations, legislative changes, epidemiological developments, medical advancements, public attitudes, potential third-wave exposures and social and economic conditions such as inflation.

It should therefore be expected that the actual emergence of the liabilities will vary, perhaps materially, from any estimate. Thus, no assurance can be given that the actual liabilities of the Liable Entities to be met by the AICF Trust will not ultimately exceed the estimates contained herein and any such variation may be significant.

Nonetheless, we provide our liability estimate based on our current expectations of future such events.

#### **1.6** Distribution and use

The purpose of this report is as stated in Section 1.2. This report should not be used for any purpose other than those specified.



This report is to be provided to the Board and management of AICFL. This report will also be provided to the Board and management of JHINV, the NSW Government, and to Ernst & Young in their capacity as auditors to both JHINV and AICFL.

We understand that this report will be filed with the ASX and placed on JHINV's website in its entirety.

KPMG Actuaries provide our consent for this report to be made available to the above-mentioned parties and for the report to be distributed in the manner described above.

To the extent permitted by law, KPMG Actuaries will not be responsible to third parties for the consequences of any actions they take based upon the opinions expressed within this report, including any use of or purported reliance upon this report not contemplated in Section 1.2.

Where distribution of this report is permitted by KPMG Actuaries, the report may only be distributed in its entirety and judgements about the conclusions and comments drawn from this report should only be made after considering the report in its entirety and with necessary consultation with KPMG Actuaries.

#### **1.7** Author of the report

This report is authored by Neil Donlevy, a Director of KPMG Actuaries, a Fellow of the Institute of Actuaries (London) and a Fellow of the Institute of Actuaries of Australia.

This report is co-authored by David Whittle, a Director of KPMG Actuaries and a Fellow of the Institute of Actuaries of Australia.

#### 1.8 Professional standards and compliance

This report details a valuation of the outstanding claims liabilities of entities which hold liabilities with features similar to general insurance liabilities as self-insured entities, and which have purchased related insurance protection.

In preparing this report, we have complied with the revised version of Professional Standard 300 of the Institute of Actuaries of Australia ("PS300"), "Valuation of General Insurance Claims". The commencement date of PS300 was 1 January 2008.



However, as we note in Section 1.2, this report does not include an allowance for the future Operating Expenses of the AICF Trust and nor does it include any allowance for a risk margin to reflect the inherent uncertainty in the liability assessment.

#### **1.9 Funding Position of the AICF Trust**

This Report does not analyse nor provide any opinion on the current, or prospective, funding position of the AICF Trust.

This is because to do so requires consideration of the future financial performance of JHINV.

This Report only provides analysis and opinion on the estimates of the future expenditure to be met by the AICF Trust.

We note the recent Notice (dated 22 April 2009) provided by AICFL to JHINV and to the NSW Government indicating that it is reasonably foreseeable that the available assets of the AICF Trust, including the expected contributions from JHINV, are likely to be insufficient to fund the payment of all reasonably foreseeable liabilities as and when they fall due for payment.

However, this Report assumes full payment of claims by the AICF Trust as these liabilities fall due and makes no allowance for any potential Rationing Scheme that may be required or its impact on the likely cashflow expenditure of the AICF Trust.

This is because the nature, operation and timing of any potential Rationing Scheme has not been determined as at the date of this report. Further, any Rationing Scheme would need to be endorsed by the Minister, being the Attorney General of New South Wales, and approved by the Supreme Court of New South Wales, prior to implementation. This has not occurred to date.

In addition, the Amended Final Funding Agreement indicates that the Discounted Central Estimate (and the Period Actuarial Estimate and Term Central Estimate) are to be calculated by reference to the cost and timing of expected Proven Claims which are reasonably expected to become payable in the relevant period (rather than the actual monies that will be paid by the AICF Trust).



# 2 DATA

#### 2.1 Data provided to KPMG Actuaries

We have been provided with the following information:

- Claims database at 31 March 2009 with individual claims listings;
- Accounting database at 31 March 2009 (which includes individual claims payment details);
- Home Renovator Reports at various dates;
- Past exposure history of the Liable Entities and their association with asbestos (this has been covered in our previous valuation reports and we have not repeated it in this report); and
- Detailed insurance bordereaux information (being a listing of claims filed with the insurers of the Liable Entities) produced by Capita Insurance Services (London) as at 31 March 2009.

We have allowed for the benefits of the product and public liability insurance policies of the Liable Entities based on information provided to us by AICFL relating to the insurance programme's structure, coverage and layers.

We have also considered the claims data listings which formed the basis of our previous valuation assessments.

#### 2.2 Data limitations

We have tested the consistency of the various data sets provided to us at different valuation dates, as noted in Section 2.3 which outlines the nature of the testing and verification process undertaken. However, we have not otherwise verified the data and have instead relied on the data provided as being complete and accurate in all material respects. We have relied upon the robustness of AICFL's operational processes and systems as to the completeness of the data provided.

Consequently, should there be material errors or incompleteness in the data, our assessment could also be affected materially.

#### 2.3 Data verification

We have undertaken a number of tests and reconciliations to verify the accuracy of the data to the extent possible, noting the limitations outlined above.



#### 2.3.1 Reconciliation with previous valuation's data

We have performed a reconciliation of the claims database as at 31 March 2009, with that provided at 31 March 2008.

We have reviewed the consistency of a number of key fields, on a claim-byclaim basis, including:

- Claim notification date;
- Claim settlement date;
- Disease type; and
- Settlement amounts.

We note that there are some movements in the historic data between valuations. The following summarise the results of the reconciliation process:

- 1 claim has changed its date of reporting;
- 7 claims have changed their disease type categorisation: 4 to lung cancer, 2 to wharf and 1 to ARPD & Other; and
- 4 claims have changed their settlement date: 2 of which were previously advised as not being settled by 31 March 2008.

We understand that a change in disease type is often due to the data being updated over time, often as more information comes to light as to the nature of the disease, or through the correcting of any previous data errors which have emerged.

Changes in the date of settlement can often arise because the previous settlement date recorded relates to the settlement with some, but not all, parties to the claim and that this information is updated when all parties have settled.

As such, changing and developing data is not unexpected or to be considered as adverse. Indeed, changing data is common to all claims administration systems.

#### 2.3.2 Reconciliation between claims and accounting databases

We have compared the claims awards, the legal costs and the recoveries amounts between the claims database and the accounting database from the earliest date to the current file position. Table 2.1 shows the results of this reconciliation for all claims to date.



	Claims database \$m	Accounting database \$m	Difference \$m	Difference %
Gross settlement amounts	609.4	616.2	6.7	1.1%
Cross claim recoveries	(19.4)	(18.4)	1.0	-5.2%
Net settlement amounts	590.1	597.8	7.7	1.3%

#### Table 2.1: Comparison of amounts from claims and accounting databases

Overall, the data appears to reconcile reasonably well in aggregate, with the gross claim settlement amounts from the two data sources differing by only 1.1%.

Our approach for each claim record has been to take the maximum value of the two databases for each claim record.

This approach is likely to result in some minor prudence in our overall analysis although the amount of prudence is not material in the context of the size of the potential liabilities and the underlying uncertainty in any valuation estimating future claims costs over the next 40 years or more.

#### 2.4 Data conclusion

We have noted above that we have not verified the underlying data nor have we undertaken "auditing at source".

We have assumed that any material data issues emerging from the Statutory Audit will have been identified by the auditors during their testing and would have been notified to us.

However, we have tested the data for internal consistency with the data provided at previous valuations.



Based on that testing and reconciliation, and subject to the limitations described in Section 1.4, we have formed the view that notwithstanding those limitations:

- The data is generally consistent between valuations, with any differences in the data being readily explained;
- The data appears to reconcile reasonably between the two data sources (the claims database and the accounting database);
- Any data issues that have emerged are not material in relation to the size of the liabilities; and
- The data is therefore appropriate for use.



# **3 VALUATION METHODOLOGY AND APPROACH**

#### 3.1 **Previous valuation work and methodology changes**

We have maintained the core valuation methodology adopted at our previous valuation.

#### 3.2 Overview of current methodology

The methodology involves assessing the liabilities in two separate components, being:

- Allowance for the cost of settling claims which have already been reported but have not yet been settled ("pending claims"); and
- Allowance for the cost of settling claims which have not yet been reported but are expected to arise out of past exposure ("Incurred But Not Reported" or "IBNR" claims).

For pending claims, we have used the case estimates (where available) with some adjustments to reflect the extent to which they tend to overstate the ultimate cost, whilst for IBNR claims we have used what can best be described as an "average cost per claim method".

In brief, the overall methodology may be summarised as follows:

- Project the future number of claims expected to be reported in each future year by disease type (for product and public liability) and for Workers Compensation and Wharf claims taking into account the past rate of co-joining of the Liable Entities and the expected future incidence of mesothelioma and other diseases;
- Analyse past average attritional claim costs of non-nil claims in current money terms. We have defined attritional claims to be claims which are less than \$1m in 2005/06 money terms. We estimate a baseline attritional non-nil average claim cost in 2008/09 (current) money terms. This represents the Liable Entities' share of a claim rather than the total claim settlement. For Workers Compensation claims, the average cost represents only that part of a claim which is borne by the Liable Entities (i.e. it is net of any insurance proceeds from a Workers Compensation Scheme or Policy);
- Analyse past historic average plaintiff and defendant legal costs for non-nil claim settlements;



- Analyse past historic average defendant legal costs for nil claim settlements (which includes costs incurred in defending and repudiating liability);
- Estimate a "large claims loading" for mesothelioma claims by estimating the frequency, or incidence rate, and average claim and legal cost sizes of such claims (being claims which are in excess of \$1m in 2005/06 money terms);
- Project the pattern and incidence of future claims settlements from the claims reporting profile projected. This is done by using a settlement pattern derived from consideration of past experience of the pattern of delay between claim reporting and claim settlement for each disease type;
- Estimate the proportion of claims which will be settled with no liability against the Liable Entities by reference to past proportions of claims settled for nil claim cost (we refer to this as the "nil settlement rate");
- Inflate average claim, plaintiff and defence legal costs and large claim costs to the date of settlement of claims allowing for base inflation and superimposed inflation;
- Multiply the claims numbers which are expected to be settled for nonnil amounts in a period by the inflated average non-nil claim costs (including the "large claims loading") and plaintiff and defence legal costs for that period;
- Make allowance in defence legal costs for that proportion of settled claims which are expected to be settled for no liability but for which defence costs will be incurred in disputing liability or contribution;
- Inflate average defence legal costs of nil claims to the date of settlement of claims allowing for base inflation and superimposed inflation;
- Multiply the claims numbers which are expected to be settled for nil amounts in a period by the inflated average defence legal costs for nil claims for that period;
- Add the expected claims and legal payments on pending claims (after allowance for the potential savings on case estimates);
- This gives the projected future gross cashflow for each future financial year;



- Adjust projected cashflow for the impact of the cap on DDB reimbursements;
- Estimate the recoveries resulting from cross-claims made by the Liable Entities against other parties ("cross-claim recoveries");
- Project Insurance Recoveries to establish the net cashflows;
- Discount the cashflows using a yield curve derived from yields on Commonwealth Government fixed interest bonds, and a flat long term spot rate of 6.00% per annum for cashflows ten years onwards, to arrive at our present value liability assessment.

It should be noted that this description is an outline and is not intended to be exhaustive in consideration of all the stages we consider or investigations we undertake. Those other stages are outlined in more detail elsewhere in this report and readers are advised to refer to those sections for a more detailed understanding of the process undertaken.

As discussed elsewhere, the liabilities are established on a central estimate basis.

In our analyses, the "year" we refer to aligns with the financial year of JHINV and runs from 1 April to 31 March, so that a 2008 reported claim would be a claim notified in the period 1 April 2008 to 31 March 2009. Similarly a 2007 settlement would be a claim settled in the period 1 April 2007 to 31 March 2008.

#### 3.3 Disease type and class subdivision

#### 3.3.1 Claims excluded

We have excluded cross-claims brought by the Liable Entities against other defendants. Where the cross-claim is brought as part of the main proceedings the claim is automatically counted in our analysis of the number of claims. However, where the cross-claim by the Liable Entities is severed from the main proceedings, the existence of a separate record on the claims file does not indicate an additional claim (or liability against the Liable Entities). In these circumstances such claims records are not counted in our analysis.

#### 3.3.2 Categories of claim

We have sub-divided the remaining claims into the following groups:


- Product and Public Liability;
- Workers Compensation, being claims by current and former employees of the Liable Entities; and
- Wharf claims, being claims by individuals whose occupations involved in working on the docks or wharves, or where part of their exposure related to wharves.

We have separated the Workers Compensation claims from product and public liability claims because claim payments from Workers Compensation claims do not generate recoveries under the product and public liability insurance cover, so that in order to value those contracts we need to separately identify the cashflows from product and public liability claims and the cashflows from Workers Compensation claims.

We have separated out wharfside workers claims because of their significantly different claim sizes relative to other classes.

#### 3.3.3 Categories of disease

For product and public liability claims, we have separately analysed the individual disease types.

We have split the data by disease because it displays substantially different average claim sizes and because the incidence pattern of future notifications is also expected to vary considerably between the different disease types. As product and public liability claims are financially significant to the overall total of the liabilities and there is significant available data, the sub-division by disease type is appropriate.

We have not divided the Workers Compensation or wharf claims data by disease type given their relatively low financial significance and the low credibility of the data if sub-divided by disease type.

For the purposes of our analysis, we have allocated each claim once and therefore to one disease. We have selected the following order of priority, based on the relative severity of the disease:

- Mesothelioma;
- Lung cancer / Other cancer;
- Asbestosis; and then
- Asbestos-Related Pleural Disease and Other ("ARPD & Other").



This means that if a claim has mesothelioma as one of its listed diseases, it is automatically included as a mesothelioma claim. If a claim has lung or other cancer as one of its listed diseases (but not mesothelioma), it is included as a lung cancer claim. If a claim has asbestosis as one of its listed diseases, it is only coded as asbestosis if it has no reference to mesothelioma, lung cancer or other cancer as one of its diseases.

#### 3.4 Numbers of future claims notifications

We begin by first estimating the incidence of future notifications of claims.

We have based this on the use of what we have termed an "exposure model", which we have constructed in relation to Australian usage of asbestos.

We do not have detailed individual exposure information for the Liable Entities, its products or where the products were used and how many people were exposed to those products. However, given the market share of James Hardie over the years (through to 1987) and its relative stability, we have used a national pattern of usage as a reasonable proxy for the Liable Entities.

We start by constructing an index from the annual consumption of asbestos within Australia from 1900-2002.<sup>2</sup> We split this between the various asbestos types and by year of consumption.

We have not allowed for multiple exposures with respect to the Liable Entities from each unit of asbestos consumed, e.g. where the Liable Entities were both mining and milling the same asbestos. While there was some (moderate) mining at Baryulgil, in relative terms it is not significant. Nonetheless, we have made separate allowance for mining activities at Baryulgil within our liability assessment.

With the exposure index that we have derived, we then allow for the latency period from the average date of exposure to claims notification.

Our model is that claims will:

- emerge proportional to past asbestos exposure measured by asbestos consumption (in metric tonnage); and
- have a latency pattern that is statistically normally distributed.

<sup>&</sup>lt;sup>2</sup> World Mineral Statistics Dataset, British Geological Survey, <u>www.mineralsuk.com</u>

US Geological Survey – Worldwide Asbestos Supply and Consumption Trends 1900 to 2000; Robert L. Virta (2003)



Our current assumptions are that:

- The historic asbestos consumption shown in Figure 4.5 gives our assumed past asbestos exposure.
- The latency pattern (from average date of exposure) for mesothelioma has a mean of 35 years and a standard deviation of 10 years. This appears to be generally supported by analyses and comments by Professor Berry et al<sup>3</sup>, by Jim Leigh et al<sup>4</sup> and by Yeung et al<sup>5</sup>. Latency pattern assumptions for mesothelioma and other diseases have also been set with consideration of the Liable Entities' own experience to date.

Our methodology is to take each year of exposure, weighted by "average consumption" of asbestos in tonnage for that year, and project an index of the number of claims emerging in each future reporting year resulting from that exposure year using the latency distribution. We then aggregate the index of claims projected across all exposure years to derive an overall index of the number of future claims by report year.

This methodology provides not only the shape of claims reporting as an index but it also derives the peak year of incidence of mesothelioma claims reported to the Liable Entities to be 2010/2011.

For the other claim types, we allow for those diseases having different average latency periods to that of mesothelioma. This results in different projected peak years for the different diseases.

From this claims index we then project the future number of claims by calibrating the index derived to the current level of claims emerging.

Our analysis and assumptions are detailed in Section 4.

#### 3.5 Incidence of claim settlements from future claim notifications

We derive a settlement pattern by considering triangulations of the numbers of settlements and claims payments by delay from the year of notification.

<sup>&</sup>lt;sup>3</sup> Malignant pleural and peritoneal mesotheliomas in former miners and millers of crocidolite at Wittenoom, Western Australia; G Berry, N H de Klerk, et al (2004)

<sup>&</sup>lt;sup>4</sup> Malignant Mesothelioma in Australia: 1945-2000; J. Leigh et al (2002)

<sup>&</sup>lt;sup>5</sup> Distribution of Mesothelioma Cases in Different Occupational Groups and Industries, 1979-1995; P. Yeung, A. Rogers, A. Johnson (1999)



From these settlement pattern analyses, we have estimated the pace at which claims notified in the future will settle, and used this to project the future number, and monetary amount, of settlements in each financial year for each disease type.

Our analysis and assumptions selected are detailed in Section 7.8.

## 3.6 Average claim costs of IBNR claims

#### 3.6.1 Attritional claims

We need to separately consider average settlement costs in respect of future claims and average legal costs of the defendants.

We have estimated the following five components to the average cost assessment:

- Average award (sometimes including plaintiff legal costs) of a non-nil "attritional" claim.
- Average plaintiff legal costs of a non-nil "attritional" claim.
- Average defendant legal costs of a non-nil "attritional" claim.
- Average defendant legal costs of a nil claim.
- Large claim awards and legal cost allowances.

All of our analyses have been constructed using past average awards, which have been inflated to current money terms (i.e. mid 2008/09 money terms) using a base inflation index. This compensates for basic inflation effects when identifying trends in historic average settlements. We then determine a prospective average cost in current money terms.

We perform the same exercise for the defence and plaintiff's legal costs in respect of non-nil claims, and for defence costs for nil claims (together "Claims Legal Costs").

Our analysis and assumptions are detailed in Section 5.

#### 3.6.2 Large claims loading

We define a large claim as those for which the award is greater than or equal to \$1m in **2005/06** money terms (this equates to approximately \$1.133m in 2008/09 money terms). We define an attritional claim as a non-nil, non-large claim. We define a nil claim as one for which the award payable by the relevant Liable Entity is zero.



We analyse the historic incidence rate of large claims (being measured as the ratio of the number of large claims to the total number of non-nil claims), and the average claim and legal costs of these claims. We have determined a prospective incidence rate and average cost in current money terms to arrive at a "per claim" loading (being the average cost multiplied by the incidence rate per claim) being the additional amount we need to add to our attritional average claim size to allow for large claims.

Our analysis and assumptions are detailed in Section 5.8.

## 3.6.3 Future inflation of claim sizes

Allowance for future claim cost inflation is made. This is modelled as a combination of base inflation plus superimposed inflation. This enables us to project future average settlement costs in each future year, which can then be applied to the IBNR claims as they settle in each future year.

Our analysis and assumptions in relation to claims inflation are detailed in Section 7.

#### 3.7 **Proportion of claims settled for nil amounts**

We apply a "nil settlement rate" to the overall number of settlements to estimate the number of claims which will be settled for nil claim cost (i.e. other than in relation to legal costs) and those which will be settled for a non-nil claim cost.

The prospective nil settlement rate is estimated by reference to past trends in the rate of nil settlements.

Our analysis and assumptions selected are detailed in Section 6.

#### 3.8 Pending claims

#### 3.8.1 Definition of pending claims

At 31 March 2009, there were 578 claims for which claim awards have not yet been fully settled by the Liable Entities. Additionally, there are a number of other claims for which defence legal costs have not yet been settled, even though the awards have been settled.

We have adopted three definitions of settlement status:

• Where there is a closure date, there are not expected to be any further award or legal costs incurred.



- When there is no closure date but the claim has a settlement date, there is a possibility of further emerging defendant legal costs, even though the claim award has been settled.
- When there is no settlement date, there is a possibility of award, plaintiff legal costs and defendant legal costs still being incurred.

## 3.8.2 Evaluating the liability for pending claims

The excess amount of the liability for pending claims, over the case estimates held, is what the insurance industry term Incurred But Not Enough Reported ("IBNER").

Depending on the case estimation procedure of the company and the nature of the liabilities, IBNER can be either positive or negative, with a negative IBNER implying that the ultimate cost of settling claims will be less than case estimates, i.e. that there is some degree of redundancy in case estimates.

In assessing the degree of redundancy in case estimates, we have undertaken a projection of the future settlement cost of pending claims and compared this to the case estimates for such claims. Our projection is based on a blending of the following actuarial techniques:

- Projection of future claim payments by year of notification using triangulation techniques as described in section 3.5 and compare with the case estimates for those claims; and
- Projection of future average cost per claim for reported, but not finalised claims. The average cost is assessed by reference to the delay from when the claim was reported to when the claim settles (this method is known as the PPCF method).

Mesothelioma claims were projected separately from other disease types due to differing reporting and settlement patterns as well as differing average claim awards.

Workers Compensation claims were excluded from the analysis owing to limited data volumes and due to the impact of Workers Compensation insurance upon the data.

#### 3.8.3 Findings

Our analysis has indicated that there is a degree of redundancy in case estimates.



The comparison of current case estimates with actuarially-projected future settlement costs for claims reported to date suggests that potential savings from case estimates in relation to the award component could be of the order of 25%.

Amaca's own analysis, as shown in the following chart, suggests that historically there have also been savings. The chart shows the savings averaged over a 3-month, a 12-month and 1-month period.





Source: AICF Monthly Management Reports to 31 March 2009

The chart seems to be supportive of our inference that there is some degree of prudence in the existing case estimates.

Based on this analysis, we have maintained our assumption for the level of redundancy in case estimates on currently reported claims at 25% at this valuation (March 2008: 25%).

It should also be noted that making allowance for savings from case estimates is expected to have the most impact on the near term cash flows and a lesser impact on the longer-term cashflows, with more than 90% of the cost of pending claims expected to be settled within the next six years.

#### 3.9 Insurance Recoveries

Insurance Recoveries are defined as proceeds which are estimated to be recoverable under the product and public liability insurance policies of the Liable Entities, and therefore exclude any such proceeds from a Workers Compensation Scheme or Policy in which the Liable Entities participate or which the Liable Entities hold.



In applying the insurance programme we consider only the projected gross cashflows relating to product and public liability.

We split out product liability cashflows from public liability cashflows as they are covered by different sections of the insurance policy under different bases:

- Product liability claims are covered by an aggregate policy which provides cover for all product liability claims costs attached to any one year up to an overall aggregate limit for that year; and
- Public liability claims are covered by an "each and every loss" policy which provides cover for each public liability claim up to an individual limit for that year.

Historical analysis of the claims data suggests that approximately 95% of all liability claims, by number and by cost, have been product liability claims.

We make no allowance for the Workers Compensation cashflows in estimating the Insurance Recoveries, as the insurance programme only provides insurance cover to product and public liability exposures.

#### 3.9.1 Programme overview

Until 31 March 1985, the Liable Entities had in place General and Products liability insurance covers with a \$1m primary policy layer.

In addition, until 31 May 1986, the Liable Entities maintained further excess "umbrella" insurance contracts, with varying retentions and policy limits. That is, the contracts paid all costs arising from claims with exposure in a specified year from the retention up to the relevant policy limit. All claim costs in relation to a given exposure year in excess of the limit would be retained by the Liable Entities.

Product liability claims were insured under these contracts on an "in the aggregate" basis whilst public liability claims were insured on an "each and every loss" basis.

These contracts were placed amongst a number of insurance providers on a claims occurring basis.

From 31 May 1986, the insurance contracts were placed on a claims made basis in relation to asbestos-related product and public liability cover.

The policies were placed as follows:



- For the period up to June 1976, the insurance policies were written on a claims occurring basis. The insurance was provided by QBE but the cover provided by these policies was commuted in June 2000 for a consideration of \$3.1m per annum for the following 15 years.
- For the period from June 1976 to 31 May 1986, the insurance policies were written on a claims occurring basis. CE Heath acted as the underwriting agent and insured the risk in Australia and also into Lloyd's of London and the London Market. However, during this period both CE Heath Underwriting Agencies Pty Ltd (CEHUA) and CE Heath Underwriting & Insurance (Australia) Pty Ltd (CEH U&I) also insured some of the risk, reinsuring their placement on a facultative basis.
- For the period 31 May 1986 to 31 March 1989, the insurance policies were written on a claims-made basis. CE Heath acted as the underwriting agent and insured the risk into Lloyd's of London and the London Market.
- For the period 31 March 1989 to 31 March 1997, the insurance policies were written on a claims-made basis. However, CE Heath Casualty & General Insurance Ltd (later HIH Casualty & General) acted as the insurer of the programme and reinsured it on a facultative basis into Lloyd's of London and the London Market. CE Heath Casualty & General retained some share on some of the layers.

#### 3.9.2 Commuted Contracts

We have allowed for the value of the QBE commutation entered into in June 2000 which involves the payment of a consideration of \$3.1m per annum for 15 years to (and including) 30 June 2014.

#### 3.9.3 Schemes of Arrangement

For the claims occurring period, where a claim filed against a company under a Scheme of Arrangement has been accepted and payment made, we have assumed that the insurance liabilities of that company to the Liable Entities have been fully discharged and no further recoveries fall due.



#### 3.9.4 Insurance protection from 31 May 1986 onwards

Insurance protection purchased from 31 May 1986 onwards was placed on a "claims made" basis and as such may not provide protection or recoveries against the cost of future claim notifications made by claimants against the Liable Entities. We have therefore, for the purposes of this report, made no allowance for the value of insurance contracts placed from 1986 onwards in our liability assessment.

We note that a claim of approximately \$70m has been made by Amaca on behalf of the Liable Entities against HIH and related entities in relation to the insurance programme for the 1989/90 to 1996/97 years. This claim is presently being considered by the liquidators of HIH and we have not, for the purposes of this report, attempted to estimate any recovery for it at this time.

It should be noted that our decision is an actuarial one and is not based on consideration of the legal arguments that might be presented by Amaca, by HIH or by the reinsurers. We present no legal opinion, and have not based our assessment on any such legal opinion, as to the admissibility of the claim or the expected recovery under the claim.

To the extent recovery is made against this claim, the net asset position of the AICF Trust would improve and this would reduce the future funding requirement by JHINV.

#### 3.9.5 Unpaid insurance recoveries

We have not included within our estimate any allowance for insurance recoveries that are due but have not yet been collected ("unpaid balances") as these are more appropriately dealt with as a debtor of AICFL. Such monies amount to approximately \$3.5m at 31 March 2009.

#### 3.10 Bad debt allowance on Insurance Recoveries

We have made allowance for bad debts on future Insurance Recoveries within our valuation by use of the default rates in Appendix A. These have been sourced from Standard & Poor's Global Fixed Income Research, February 2008 and are based on bond default rates.

We have considered the credit rating of the insurers of the Liable Entities as at March 2009 and applied the relevant credit rating default rates to the expected future cashflows by year, treaty and insurer.



We assume that insurance recoveries from syndicates of Lloyd's of London, which are reinsured by Equitas<sup>6</sup> (amounting to approximately 45% of the coverage in the claims occurring period), will have 100% recoverability and that no credit risk charge is made against those recoveries. For the remaining companies, we have allowed for credit risk costs on the Insurance Recoveries.

Where additional information regarding the expected payout rates of solvent and insolvent Schemes of Arrangement is available we have instead taken the expected payout rates to assess the credit risk allowance to be made in our liability assessment.

In relation to those claims occurring contracts where CEHUA or CEH U&I insured some of the risks (and then facultatively reinsured that risk), we have assumed, for the purposes of this report, that cut-through from the reinsurers directly to the Liable Entities will not take place and that these Insurance Recoveries will therefore rank alongside other creditors of the HIH Group. We note that this assumption is an actuarial valuation assumption and is not based on legal opinion and we pass no such opinion.

We note the House of Lords decision (McGrath and Ors and another vs. Riddell and Ors, [2008] UKHL21) passed down in April 2008 which has had the effect of remitting the reinsurance assets of HIH Group to Australia. Those assets are available for distribution in accordance with Australian law.

Whilst this decision assists in any potential applicability of Section 562A(4) of the Corporations Act to the reinsurance recoveries of the HIH Liquidator, the decision does not in itself enshrine or impose cut-through (any such application would be at the Court's discretion).

Accordingly, given the obstacles that still remain (in relation to any potential cut-through) we have not allowed for this beneficial decision to alter the value we have assigned to these insurance and reinsurance contracts at this valuation.

<sup>&</sup>lt;sup>6</sup> The announcement by Berkshire Hathaway on 20 October 2006 that it would take over management of Equitas and provide additional capital (by way of a \$7bn reinsurance contract from Berkshire Hathaway to Equitas) appears to reduce the risk of insolvency to Equitas considerably at this time. Berkshire Hathaway is AAA rated by Standard & Poor's. Indications are that Berkshire Hathaway will ultimately assume the liabilities of Equitas, subject to regulatory and Court approval.



Were cut-through to be achieved, whether under Section 562A(4) of the Corporations Act or under Section 6 of the Law Reform (Miscellaneous Provisions) Act or on some other basis, this would be expected to increase the level of Insurance Recoveries, as the financial health of the reinsurers to the HIH Group is generally better than that of the HIH Group itself, so that a lower bad debt charge would apply.

#### 3.11 Cross-claim recoveries

A cross-claim can be brought by, or against, one or more Liable Entities. Cross-claims brought against a Liable Entity ("Contribution Claims") are included in our analysis of claims and such claims are treated as if the Liable Entities were joined by the plaintiff in the main proceedings as a joint defendant to the claim, as opposed to being joined as a cross-defendant by another defendant.

Cross-claims brought by a Liable Entity relate to circumstances where the Liable Entity seeks to join (as a cross-defendant) another party to the claim in which the Liable Entity is already joined.

To the extent that the Liable Entities are successful in joining such other parties to a claim, the contribution to the settlement by the Liable Entities will reduce accordingly.

Our approach in the valuation has been to separately value the rate of recovery ("cross-claims recovery rate") as a percentage of the gross award based on historic experience of such recoveries.

Our analysis and assumptions selected are detailed in Section 7.7.

#### 3.12 Discounting cashflows

Cashflows are discounted on the basis of yields available on Commonwealth fixed interest government bonds of varying coupon rates and durations to maturity (matched to the liability cashflows), with a long-term discount rate of 6% assumed.

It should be recognised that the yield curves and therefore the discount rates applied can vary considerably between valuations and can, and do, contribute significant volatility to the present value of the liability at different assessment dates.

Our analysis and assumptions selected are detailed in Section 7.5.



## 4 ANALYSIS OF CLAIMS EXPERIENCE – CLAIM NUMBERS

#### 4.1 Overview

We have begun by analysing the pattern of notifications of claims as shown in Table 4.1. This table shows the number of claim notifications by year.

Report Year	Mesothelioma	Asbestosis	Lung Cancer	ARPD & Other	Wharf	Worker
1997	112	32	20	17	2	50
1998	93	25	12	13	3	30
1999	95	41	16	12	14	39
2000	126	46	30	21	26	38
2001	161	92	24	29	17	61
2002	180	93	36	41	15	51
2003	188	101	26	27	10	36
2004	265	121	34	26	6	62
2005	217	103	32	17	6	33
2006	220	164	35	29	6	43
2007	272	169	29	41	8	46
2008	298	159	33	47	11	59

#### Table 4.1: Number of claims reported annually

Note: Throughout Sections 4 to 6, the date convention used in tables and charts is that (for example) 2008/09 indicates the financial year running from 1 April 2008 to 31 March 2009. Furthermore, unless clearly identifying a calendar year, the label "2008" in charts or tables would indicate the financial year running from 1 April 2008 to 31 March 2009.

Historically, mesothelioma has accounted for more than 40% of claims by number. This percentage increased from 42% in 2001/02, peaking at 53% in 2005/06, and then falling to 49% for 2008/09.

Asbestosis has shown a significant increase, from less than 20% in 2000/01 to above 30% in 2006/07 and 2007/08 but reducing to 26% in 2008/09.







## 4.2 Mesothelioma claims

The incidence of mesothelioma claim notifications showed a step change upwards from 1999/00 through to 2001/02 and a steady rate of increase to the 2003/04 financial year, to 188 claims. There was a further upward step in claim numbers during 2004/05 with 265 claims reported in the year, with some of this increase due to a large number of "backlog clearance" claims from WorkCover Queensland and some of the increase arising from uncertainty and concerns as to the Medical Research and Compensation Foundation's financial position.

Reporting activity reduced in 2005/06 and 2006/07, but increased to 272 claims reported in 2007/08.

In 2008/09, there were 298 claims reported.

#### 4.2.1 Monthly analysis of notifications

We have examined the number of mesothelioma claims reported on a monthly basis to better understand the nature of the trends.





Figure 4.2: Monthly notifications of mesothelioma claims

It is observed that:

- The high level of claims reporting of 2007/08 has continued during 2008/09.
- Claims reporting activity was particularly high in the first half of the 2008/09 financial year (at 164 claims), with each of the first five months having 25 or more claims reported.
- Claims reporting activity in the second half of 2008/09 (at 134 claims) was more in line with prior expectations.
- There is typically a degree of late development which takes place in the following financial year (e.g. the number of claims reported in 2007/08 has increased by 6 since the end of that financial year, and since the figures quoted in our previous valuation report).

#### 4.2.2 Rolling averages

We have also reviewed the number of mesothelioma claims reported on a monthly basis and reviewed the rolling 3-month, 6-month and 12-month averages in recent periods.







It can be seen that the current annualised rolling averages are between 268 (6-month average) and 298 (12-month average).

Generally, over the last two years, the 6-month and 12-month averages have remained within the range of 230 to 330 claims per annum, although there was a period during the most recent financial year when the 6-month and 12-month average increased to between 310 and 330 claims per annum.

The 3-month averages have, not surprisingly, shown more volatility, varying between 200 and 350 over the last twelve months.

#### 4.2.3 Claims notifications by State

We have monitored the number of claim notifications by State in which the claim is filed. Figure 4.4 shows the number of claims notified by year by State.





Figure 4.4: Number of mesothelioma claims by location of claim filing

It is of note that for 2008/09:

- Claims activity has increased in NSW, returning to levels last seen in 2004/05.
- Claims activity has generally been similar to 2004/05, with the main difference to 2004/05 being the higher levels of claims from Western Australia and South Australia. In part, these trends will have been contributed to by the decision in *Schultz vs. BHP*.
- Claim activity in Victoria and Queensland has been stable, with no "backlog clearance" emerging from Queensland this year.

#### 4.2.4 Base valuation assumption

In setting a base valuation assumption for 2009/10, we need to consider whether the observations in the most recent year were one-off fluctuations or were part of a new trend.

In considering the increase in activity in South Australia and Western Australia, there did not appear to be any common themes explaining the reasons for the increase, with no obvious signs of a "backlog clearance" or aggregation of risks giving rise to a large number of claims.

Further analysis also indicated that the increase in claims reporting was not due to an increased number of claims per claimant.

We note that following the large increase in claims activity in 2004/05 there was a reduction in activity in 2005/06 and 2006/07.



We also note that the first and second half of the 2008/09 financial year experienced very different levels of claims activity, with the second half of the year slowing down considerably.

Accordingly, it is possible that the increase in 2008/09 may be followed by a reduction in activity.

However, at this stage and in the absence of any information to the contrary, we have assumed that claims activity for mesothelioma will remain at the level observed in 2008/09.

Based on the above observations, we have therefore assumed 300 claims for 2009/10, which equates to 25 claims per month.

#### 4.3 Asbestosis claims

It can be seen in Table 4.1 that for asbestosis, the incidence of notifications has shown a step change upwards since 2000/01 and then a gradual increase to 2003/04. There was then a step change in 2006/07.

For the three most recent years, claims reporting activity has been reasonably stable, between 159 and 169 claims.

Given this, we have assumed the recent high levels of claims reporting will continue into the future.

We have therefore estimated 162 claims to be reported in 2009/10.

#### 4.4 Lung cancer claims

For lung cancer claims, claim notifications have been reasonably steady and do not appear to have shown the same pattern of notification as mesothelioma and asbestosis.

There were 33 claims reported in 2008/09.

We have estimated 33 claims to be reported in 2009/10.

#### 4.5 ARPD & Other claims

For ARPD & Other claims, the number of claims reported has been volatile, with 17 claims reported in 2005/06 and 41 claims reported in 2007/08.

There were 47 claims reported in 2008/09.

We have estimated 48 claims to be reported in 2009/10.



#### 4.6 Workers Compensation and wharf claims

The number of Workers Compensation claims, including those met in full by the Liable Entities' Workers Compensation insurers, has exhibited some degree of volatility ranging from 33 claims to 62 claims in the last five years.

There were 59 claims reported in 2008/09.

We have estimated 60 claims to be reported in 2009/10.

It should be noted that the financial impact of this source of claim is not substantial given the proportion of claims which are settled for nil liability against the Liable Entities (typically around 90%), which results from the insurance arrangements in place.

For wharf claims, we have projected 9 claims to be notified in 2009/10. Again, the financial impact of this source of claim is not material.

#### 4.7 Summary of base claims numbers assumptions

In forming a view on the numbers of claims projected to be reported in 2009/10, we have taken into account the emerging experience in the latest financial year and a revised view of the expected numbers of claims reported monthly based on recent trends.

We have also considered the extent to which the experience in the previous 3 financial years, and trends in those claims numbers, will continue.

As outlined in Sections 4.2 to 4.6, our assumptions as to the levels of claims numbers to assume are as follows:

	2007/08	First half of 2008/09 *	Second half of 2008/09 *	2009/10 (projected)
Mesothelioma	272	328	268	300
Asbestosis	169	158	160	162
Lung Cancer	29	30	36	33
ARPD & Other	41	38	56	48
Wharf	8	12	10	9
Workers Compensation	46	72	46	60
Total	565	638	576	612

## Table 4.2: Base claim numbers assumptions

\* Annualised figures do not make allowance for any seasonality of reporting or for late development adjustments. They are calculated by multiplying the half-year experience by a factor of 2.

It can be seen that the first half of 2008/09 was particularly high, with the main cause of this being the high levels of mesothelioma and workers compensation claims activity.



Our projection for 2009/10 of 612 claims compares with a previous projection (as at 31 March 2008) for 541 claims in 2009/10.

The increase in the assumption predominantly reflects the higher reporting activity for mesothelioma, and credibility being attached to that experience, thereby resulting in a reconsideration of our previous views.

#### 4.8 Exposure and latency information

To project the pattern of incidence of claims again the Liable Entities, we have constructed a model which utilises the following inputs:

- The exposure to asbestos in Australia, adjusted to allow for the Liable Entities particular incidence of usage, noting that for the period to 1987 they had approximately a uniform market share but thereafter were not involved in asbestos products;
- The average period over which claimants are typically exposed; and
- The distribution of the latency period from average exposure for each disease type.

#### 4.8.1 Australian use of asbestos

Figure 4.5 shows measures of the production and consumption of asbestos in Australia in the period 1920 to 2002. It can be seen that the exposure, being measured in net consumption, appeared to peak in the early to mid 1970s. It can also be seen that for Australia as a whole, asbestos consumption continued at significant levels until the mid 1980s and then began to fall, but nonetheless continued through to 2002.

#### Figure 4.5: Consumption and production indices – Australia 1930-2002



Source: World Mineral Statistics Dataset, British Geological Survey, www.mineralsuk.com The data underlying this chart is shown in Appendix F.



The "averaged consumption" is derived as the consumption averaged over the prior 16-year period. The 16-year assumption for "averaging" the exposure is based on experience specific to the Liable Entities and reflects that, for the Liable Entities, claims have (on average) related to 16 years of exposure.

It is the averaged consumption which is used as a basis for projecting future mesothelioma claims numbers.

The following chart show the derivation and support for the assertion that claims have resulted from, on average, 16 years of exposure.





It can be seen that the average duration of exposure has generally varied between 15 years and 19 years, with an average of 15.8 years over the last five years and 16.8 years over the last ten years.



The following chart shows the timeline of exposure, diagnosis and claims reporting.

## Figure 4.7: Timeline of exposure and claim reporting



#### 4.8.2 Exposure information from current claims

We have also reviewed the actual exposure information available in relation to claims notified to date. This has been conducted by using the exposure dates stored in the claims database at an individual claim level and identifying the number of person-years of exposure in each exposure year. We have reviewed the pattern of exposure for each of the disease types separately, although we note that they tend to follow similar patterns for each disease type.

Figure 4.8: Exposure (person-years) of all



The chart shows that the peak of exposure from claims reported to date has so far arisen in 1968. It should be recognised that there is a significant degree of bias in this analysis in that the claims notified to date will tend to have arisen from the earlier periods of exposure.

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Over time, one would expect this curve to develop to the right hand side and the peak year of exposure to trend towards the early to mid 1970s, whilst also increasing in absolute levels at all periods of exposure as more claims are notified and the associated exposures from these are included in the analysis.

The relatively low level of exposure from 1987 onwards (about 3% of the total) is not unexpected given that all products ceased to be manufactured by 1987 but the exposure after that date likely results from usage of products already produced and sold before that date.

This chart is a cumulative chart of the position to date and does not show temporal trends in the allocation of claims to exposure years.

For example, one would expect that more recently reported claims should be associated with, on average, later exposures; and that claims reported in future years would continue that trend to later exposure periods.

To understand better these temporal trends, we have modelled claimants' exposures for each past claim report year since 1997/98.



## Figure 4.9: Exposure (person years) of all claimants to date by report year and exposure year

Pre-1976 1976-1980 1981-1985 1986-2008

As can be seen in the above chart, there has been a general increasing shift towards the period after 1975, evident by the downwards trends in the chart from left to right indicating that an increasing proportion of the claimants' exposure relates to more recent exposure periods.



We would expect that such a trend should continue for some time to come and that an increasing proportion of the exposure will relate to the period 1981/82 to 1985/86.

#### 4.8.3 Latency model

Our method for projecting claim numbers is described in Section 3.4.

In brief terms, we use the exposure curve (averaged consumption) together with a model of the latency period of claims to derive an index of future claim notifications. We then calibrate this index to a base number of claims notifications to estimate the future incidence of claims reporting.

Our latency model for mesothelioma is for latency from the average date of exposure to be normally distributed with a mean latency of 35 years and a standard deviation of 10 years.

We have monitored the latency period of the claims of the Liable Entities in order to test the validity of those assumptions.

We have measured the mean latency period from the average date of exposure to the date of notification of a claim.

In strict epidemiological terms, the latency period should be measured from the date of first exposure to the date of diagnosis.

Because our model utilises latency assumptions from the average date of exposure, the latency period reported in the following charts is not directly comparable with that referred to in epidemiological literature.

As indicated in Figure 4.7, the average period of exposure for claimants against the Liable Entities is around 16 years. This means the actual latency period from the date of first exposure is around 8 years more than indicated in the following charts.

Furthermore, given that the date of notification lags the date of diagnosis by around 8 months for mesothelioma and by about 2 to 3 years for non-mesothelioma disease types, the latency trends shown in the following charts might slightly overstate the latency to diagnosis.

The charts below show the average (mean) latency and the 25<sup>th</sup> percentile and 75<sup>th</sup> percentile observations.





#### Figure 4.10: Latency of mesothelioma claims

The above chart indicates that the average latency period from the average exposure is currently around 35 years for mesothelioma.

Epidemiological studies tend to suggest that the observed latency period (from first exposure) for mesothelioma is between 4 and 75 years, with an average latency of around 35 to 40 years and an implied standard deviation of around 11 years.

Given that the average period of exposure is 16 years, this implies our latency assumption from the date of first exposure is approximately 43 years (being  $35 + \frac{1}{2}$ \*16). Our model therefore generally accords with epidemiological literature and, if anything, assumes slightly longer latencies than epidemiological studies suggest.

At present, given that we are some 30 to 40 years after the main period of exposure, claims currently being reported reflect a broad mix of claims of varying latencies. Accordingly, any analysis of the latency period during the most recent 5 to 10 years:

- Should provide a good indicator of the underlying average latency period of each disease type; and
- Should have shown upwards trends given the fall-off in exposure in the late 1970s and 1980s.

Over the last ten years, the average latency of reported mesothelioma claims has increased from 33 years to almost 38 years.



The average observed latency should also be expected to show some further upward trends in the coming years.

The currently observed standard deviation of the latency period is 8.2 years.

The claims experience to date and the assumptions selected seem to accord with epidemiological research in relation to mesothelioma, once the relevant adjustments to standardise onto a consistent terminology are made.



#### Figure 4.11: Latency of asbestosis claims

#### Figure 4.12: Latency of lung cancer claims







Figure 4.13: Latency of ARPD & Other claims

The latency periods for the other disease types shows a more surprising trend, appearing to be longer than epidemiological literature has tended to suggest (particularly when adjusting our information to the latency from first exposure).

A summary of our latency assumptions by disease type are shown below.

# Table 4.3: Assumed latency periods from average date of exposure to notification

	Mean (years)	Std Dev (years)
Mesothelioma	35	10
Asbestosis	35	8
Lung Cancer	35	10
ARPD & Other	32	10
Wharf	n/a	n/a
Workers Compensation	n/a	n/a

## 4.9 Peak year of claims and estimated future notifications

Based on the application of our exposure model and our latency model, the peak year of notification of claims reporting against the Liable Entities for each disease type is assumed to be as follows:



	Current valuation	Previous valuation
Mesothelioma	2010/11	2010/11
Asbestosis	2008/09	2008/09
Lung Cancer	2010/11	2010/11
ARPD & Other	2007/08	2007/08
Wharf	2000/01	2000/01
Workers Compensation	2007/08	2007/08

## Table 4.4: Peak year of claim notifications

In adopting these assumptions, we also considered various epidemiological views and models from both Australia and the UK, recognising that there are conflicting and widely diverging views as to when the peak might arise: with some projecting earlier peaks than we have assumed (e.g. Leigh & Driscoll 2003), whilst others project peak activity will be later than we have assumed (e.g. Clements et al, 2007).

In considering the relevance of the findings of the various epidemiological studies, we note the following:

- Many of the studies are based on developing an Australia-wide model of incidence of people who may develop mesothelioma based on the exposures that took place in Australia. Australia continued importing and using Chrysotile asbestos until 31 December 2003, when a ban came into effect.
- The KPMG Actuaries model is a model for the Liable Entities', and not the whole of Australia's, exposures. Our model recognises the timing of the involvement of the former James Hardie entities with asbestos. The insulation business was closed in 1974; the building products business ceased using asbestos in 1985; the pipes business ceased using asbestos in 1987; and the brakes business ceased using asbestos in 1984 and was sold in 1987.
- A national model of incidence may not be relevant to individual populations of claimants, as the timing of the exposure in an individual population of claimants may be different to the exposure profile for Australia as a whole.

We have projected the future number of claim notifications from the curve we have derived using our exposure model and our latency model. We have applied this curve to the base number of claims we have estimated for 2009/10 as summarised in Section 4.7.



Figure 4.14 shows the pattern of future notifications which have resulted from the application of our exposure and latency model and the recalibration of the curve to our revised expectations for 2009/10.





The recognition of the emerging experience to date has increased our projected ultimate number of claims compared with our previous valuation by 1,737 claims, the majority of which results from mesothelioma (1,073) and workers compensation (231) and other more minor changes in relation to the other disease claim types.

## 4.10 Baryulgil

Almost half of the claims settled which relate to asbestos mining activities at Baryulgil (as discussed previously in Section 1.2.3) have been settled with no liability against the Liable Entities; and for the remaining settled claims, the Liable Entities have typically borne around one-third to one-half of the settlement amount, reflecting the contribution by other defendants to the overall settlement (including those which have since been placed in liquidation).

For the purposes of our valuation, we have estimated there to be a further 23 future claims, comprising 8 mesothelioma claims, 8 other product and public liability claims and 7 Workers Compensation claims.

We have assumed average claims and legal costs, net of Workers Compensation insurances, broadly in line with those described in Section 5.



Our projected liability assessment at 31 March 2009 of the additional provision (for claims not yet reported) that could potentially be required is an undiscounted liability of \$7.4m and a discounted liability of \$5.3m, all of which is deemed to be a liability of Amaca.



## 5 ANALYSIS OF EXPERIENCE – AVERAGE CLAIMS COSTS

#### 5.1 Overview

We have modelled the average claim awards and plaintiff and defendant legal costs (where separately disclosed) by disease type in arriving at our valuation assumptions.

Table 5.1 shows how the average settlement costs for non-nil attritional claims have varied by plaintiff settlement year. All data have been converted into current money terms (i.e. mid 2008/09 money terms) using base inflation at 4% per annum.

The reader's attention is drawn to the fact that the average amounts shown hereafter relate to the average amounts of the contribution made by the Liable Entities, and do not reflect the total award payable to the plaintiff unless this is clearly stated to be the case.

In particular, for Workers Compensation the average awards reflect the average contribution by the Liable Entities for claims in which they are joined but relate only to that amount of the award determined against the Liable Entities which is not met by a Workers Compensation Scheme or Policy.

Plaintiff	Mesotheliom	Asbestosis	Lung Cancer	ARPD &	Wharf	Workers
settlement				Other		Compensation
Year						
1997	188,007	74,404	44,927	78,534	76,973	131,385
1998	200,974	48,102	35,321	126,564	0	52,301
1999	223,685	75,561	80,491	134,227	77,867	123,835
2000	252,566	78,201	99,224	86,551	84,069	69,583
2001	292,868	93,943	122,158	111,544	53,672	55,927
2002	265,788	100,959	83,998	85,026	120,040	117,253
2003	248,084	113,265	106,029	98,779	116,703	101,221
2004	265,047	87,110	159,087	86,810	83,589	148,762
2005	253,167	90,969	84,061	89,979	73,634	108,026
2006	256,614	96,719	115,862	77,854	119,094	100,228
2007	245,519	80,549	113,004	48,603	32,898	175,797
2008	271,291	91,907	102,063	91,481	145,262	33,333

# Table 5.1: Average attritional non-nil claim award(inflated to current money terms)



#### 5.2 Mesothelioma claims

In setting our assumption for mesothelioma, we have considered average awards over the last 3, 4 and 5 years.





The chart above shows the historic variability in average claim sizes for mesothelioma varying from \$190,000 to \$290,000 in 2008/09 money terms, although the last seven years have shown a greater degree of stability.

The average of the last three years is \$259,000; the average of the last four years is \$258,000 and the average of the last five years is \$259,000.

Taking the above averages into consideration, and particularly noting the increased award size in 2008/09 we have adopted a valuation assumption of \$265,000 for mesothelioma claims in 2008/09 money terms.

This compares with our previous valuation assumption of \$266,500 in 2008/09 money terms. This represents a 1% reduction in inflation-adjusted terms.

#### Table 5.2: Average mesothelioma claims assumptions

Valuation Report	Claim settlement yea 2007/08 2008/09	
31-Mar-08	250,000	266,500
31-Mar-09	n/a	265,000



#### 5.3 Asbestosis claims

For asbestosis, it can be seen from Table 5.1 that in 2003 the average claim settlement was high relative to recent experience.





The chart shows the substantial variation in average awards though in part this is affected by the low numbers of claims settled in the earlier years.

The average of the last three years is \$89,000; the average of the last four years is \$89,000 and the average of the last five years is \$89,000.

We have reduced our assumption to \$92,500 in light of the recent experience, whilst still giving some credibility to the experience in 2003. This represents a 6% reduction in inflation-adjusted terms.

Table 5.3: Average asbestosis claims assumptions

	Claim settlement year		
Valuation Report	2007/08	2008/09	
31-Mar-08	92,500	98,600	
31-Mar-09	n/a	92,500	



#### 5.4 Lung cancer claims

Lung cancer average claims costs appear to have experienced some volatility in the last five years, although this is not unexpected given the small volume of claim settlements (usually approximately 20 per annum).

Average claim costs observed in 2004, 2006 and 2007 were high relative to previous and more recent experience. This was mainly due to a number of claim settlements being made which were in excess of \$200,000.



# Figure 5.3: Inflated average awards and number of non-nil claims settlements for lung cancer claims

The average of the last three years is \$110,000; the average of the last four years is \$104,000 and the average of the last five years is \$115,000.

At this valuation, we have adopted an average award size of \$115,000, taking into account the recent downward trend in experience but recognising the volatility in past experience and the high average award sizes in 2004. This represents a 10% reduction in inflation-adjusted terms.

	Table 5.4	: Average	lung canc	er claims	assumptions
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	Claim settlement year		
Valuation Report	2007/08	2008/09	
31-Mar-08	120,000	127,900	
31-Mar-09	n/a	115,000	



#### 5.5 ARPD & Other claims

Historically, average awards have been volatile owing to the low number of claims.



Figure 5.4: Inflated average awards and number of non-nil claims settlements for ARPD & Other claims

For ARPD & other claims, the average of the last three years is \$76,000; the average of the last four years is \$80,000 and the average of the last five years is \$81,000.

We have adopted an average award size of \$85,000 recognising the experience between 2002 and 2005 (and largely ignoring the experience in 2007 owing to the lower number of claim settlements in that year). This is a 6% reduction in inflation-adjusted terms.

#### Table 5.5: Average ARPD & Other claims assumptions

	Claim settlement year		
Valuation Report	2007/08	2008/09	
31-Mar-08	85,000	90,600	
31-Mar-09	n/a	85,000	



#### 5.6 Workers Compensation claims

The average award for non-nil Workers Compensation claims has shown a large degree of volatility.

In 2007/08 there was a significant increase in average awards, although this is predominantly due to the impact of one large claim.



Figure 5.5: Inflated average awards and number of non-nil claims settlements for Workers Compensation claims

The average of the last three years is \$125,000; the average of the last four years is \$122,000 and the average of the last five years is \$126,000.

These reductions, relative to previous years, are driven by the low average claim size for 2008/09.

We have adopted \$125,000 as our valuation assumption. This represents a 22% reduction in inflation-adjusted terms. This assumption is not material to the overall liability.

Table 5.6: Average Workers Compensation claims assumptions

	Claim settlement year		
Valuation Report	2007/08	2008/09	
31-Mar-08	150,000	159,900	
31-Mar-09	n/a	125,000	


## 5.7 Wharf claims

For wharf claims, the average of the last three years has been \$113,000; the average of the last four years has been \$101,000 and the average of the last five years has been \$98,000.





The experience in 2008/09 has been affected by one large claim of almost \$500,000. In the absence of this claim, the average claim size would have been \$95,000.

We have adopted a valuation assumption of \$100,000 in current money terms. This is an increase of 4% in inflation-adjusted terms.

Given the small volume of wharf claims, this assumption is not financially significant.

	Claim settlement year				
Valuation Report	2007/08	2008/09			
31-Mar-08	90,000	95,900			
31-Mar-09	n/a	100,000			

Note: 2007/08 settlements are in 2007/08 dollars whilst 2008/09 settlements are in 2008/09 dollars.



## 5.8 Large claim size and incidence rates

There have been 30 settled claims with claims awards in excess of \$1m in 2005/06 money terms. All of these claims are product and public liability claims and the disease diagnosed in every case is mesothelioma.



#### Figure 5.7: Distribution of individual large claims by settlement year

In aggregate these claims have been settled for \$52.4m in current money terms, at an average cost of approximately \$1.75m. We have noted two claims of more than \$4m in current money terms.

The incidence rate of large claims to non-nil settlements in any one year has been variable, dependent on the random incidence of large claims by settlement year:

- Over the period 1997-2008 there have been 27 large claims compared with 1,815 non-nil non-large claims settlements. This gives an incidence rate of 1.47%.
- Over the period 2001-2008 there have been 22 large claims compared with 1,487 non-nil non-large settlements, an incidence rate of about 1.46%.

We have assumed that there will be a large claim incidence rate of 1.67% prospectively over all future years. This is a reduction from our previous valuation assumption.

With approximately 300 mesothelioma claims settlements per annum projected, we are therefore projecting to observe 5 large claims per annum.



We have taken the average costs experienced over all years as our base assumption, given the small volume of such claims. This has resulted in an assumption of \$1.75m for the claim award and \$50,000 for plaintiff legal costs with separate allowance also made for defendant legal costs of \$150,000 per claim. Implicitly this allows for the occasional \$4m claim at an incidence rate broadly equivalent to past experience.

As a consequence, the overall loading per non-nil mesothelioma claim (including plaintiff legal costs) to make allowance for large claims is 30,000 (being 1.67% x 1,800,000).

We note that the actual incidence of, and settlement of, large claims is not readily predictable and it should be expected that deviations will occur from year to year due to random fluctuations because of the small numbers of large claims (about 5 per annum).

For other disease types, there have been no claims settled which have exceeded \$550,000 in actual money terms. Therefore we have made no allowance for large claims for other disease types.

#### 5.9 Summary assumptions

The following table provides a summary of our average claim cost assumptions at this valuation, and those assumed at the previous valuation.

	Current Valuation	Previous Valuation
Mesothelioma	265,000	266,500
Asbestosis	92,500	98,600
Lung Cancer	115,000	127,900
ARPD & Other	85,000	90,600
Wharf	100,000	95,900
Workers Compensation	125,000	159,900
Mesothelioma Large Claims	Average Size: \$1.75m. Frequency: 1.67%	Average Size: \$1.76m. Frequency: 2.00%

# Table 5.8: Summary average claim cost assumptions

Note: Both the current valuation assumption and the previous valuation assumption are expressed in 2008/09 money terms.



# 6 ANALYSIS OF CLAIMS EXPERIENCE – NIL SETTLEMENT RATES

#### 6.1 Overview

We have modelled the nil settlement rates, being the number of nil settlements expressed as a percentage of the total number of settlements (nil and non-nil).

The following table shows the observed nil settlement rates by disease type and by settlement year.

Plaintiff settlement Year	Mesotheliom a	Asbestosis	Lung Cancer	ARPD & Other	Wharf	Workers Compensatio n
1997	34%	20%	24%	56%	0%	84%
1998	26%	50%	11%	30%	100%	90%
1999	10%	15%	27%	17%	17%	77%
2000	6%	11%	6%	14%	36%	83%
2001	15%	12%	30%	13%	17%	86%
2002	9%	3%	21%	11%	33%	80%
2003	9%	1%	26%	7%	46%	95%
2004	8%	10%	27%	10%	0%	94%
2005	8%	5%	39%	18%	17%	93%
2006	18%	13%	33%	50%	0%	95%
2007	21%	11%	29%	23%	33%	72%
2008	7%	10%	29%	12%	11%	86%

# Table 6.1: Nil settlement rates

It should be noted that some of the nil settlement rate in these tables have changed since the last valuation report (particularly for the more recent years). This reflects ongoing activity on the claims files that can be re-opened with settlement and recovery amounts modified over time.



## 6.2 Mesothelioma claims

The nil settlement rates for mesothelioma have shown some degree of volatility between settlement years.

Figure 6.1 shows the number of claims settled for nil cost, the total number of claims settled and the implied nil settlement rate for each settlement year.



Figure 6.1: Mesothelioma nil claims experience

During the last six years, the nil settlement rate has varied between 7% and 21%.

In considering the future nil settlement rate assumption, we note the following:

- The last three years have averaged 15%, the last four years have averaged 14% and the last five years have averaged 12%;
- The experience in 2006/07 and 2007/08 has shown an increased nil settlement rate to an average of around 19%; and
- In 2008/09, the rate has fallen to 7%.

Taking all of these factors into consideration and in particular the variability from year to year, we have slightly reduced the assumed future nil settlement rate to 12%.



# 6.3 Asbestosis claims

As with mesothelioma, the historic asbestosis nil settlement rates have been fairly volatile, although they have been steady for the last three years.



#### Figure 6.2: Asbestosis nil claims experience

We have reviewed the average rate over the last 3, 4 and 5 years in determining our assumption.

The last three years have averaged 11%, the last four years have averaged 11% and the last five years have averaged 10%.

In these circumstances we have assumed a nil settlement rate of 11%, slightly increased from our previous valuation assumption of 10.5%.



# 6.4 Lung cancer claims

Given the small volumes of claims, volatility in nil settlement rates for lung cancer claims is to be expected.



#### Figure 6.3: Lung cancer nil claims experience

The average of the last three years for lung cancer claims has been 30%, the last four years have averaged 33% and the last five years have averaged 31%.

The nil settlement rate trend observed in these averages is influenced by the high nil settlement rate for 2005/06 (39%). The chart also shows a downward trend since 2005/06 based on the average of the last three years. In these circumstances we have selected 30% as the future nil settlement rate. This is a reduction from 32% at the previous valuation.

We note that this rate could be affected in the future by legal changes to the division and acceptability of claims in relation to claimants who have also smoked and the contribution of smoking to the incidence of lung cancer. At this time, we have no evidence to make any specific adjustment to the assumption for that factor.



# 6.5 ARPD & Other claims

As with other disease types, there has been significant volatility in the historic nil settlement rates, given the low numbers of claims for this disease.



# Figure 6.4: ARPD & Other nil claims experience

The average for the last three years for ARPD & Other claims has been 27%, the average for the last four years has been 25% and the average for the last five years has been 22%.

These figures are affected by the high nil settlement rate experience for 2006/07.

In these circumstances, we have selected 20% as our nil settlement rate assumption for this class of disease. This is a reduction from our previous valuation assumption of 22%.



## 6.6 Workers Compensation claims

The nil settlement rates for Workers Compensation are high and are reflective of the portion of claims whose costs are fully met by a Workers Compensation Scheme or Policy. The proportion of such claims which are fully met by insurance will have increased over time and are likely to continue to do so in the future.

This trend can be observed in the following chart. The nil settlement rate has risen from 50% in 1994 to in excess of 90% for four of the last seven years, and it has been above 80% for ten of the last twelve years.



Figure 6.5: Workers Compensation nil claims experience

Whilst the nil settlement rate in 2007/08 showed a significant reduction to 72%, it should be noted that the number of settlements were very low, at approximately half the normal level of settlements. The rate in 2008/09 has reverted more closely to "normal" levels, although it still remains below 90% and again reflects low settlement activity.

The average nil settlement rate of the last three years is 88%, the average of the last four years is 89% and the average of the last five years is 90%.

As a result, whilst we have reduced the nil settlement rate assumption, we have not placed significant credibility on the 2007/08 experience at this valuation.

In these circumstances, we have selected a rate of 87% at this valuation, reduced from our previous valuation assumption of 90%.



#### 6.7 Wharf claims

For wharf claims, the average of the last three years is 12%, the average of the last four years is 14% and the average of the last five years is 12%, although these averages are affected by two years where there were no nil claims settlements. We have selected 20% as our valuation assumption which is reduced from our previous valuation assumption of 25%.

Given the extremely low volume of claims activity for Wharf claims, this assumption is highly subjective but is also not material to the liability assessment.



Figure 6.6: Wharf nil claims experience

#### 6.8 Summary assumptions

The following table provides a summary of our nil settlement rate assumptions at this valuation, and those assumed at the previous valuation.

#### Table 6.2: Summary nil settlement rate assumptions

	Current Valuation	Previous Valuation
Mesothelioma	12.0%	12.5%
Asbestosis	11.0%	10.5%
Lung Cancer	30.0%	32.0%
ARPD & Other	20.0%	22.0%
Wharf	20.0%	25.0%
Workers Compensation	87.0%	90.0%



# 7 ECONOMIC AND OTHER ASSUMPTIONS

## 7.1 Overview

The two main economic assumptions required for our valuation are:

- The underlying claims inflation assumptions adopted to project the future claims settlement amounts and related costs.
- The discount rate adopted for the present value determinations.

These are considered in turn in Sections 7.2 to 7.5.

We also discuss the basis of derivation of other assumptions, being:

- The cross-claim recovery rate; and
- The pattern of settlement of reported claims.

#### 7.2 Claims inflation

We are required to make assumptions about the future rate of inflation of claims costs. We have adopted a standard Australian actuarial claims inflation model for liabilities of the type considered in this report that is based on:

- An underlying, or base, rate of general economic inflation relevant to the liabilities, in this case based on wage/salary (earnings) inflation; and
- A rate of superimposed inflation, i.e. the rate at which claims costs inflation exceeds base inflation.

#### 7.2.1 Base inflation basis

Ideally, we would aim to derive our long term base inflation assumptions based on observable market indicators or other economic benchmarks. Unfortunately, such indicators and benchmarks typically focus on inflation measures such as CPI (e.g. CPI index bond yields and RBA inflation targets).

We have therefore derived our base inflation assumption from CPI based indicators and long term CPI / AWOTE<sup>7</sup> relativities.

#### 7.2.2 CPI assumption

We have considered two indicators for our CPI assumption:

<sup>&</sup>lt;sup>7</sup> AWOTE = Average Weekly Ordinary Time Earnings



- Market implied CPI measures.
- RBA CPI inflation targets.

We have measured the financial market implied expectations of the longerterm rate of CPI by reference to the gap between the yield on Commonwealth government bonds and the real yield on Commonwealth government CPI index-linked bonds.

The chart below shows the yields available for 10-year Commonwealth Bonds and Index-linked bonds. The gap between the two represents the implied market expectation for CPI at the time.



# Figure 7.1: Trends in Bond Yields

#### Source: <u>http://www.rba.gov.au/Statistics/Bulletin/index.html</u>

It can be seen that the implied rate of CPI has varied between 1.5% per annum and 4% per annum during the last 11 years, although it broadly remained between 2% and 3% per annum from March 2000 to January 2006.

Currently, the effective annual yield on long-term government bonds is approximately 4.4% p.a. and the equivalent effective real yields on long-term index-linked bonds is approximately 2.2% per annum. This would imply current market expectations for the long-term rate of CPI were of the order of 2.2% per annum.

In considering this result we note that:

• The implied CPI rate stayed consistently above 3.2% per annum from March 2006 until October 2008.



- The yields on both nominal and CPI-linked government bonds are driven by supply and demand, and both are in increasingly short supply in the market. The yields on both, and their relativities, are subject to some volatility and likely some short term distortion, particularly during the Global Financial Crisis (GFC).
- The RBA's long term target is for CPI to be maintained between 2% and 3% per annum.
- The implied rate of CPI showed a prolonged trend upwards from the early part of 2003, which coincides when it last was towards the bottom end of the RBA's target range, and May 2008 when it peaked at almost 4.2%.
- Since May 2008, the implied rate of CPI has shown a significant reduction from 4.2% to 1.5% at 31 December 2008 and 2.2% at 31 March 2009.
- Recent actual CPI figures show reductions to 3.7% per annum at December 2008 and 2.5% at March 2009.
- Market commentary suggests further reductions in actual CPI in the near-term, although the extent to which it is likely for CPI to remain outside the target range over the next 10 years is less clear.

Weighing this evidence together, this suggests a long term CPI inflation benchmark of 2.50% to 3.00% per annum.

# 7.2.3 Wages (AWOTE) / CPI relativity

The following chart summarises the annualised rates of AWOTE and CPI inflation, and their relativities, for the 1970 to 2008 period.





Figure 7.2: Trends in CPI and AWOTE

In considering the above, we note:

- The last period from 1995 reflects largely a continuous period of economic growth which may not be reflective of longer term trends.
- The longer periods cover a range of business cycles, albeit that the period from 1970 includes the unique events of the early 1970's (i.e. general inflationary pressures, both locally and worldwide, and the impact of high oil prices owing to the Oil Crisis in 1973).

Allowing for these factors, the historic data suggests a CPI / AWOTE relativity, or gap, of approximately 1.75% to 2.00% per annum.

On this basis, given a longer term CPI benchmark of 2.50% to 3.00%, it would suggest a longer-term wage inflation (AWOTE) assumption of 4.25% to 5.00% p.a.

#### 7.2.4 Impact of claimant ageing and non-AWOTE inflation effects

The overall age profile of claimants is expected to rise over future years with the consequent impact that, other factors held constant, claims amounts should tend to increase more slowly than average wage inflation (excluding any societal changes, e.g. changes in retirement age). This is due to both reduced compensation for years of income or life lost and a tendency for post retirement age benefits to possibly increase closer to CPI than AWOTE.

Furthermore, we note that:



- some heads of damage, such as general damages and compensation for loss of expectation of life, would be expected to rise at CPI or lower;
- other heads of damage, including loss of earnings, would be expected to rise at AWOTE (ignoring the ageing effect); and
- medical expenses and care costs would be expected to rise in line with medical cost inflation which in recent times has been well in excess of AWOTE.



Figure 7.3: Age profile of mesothelioma claimants by report year

The chart indicates that claimants are generally continuing to age. The claims experience does not indicate a considerable increase in the number (and proportion) of younger claimants. We note the claim reported in 2006/07 involving a 25-year old claimant. However, the chart indicates that the trend for all of the lines in the graph (other than the minimum age) is upwards indicating that there is a gradual ageing of the population of claimants.

The chart also indicates that the average age of claimants is increasing by around 0.35 years each year, with the average age now about 70 years.

We have reviewed how average claim sizes vary by decade of age.





# Figure 7.4: Average mesothelioma awards by decade of age

The analysis suggests that average mesothelioma awards reduce by around 20%-30% for each increasing decade of age when considering the typical age range of the claimants (i.e. over 60 years of age).

Analysis also suggests that mesothelioma claimants are typically ageing by around 0.36 years every year.

Weighing these various factors together, and allowing for the relative mix of claims between mesothelioma and non-mesothelioma, we consider that a reasonable assumption for the deflationary allowance for the impact of ageing on average sizes is 0.50% to 0.75% per annum.

Taking all of these factors into account, we have adopted a base inflation assumption of 4.25% per annum.



# 7.3 Superimposed inflation

#### 7.3.1 Overview

At our previous valuation, we indicated that an allowance of 2.25% per annum for superimposed inflation was appropriate. We identified a number of factors we considered in setting this assumption.

These included:

- The rate of pure (judicial) inflation reflecting the natural tendency for personal injury claim awards to rise at a rate higher than wage inflation;
- The impact of medical or other developments;
- The emergence of new heads of damage, or the expansion of existing heads of damage; and
- The mix of claims costs by different heads of damage.

Additionally, we have considered the potential for these factors to be offset to some extent by:

- The potential for existing heads of damage to be removed, or for the contraction of these heads of damage (e.g. *CSR vs. Eddy*); and
- The effect of an ageing population of claimants on the rate of inflation of overall damages, a component of which relates to economic loss.

Whilst the future rate of superimposed inflation is uncertain, and not predictable from one year to the next, it is of note that the average claim costs appear to have been stable in the last few years, although the emergence of new or expanding heads of damage does not tend to proceed smoothly but rather is more "lumpy".

#### 7.3.2 Analysis of past rates of superimposed inflation

We have reviewed the rate of inflation of claims costs by settlement year for the last 10 years for mesothelioma claims. We have assessed this by using uninflated claim costs and therefore the chart directly measures the trends in the total rate of inflation.

The chart can also be used to imply the rate of inflation of claim awards over and above base inflation (i.e. measuring the rate of superimposed inflation) in any one year or an annualised rate of superimposed inflation over a longerterm.





# Figure 7.5: Average mesothelioma awards

The chart shows the "best fit" of the rate of growth of inflated claim awards using two possible models:

- A linear fit which assumes that the average inflated award is a linearly increasing function (such that the monetary increase from year to year is fixed); and
- An exponential fit which assumes that the rate of increase in the average inflated awards (i.e. the rate of superimposed inflation) is constant.

The actual rate of inflation within any one year, and the extent to which superimposed inflation arises in any one year, is not in itself readily estimable but rather is a function of a whole range of factors. It can be inferred from Table 5.1 and Figure 7.5, that the average rate of claim inflation can be extremely volatile from year to year, with figures as low as -20% and as high as +20% observed since 1995.

The actuarial approach for this report is to take an average view to be applied over the long-term noting that there will necessarily be deviations from this average on an annual basis.

Using the chart and these models of best fit, we have the following observations in relation to the rate of claim inflation:

• The linear fit of the last 10 years' experience implies a rate of claim inflation of around 4.2% per annum. This implies superimposed inflation of around 0.0% per annum;



- The exponential fit of the last 10 years' experience implies the rate of claim inflation to be around 5.6% per annum. This implies superimposed inflation of around 1.25% per annum;
- Over the last five years, the annualised rate of claim inflation (averaged across all disease types) has been 5% per annum; and
- Step changes in average claim costs typically reflect the impact of:
  - Emerging new heads of damage (such as Sullivan vs. Gordon and Griffiths vs. Kerkemeyer); and
  - Changes in the contribution rate of the Liable Entities to the overall settlements.

Weighing all of this evidence together, we have adopted an assumed rate of future superimposed inflation of 2.25% per annum, noting in particular that this rate is intended to be a longer-term rate of inflation.

# 7.4 Summary of long-term claims inflation assumptions

The table below summarises the claims inflation assumptions we have used within our current and previous liability assessments.

	Current	Previous
	Valuation	Valuation
Base inflation	4.25%	4.25%
Superimposed inflation	2.25%	2.25%
Total inflation	6.60%	6.60%

#### Table 7.1: Long-term claims inflation assumptions

Base and superimposed Inflation are applied multiplicatively in our models so that claim cost inflation is calculated as 1.0425 \* 1.0225 - 1

There are some short-term adjustments to these figures owing to the impact of the Global Financial Crisis.

#### 7.5 Discount rates: Commonwealth bond zero coupon yields

We have calculated the zero coupon yield curve at 31 March 2009, underlying the prices, coupons and durations of certain Australian government bonds for the purpose of discounting the liabilities for this report.



The use of such discount rates is consistent with standard Australian actuarial practice for such liabilities, is in accordance with Professional Standard PS300 and is also consistent with our understanding of the Australian accounting standards, however the discussion below illustrates some of the issues caused by the Global Financial Crisis and explains the approach we have therefore taken.

Year	Current	Previous
	Valuation	Valuation
1	2.69%	6.57%
2	3.35%	6.10%
3	4.06%	6.09%
4	4.53%	6.09%
5	4.76%	6.09%
6	4.87%	6.09%
7	4.99%	6.09%
8	5.11%	6.09%
9	5.24%	6.09%
long-term	6.00%	6.09%

# Table 7.2: Zero coupon yield curve by duration

# 7.6 Impact of the Global Financial Crisis (GFC)

The GFC has the potential to impact our economic valuation assumptions, most notably:

- Future assumed investment returns (discount rates); and
- Wage inflation.

#### 7.6.1 Discount rates

The most direct way in which the GFC has already impacted the valuation result has been the large fall in expected future rates of investment return; with the lowering of prospective bond yields by between 1.0 and 4.0 percentage points at most durations (see Table 7.2).

A fall in the discount rate leads to an increase in the valuation result.

One of the uncertainties in our valuation is the fact that fixed interest Commonwealth Government Bonds do not exist at most of the durations of our cashflow projection, with the maximum term of bonds being around 10 to 15 years.



This means we need to take a long-term view that is not measured by marketobservable rates of return.

#### 7.6.2 Wage inflation

It is possible that there will be an impact of the GFC on future wage inflation (which affects the rate at which claims costs escalate).

It would be anticipated that wage inflation, particularly in the near term, would be tempered by the impact of the GFC.

However, we also note that some economists continue to predict relatively high levels of wage inflation.

# 7.6.3 Consistency in assumptions between valuations

Whilst the GFC is likely to have an impact in short-term economic metrics, one would not expect that it will have a considerable effect in 10 years or more.

In these circumstances, it is important to consider previous long-term assumptions.

At our previous valuation, we assumed that the spot rate in the long-term would be 6.09% (being that implied by bond market prices). This compared with a wage inflation assumption (excluding the effect of ageing) of 4.75%, implying a "gap" of 1.34%.

If we consider current bond market implied prices, the spot rate for the long-term (to duration 10) is just over 4.40%. With a wage inflation assumption (excluding ageing) of 4.75%, this would imply the long-term "gap" had reduced to -0.35%.

This appears to produce an inconsistency in long-term assumptions between the two valuations.

Furthermore, a comparison of the 10 year bond yield with AWOTE suggests that the average "long-term gap" has been between 1.3% and 1.4%.

#### 7.6.4 Our approach

Our approach at this valuation has been to take the bond yields implied by bond market prices, without adjustment, up to 10 years.

Thereafter, we have set the spot rate to be 1.25 percentage points above our underlying long-term wage inflation assumption of 4.75% (before ageing allowance).

The combined effect is that our long-term spot rate is 6.00% at durations 10+.



In relation to wage inflation, we have assumed that for the next 2 years wage inflation will be 0.5% lower than our long-term assumption and that it will graduate back to the long-term position over the following three years.

# 7.7 Cross-claim recovery rates

Cross-claim recoveries have totalled \$19m to date. This represents 3.2% of gross claim costs.

The majority of cross-claim recoveries have been in relation to the Hardie-BI Joint Venture with CSR, including more than \$4m paid in 2005/06 and \$2m paid in 2006/07 in relation to cross-claims against CSR and Bradford Insulation in relation to the Hardie-BI Joint Venture.

The following chart shows how the experience of cross-claim recoveries has varied over time, both in monetary terms and expressed as a percentage of gross payments.



# Figure 7.6: Cross-claim recovery experience

Given the observations that 2005/06 (\$5.8m) and 2006/07 (\$3.4m) have been impacted by significant recoveries from CSR and also due to the impact of the Hardie-BI Joint Venture, and given that such recoveries in part relate to recoveries that ought to have been made earlier, the rate of recovery exhibited in those two years is currently not believed to be a good guide to the future level of recovery.



Taking this, and the recent levels of cross-claims recoveries, into account we have assumed that future levels of cross-claim recoveries will be 2.5% of the average award. This is an increase from the previous assumption of 2.2% and reflects increased credibility given the stability in the experience for the last two years.

# 7.8 Settlement Patterns

Triangulation methods are used to derive the past pattern of settlement of claims and are used in forming a view on future settlement patterns.

The following triangles provide an illustrative example of how we perform this:

# Figure 7.7: Settlement pattern derivation for mesothelioma claims: paid as % of ultimate cost

Yr of Notification													12
1996	48.6%	97.3%	97.8%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
1997	45.6%	85.2%	85.2%	85.7%	85.7%	92.0%	92.0%	97.4%	99.6%	99.6%	99.6%	99.6%	
1998	63.8%	96.5%	97.7%	97.7%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%		
1999	63.2%	95.0%	95.1%	95.1%	96.9%	97.3%	100.0%	100.0%	100.0%	100.0%			
2000	66.2%	96.7%	99.2%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%				
2001	58.4%	95.9%	98.2%	99.5%	99.5%	99.6%	99.6%	99.6%					
2002	61.5%	95.5%	99.9%	99.9%	100.0%	100.0%	100.0%						
2003	58.5%	92.9%	97.2%	99.4%	99.4%	99.9%							
2004	57.9%	94.6%	97.7%	98.7%	99.5%								
2005	62.8%	94.8%	97.4%	97.5%									
2006	58.0%	85.9%	89.0%										
2007	49.7%	90.2%											
2008	62.8%												

# Figure 7.8: Settlement pattern derivation for non-mesothelioma claims: paid as % of ultimate cost

Yr of Notification													
1996	32.1%	50.2%	61.7%	81.3%	84.1%	84.1%	94.2%	94.2%	99.0%	99.0%	100.0%	100.0%	100.0%
1997	13.5%	45.2%	81.2%	86.2%	95.9%	98.8%	98.8%	98.8%	98.8%	98.8%	98.8%	100.0%	
1998	19.2%	63.1%	85.2%	89.5%	90.4%	97.4%	97.4%	98.0%	98.4%	98.4%	98.4%		
1999	19.1%	68.8%	88.7%	95.2%	95.2%	96.5%	96.5%	96.5%	96.5%	96.5%			
2000	22.1%	52.8%	72.5%	85.5%	85.5%	85.5%	88.5%	88.5%	92.4%				
2001	29.7%	62.3%	85.7%	86.1%	87.0%	87.9%	89.1%	92.0%					
2002	19.4%	67.0%	85.4%	91.6%	94.5%	97.0%	98.1%						
2003	25.6%	70.9%	88.0%	92.4%	95.2%	98.6%							
2004	22.4%	59.9%	81.7%	91.6%	93.5%								
2005	21.9%	81.2%	93.2%	96.2%									
2006	25.1%	69.4%	88.4%										
2007	28.1%	76.9%											
2008	23.9%												



We have therefore estimated the settlement pattern from future claim reporting as follows:

		Non-
Delay (years)	Mesothelioma	Mesothelioma
0	63%	23%
1	30%	44%
2	4%	19%
3	1%	4%
4	1%	2%
5	1%	2%
6	0%	1%
7	0%	1%
8	0%	1%
9	0%	1%
10	0%	1%
11	0%	1%
12	0%	0%

# Table 7.3: Settlement pattern of claims awards by delay from claimreporting

These assumed settlements patterns, and also those relating to defence legal costs, have been modified since our previous valuation: generally resulting in a substantial speeding up of settlement patterns reflecting the actual experience of AICFL in the last year.



# 8 VALUATION RESULTS

# 8.1 Central estimate liability

At 31 March 2009, our projected central estimate of the liabilities of the Liable Entities (the Discounted Central Estimate) to be met by the AICF Trust is \$1,781.6m (March 2008: \$1,426.3m).

We have not allowed for the future Operating Expenses of the AICF Trust or the Liable Entities in the liability assessment.

The following table shows a summary of our central estimate liability assessment and compares the current assessment with our previous valuation.

		Mar-09					
		\$m					
	Gross of		Net of	Net of			
	insurance	Insurance	insurance	insurance			
	recoveries	recoveries	recoveries	recoveries			
Total projected cashflows (uninflated)	1,757.9	233.6	1,524.3	1,386.2			
Future inflation allowance	1,827.9	228.7	1,599.2	1,641.1			
Total projected cash-flows with inflation	3,585.7	462.3	3,123.5	3,027.3			
Discounting allowance	(1,547.4)	(205.6)	(1,341.8)	(1,601.0)			
Net present value liabilities	2,038.3	256.7	1,781.6	1,426.3			

# Table 8.1: Comparison of central estimate of liabilities

We observe that the Discounted Central Estimate has grown considerably since March 2008, increasing by \$355.3m (or 24%) to \$1,781.6m, whilst the total projected cashflows (with inflation) have grown by a lesser amount.

The total projected cashflows (with inflation) have increased by \$96.2m to \$3,123.5m. When taking into account the actual net claims payments of \$90.8m in the 2008/09 financial year, this means there has been a like-for-like increase in total projected future cashflows of \$187.0m (i.e. a 6% increase).



## 8.2 Comparison with previous valuation

In the absence of any change to the claim projection assumptions from our 31 March 2008 valuation, other than allowing for the changes in the discount rate, we would have projected a Discounted Central Estimate liability of \$1,634.8m as at 31 March 2009.

Consequently, our revised assessment at 31 March 2009 represents an increase of \$146.8m from that assessment.

The increase in that net liability estimate is principally a consequence of:

- An increase in the projected number of future mesothelioma claims recognising the higher reporting activity in the last year; and
- The impact of a speeding-up in claims settlement patterns;
- Changes to the assumed nil settlement rates for most disease types;

offset by

- A reduction in average claim awards and legal costs for some disease types;
- Higher payments than forecast resulting in lower residual liabilities; and
- Actual experience in the 12-month period being better than forecast, with savings being achieved on claims which were not settled as at the previous valuation.

The following chart shows an analysis of the change in our liability assessments from March 2008 to March 2009.





#### Figure 8.1: Analysis of change in central estimate liability

Note: Green bars signal that this factor has given rise to an increase in the liability whilst light blue bars signal that this factor has given rise to a reduction in the liability

## 8.3 Cashflow projections

#### 8.3.1 Past cashflow expenditure

The following chart shows the monthly rate of expenditure over the last six years.



Figure 8.2: Past claim-related expenditure of the Liable Entities: 1 January 2003 to 31 March 2009



Cashflow payments in the 12 months to 31 March 2009 were approximately \$112m gross of insurance and other recoveries (2007/08: \$74m) and \$91m net of insurance and other recoveries (2007/08: \$55m).

The significant increase in cashflow in 2008/09 has been due to:

- An increased expenditure on claims which had been reported prior to this financial year, being 36% higher than the previous financial year, arising from an acceleration in the settlement of those claims which were not settled at the start of the financial year.
- An increased expenditure on newly reported claims, being 72% (or \$23m) higher than the previous financial year, arising from:
  - A higher number of mesothelioma claims being reported led to an increase in expenditure by around \$3m.
  - The faster settlement of newly reported mesothelioma claims increased expenditure by around \$7m.
  - The incidence of a higher number and amount of large mesothelioma claims (being those in excess of \$1m in 2005/06 money terms) increased expenditure by around \$6m.
  - The impact of a change in the mix of claims leading to a higher overall average claim size for claims settled in the period, and the lower nil settlement rate, increased expenditure by around \$7m.

Acceleration in the settlement of claims has limited impact on the total expenditure and on the Discounted Central Estimate but has a more significant impact upon the timing of the cashflow expenditure.

It should be noted that the above chart is compiled on a "cash basis" rather than an "accruals basis" so that the figures are not directly applicable to the actuarial basis of projection. However, the difference in timing should be relatively small (i.e. of the order of 1-2 months generally).



# 8.3.2 Future cashflow projections

Figure 8.3 shows a comparison of the actual annual net cashflows for all financial years since 2000/01, the projected net cashflows underlying our current valuation and the projected net cashflow projection underlying our previous valuation.





The underlying projected cashflows for this chart are detailed in Appendix B.

The increase in projected future cashflow between the previous valuation and our current valuation is predominantly a result of the higher number of future mesothelioma claims which we are now assuming.

Given the extremely long-tail nature of asbestos-related liabilities, a small change in an individual assumption can have a significant impact upon the cashflow profile of the liabilities.



#### 8.4 Amended Final Funding Agreement calculations

The Amended Final Funding Agreement sets out the basis on which payments will be made to the AICF Trust.

Additionally, there are a number of other figures specified within the Amended Final Funding Agreement that we are required to calculate. These are<sup>8</sup>:

- Discounted Central Estimate;
- Term Central Estimate; and
- Period Actuarial Estimate.

#### **Table 8.2: Amended Final Funding Agreement calculations**

	\$m
Discounted Central Estimate (net of cross-claim recoveries, Insurance and Other Recoveries)	1,781.6
Period Actuarial Estimate (net of cross-claim recoveries, gross of Insurance and Other Recoveries) comprising:	341.6
Discounted value of cashflow in 2009/10	110.2
Discounted value of cashflow in 2010/11	114.3
Discounted value of cashflow in 2011/12	117.2
Term Central Estimate (net of cross-claim recoveries, Insurance and Other Recoveries)	1,777.8

It should be noted that the actual funding required at a particular date will depend upon a number of factors, including:

- the net asset position of the AICF Trust at that time;
- the free cash flow amount of the JHINV Group in the preceding financial year; and
- the Period Actuarial Estimate in the latest Annual Actuarial Report.

<sup>&</sup>lt;sup>8</sup> See Glossary of Terms in Appendix G for description of these items



#### 8.5 Accounting liability calculations: JHINV

The accounting liabilities for JHINV are determined in accordance with US GAAP which differs from Australian actuarial standards of liability determination.

The determination of the accounting liability to be established by JHINV is ultimately a decision for the Board of JHINV.

However, the Board of JHINV have indicated that the calculation of the accounting liability will, in part, be based upon the liabilities we have estimated within this report.

The basis upon which we have calculated the US GAAP accounting liability is set out in Appendix D.



# 9 UNCERTAINTY

# 9.1 Overview

There is uncertainty involved in any valuation of the liabilities of an insurance company or a self-insurer. The sources of such uncertainty include:

- Parameter error this is the risk that the parameters and assumptions chosen ultimately prove not to be reflective of future experience.
- Model error this is the risk that the model selected for the valuation of the liabilities ultimately proves not to be adequate for the projection of the liabilities.
- Legal and social developments this is the risk that the legal environment in which claims are settled changes relative to its current and historic position thereby causing significantly different awards.
- Future actual rates of inflation.
- The general economic environment.
- Potential sources of exposure this is the risk that there exist sources of exposure which are as yet unknown or unquantifiable, or for which no liabilities have yet been observed, but which may trigger future claims.

In the case of asbestos liabilities, these uncertainties are exacerbated by the extremely long latency period from exposure to onset of disease and notification of a claim. Asbestos-related claims often take in excess of 40 years from original exposure or event to become notified and then settled, compared with an average of 4-5 years for many other compensation-type liabilities such as Comprehensive Third-Party injury liabilities or other Workers Compensation liabilities.

Specific forms of uncertainty relating to asbestos-related disease liabilities include:

 The difficulty in quantifying the extent and pattern of past asbestos exposures and the number and incidence of the ultimate number of lives that may be affected by asbestos related diseases arising from such past asbestos exposures;;



- The timing of the peak level of claims reporting for mesothelioma, particularly in light of the high level of claims reporting activity in 2008/09;
- The propensity of individuals affected by diseases arising from such exposure to file common law claims against defendants;
- The extent to which the Liable Entities will be joined in such future common law claims;
- The fact that the ultimate severity of the impact of the disease and the quantum of the claims that will be awarded will be subject to the outcome of events that have not yet occurred, including:
  - medical and epidemiological developments;
  - court interpretations;
  - legislative changes;
  - changes to the form and range of benefits for which compensation may be awarded ("heads of damage");
  - public attitudes to claiming;
  - the potential for future procedural reforms in NSW and other States affecting the legal costs incurred in managing and settling claims;
  - potential third-wave exposures; and
  - social and economic conditions such as inflation.

#### 9.2 Sensitivity testing

As we have noted above, there are many sources of uncertainty. Actuaries often perform "sensitivity testing" to identify the impact of different assumptions as to future experience, thereby providing an indication of the degree of parameter error risk to which the valuation assessment is exposed.

Sensitivity testing may be considered as being a mechanism for testing "what will the liabilities be if instead of choosing [x] for assumption [a] we choose [y]?" It is also a mechanism for identifying how the result will change if experience turns out different in a particular way relative to that which underlies the central estimate expectations. As such, it provides an indication of the level of variability inherent in the valuation.

We have performed some sensitivity tests of the results of our central estimate valuation. We have sensitivity tested the following factors:



- *nil settlement rate*: 5 percentage points above and below our best estimate assumption.
- *average claim cost of a non-nil claim*: 10% above and below our best estimate assumption.
- *peak year of claims*: increase/decrease by 1, 3 and 5 years.
- *number of claims notified*: 5% above and below our best estimate assumption.
- **superimposed inflation**: 2.25% per annum superimposed inflation for 5 years reducing to 0% per annum after a further five years and remaining at 0% per annum thereafter; and 6.25% per annum superimposed inflation for the next five years, linearly reducing to 2.25% per annum after a further five years and remaining at 2.25% per annum thereafter.
- *discount rates*: 1 percentage point above and below our best estimate assumption.
- **base inflation**: 1 percentage point above and below our best estimate assumption.

There are other factors which influence the liability assessment and which could be sensitivity tested, including:

- The cross-claim recovery rate;
- The pattern of claim notifications; and
- The pattern and delay of claim settlements from claim notification.

We have not sensitivity tested these factors noting them to be of less financial significance or uncertainty individually, although in aggregate they could be of more significance.

We have not sensitivity tested the value of Insurance Recoveries as their uncertainties relate to legal risks and disputation risks, and it is not possible to parameterise a sensitivity test in an informed manner.

#### 9.3 Results of sensitivity testing

Figure 9.1 shows the impact of various individual sensitivity tests on the Discounted Central Estimate of the liabilities, and of a combined sensitivity test of a number of factors.



It should be noted that although we have tested multiple scenarios of each assumption, one cannot gauge an overall potential range by simply adding these tests together.

It should also be noted that because of the interactions between assumptions, the maximum range will not be the sum of the constituent parts. Rather it is important to recognise that it is unlikely that all assumptions would deteriorate together, and there are often compensating upsides to the downsides that can arise. This is especially so when considering the inter-dependencies and correlations between parameters, such as higher inflation often being associated with higher discount rates: the former would increase the liabilities whilst the latter would decrease the liabilities.

# Figure 9.1: Sensitivity testing results – Impact around the Discounted Central Estimate (in \$m)



\* The superimposed inflation sensitivity tests are for 6.25% per annum for 5 years reducing to 2.25% per annum; and 2.25% per annum for 5 years reducing to 0% per annum.

Whilst our combined sensitivity test of a number of factors (including superimposed inflation, average claim costs and numbers of claims) indicates a range around the Discounted Central Estimate of liabilities of -\$600m to +\$800m (i.e. \$1.2bn to \$2.6bn), the actual cost of liabilities could fall outside that range depending on the out-turn of the actual experience.



The above chart implies that the single most sensitive assumption is potentially the peak year of mesothelioma claims reporting against the Liable Entities. Shifting the peak year of mesothelioma claims reporting by 5 years from 2010/11 to 2015/2016 for mesothelioma would imply an increase in the future number of mesothelioma claims reported of around 50%. This would lead to a corresponding increase in the Discounted Central Estimate

However, we note that the impact upon near-term cashflows (and the Period Actuarial Estimate) from an assumption of a peak in mesothelioma claims 5 years later than our central estimate scenario, would be much less significant.

For example, the Period Actuarial Estimate would increase by only around 2%.

	Undiscounted	Discounted
Central estimate	\$3.12bn	\$1.78bn
Range around the central estimate	-\$1.2bn to \$2.4bn	-\$0.6bn to \$0.8bn
Range of liability estimates	\$1.9bn to \$5.5bn	\$1.2bn to \$2.6bn

# Table 9.1: Summary results of sensitivity analysis


Valuation of the asbestos-related disease liabilities of the Liable Entities to be met by the AICF Trust 31 March 2009

## **APPENDICES**



## A. Credit rating default rates by duration

Rating	Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr. 5	Yr. 6	Yr. 7	Yr. 8	Yr. 9	Yr. 10	Yr. 11	Yr. 12	Yr. 13	Yr. 14	Yr. 15
AAA	0.00%	0.00%	0.09%	0.18%	0.28%	0.41%	0.48%	0.59%	0.63%	0.67%	0.67%	0.67%	0.67%	0.73%	0.79%
AA+	0.00%	0.06%	0.06%	0.13%	0.20%	0.28%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%
AA	0.00%	0.00%	0.00%	0.09%	0.18%	0.25%	0.35%	0.48%	0.60%	0.72%	0.81%	0.88%	1.03%	1.10%	1.14%
AA-	0.02%	0.09%	0.20%	0.32%	0.45%	0.61%	0.76%	0.86%	0.96%	1.08%	1.21%	1.35%	1.41%	1.53%	1.60%
A+	0.05%	0.10%	0.25%	0.45%	0.61%	0.77%	0.95%	1.10%	1.29%	1.46%	1.66%	1.88%	2.08%	2.31%	2.51%
A	0.07%	0.18%	0.30%	0.42%	0.60%	0.80%	1.00%	1.21%	1.42%	1.73%	1.98%	2.12%	2.26%	2.35%	2.61%
A-	0.06%	0.20%	0.32%	0.49%	0.73%	1.02%	1.44%	1.71%	1.95%	2.12%	2.19%	2.32%	2.42%	2.53%	2.65%
BBB+	0.15%	0.46%	0.91%	1.30%	1.74%	2.22%	2.58%	2.91%	3.36%	3.71%	4.07%	4.27%	4.62%	5.14%	5.72%
BBB	0.23%	0.54%	0.85%	1.39%	1.95%	2.47%	2.95%	3.48%	3.93%	4.44%	5.00%	5.44%	5.93%	6.12%	6.50%
BBB-	0.31%	1.02%	1.78%	2.78%	3.74%	4.60%	5.25%	5.87%	6.33%	6.91%	7.42%	7.94%	8.54%	9.37%	10.03%
BB+	0.52%	1.41%	2.85%	4.20%	5.41%	6.71%	7.88%	8.41%	9.36%	10.21%	10.82%	11.41%	11.85%	12.35%	13.07%
BB	0.81%	2.50%	4.62%	6.53%	8.38%	10.13%	11.52%	12.79%	13.82%	14.62%	15.71%	16.63%	17.10%	17.19%	17.28%
BB-	1.44%	4.16%	7.04%	9.90%	12.32%	14.66%	16.52%	18.35%	19.87%	21.03%	21.93%	22.62%	23.51%	24.22%	24.87%
B+	2.53%	6.97%	11.22%	14.92%	17.65%	19.74%	21.64%	23.29%	24.70%	26.11%	27.32%	28.29%	29.29%	30.31%	31.19%
В	6.27%	12.74%	17.75%	21.27%	23.84%	26.03%	27.44%	28.52%	29.43%	30.43%	31.40%	32.36%	33.42%	34.20%	35.04%
B-	9.06%	16.94%	22.75%	26.66%	29.44%	31.56%	33.38%	34.53%	35.25%	35.73%	36.26%	36.64%	36.84%	37.07%	37.32%
CCC+	25.59%	34.06%	39.04%	41.86%	44.50%	45.62%	46.67%	47.25%	48.86%	49.76%	50.50%	51.26%	51.87%	52.50%	52.50%
L	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
NR	2.81%	6.54%	10.00%	12.92%	15.23%	17.23%	18.87%	20.25%	21.46%	22.54%	23.52%	24.34%	25.12%	25.79%	26.43%
CEHUA	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%
CEHU&I	92.50%	92.50%	92.50%	92.50%	92.50%	92.50%	92.50%	92.50%	92.50%	92.50%	92.50%	92.50%	92.50%	92.50%	92.50%
CIC	55.00%	55.00%	55.00%	55.00%	55.00%	55.00%	55.00%	55.00%	55.00%	55.00%	55.00%	55.00%	55.00%	55.00%	55.00%
R	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Standard and Poor's 2007 Annual Global Corporate Default Study and Rating Transitions, February 2008.

CEHUA, CEHU&I and CIC default rates have been estimated based on HIH Scheme Information, available at www.hih.com.au

#### Notes:

L relates to Lloyds' of London and Equitas; NR relates to companies which are Not Rated; R relates to companies which have been subject to Regulatory Action regarding solvency.



Valuation of the asbestos-related disease liabilities of the Liable Entities to be met by the AICF Trust 31 March 2009

## B. Projected cashflows (\$m)

							Workers							
	Mesothelio		Lung	ARPD &	Defendant	Workers Compensati	Compensati on Legal	Wharf	Wharf Legal		Cross Claim			
Payment Year	ma .	Asbestosis	Cancer	Other	Legal Costs	on Claims	Costs	Claims	Costs	Baryulgil	Recoveries	Gross	Insurance	Net
2009 / 2010	83.6	12.3	3.6	3.4	8.6	1.2	0.3	0.5	0.1	0.6	2.5	111.7	15.1	96.5 103.4
2010 / 2011	93.7	14.1	3.4	3.8	9.7 10.6	1.1	0.2	0.7	0.2	0.6	2.7	126.8	16.1	110.8
2012 / 2013	98.8	16.1	3.5	4.0	11.3	1.2	0.3	0.8	0.2	0.5	3.1	133.6	16.2	117.3
2013 / 2014	103.7	16.8	3.7	4.1	11.9	1.2	0.3	0.8	0.2	0.5	3.2	139.9	17.0	122.9
2014 / 2015	108.4	17.5	3.9	4.2	12.3	1.3	0.3	0.8	0.2	0.5	3.4	145.8	18.1	127.7
2015 / 2016	111.9	18.1	4.1	4.3	12.6	1.3	0.3	0.7	0.2	0.4	3.5	150.4	16.2	134.3
2016 / 2017	115.0	18.5	4.2	4.4	12.8	1.4	0.3	0.7	0.1	0.4	3.6	154.2	17.1	137.0
2017 / 2018	117.3	10.9	4.5	4.4	12.0	1.4	0.3	0.7	0.1	0.4	3.0	157.0	18.8	130.9
2019 / 2020	119.0	19.2	4.5	4.4	12.5	1.3	0.3	0.6	0.1	0.3	3.7	158.7	17.2	141.5
2020 / 2021	118.4	19.1	4.5	4.4	12.3	1.3	0.2	0.6	0.1	0.3	3.7	157.6	17.6	140.1
2021 / 2022	116.9	18.8	4.5	4.3	11.9	1.3	0.2	0.5	0.1	0.3	3.6	155.1	18.2	136.9
2022 / 2023	114.4	18.3	4.5	4.1	11.5	1.2	0.2	0.5	0.1	0.2	3.5	151.4	18.5	132.9
2023 / 2024	111.0	17.6	4.4	3.9	10.9	1.2	0.2	0.4	0.1	0.2	3.4	146.6	18.6	128.0
2024 / 2025	106.9	16.9	4.5	3.0	9.7	1.1	0.2	0.4	0.1	0.2	3.3 3.1	140.0	18.3	122.3
2026 / 2027	96.6	15.1	3.9	3.3	9.0	1.0	0.2	0.3	0.1	0.1	3.0	126.7	17.9	108.8
2027 / 2028	90.6	14.2	3.7	3.1	8.3	0.9	0.1	0.3	0.0	0.1	2.8	118.6	17.3	101.4
2028 / 2029	84.3	13.1	3.5	2.8	7.6	0.8	0.1	0.2	0.0	0.1	2.6	110.2	16.9	93.4
2029 / 2030	77.8	12.1	3.3	2.6	6.9	0.8	0.1	0.2	0.0	0.1	2.4	101.5	16.2	85.3
2030 / 2031	71.0	11.0	3.1	2.3	6.3	0.7	0.1	0.2	0.0	0.1	2.2	92.6	15.5	77.1
2031 / 2032	64.3	10.0	2.8	2.1	5.6	0.6	0.1	0.1	0.0	0.1	2.0	83.7	14.7	69.0
2032 / 2033	51.3	7.9	2.0	1.9	4.4	0.5	0.1	0.1	0.0	0.1	1.0	66.7	12.9	56.3
2034 / 2035	45.2	7.0	2.1	1.4	3.8	0.4	0.1	0.1	0.0	0.0	1.4	58.8	9.3	49.5
2035 / 2036	39.5	6.1	1.8	1.2	3.3	0.4	0.0	0.1	0.0	0.0	1.2	51.3	6.8	44.5
2036 / 2037	34.2	5.3	1.6	1.1	2.8	0.3	0.0	0.1	0.0	0.0	1.1	44.5	6.3	38.2
2037 / 2038	29.4	4.6	1.4	0.9	2.4	0.3	0.0	0.0	0.0	0.0	0.9	38.2	4.1	34.1
2038 / 2039	25.0	3.9	1.2	0.8	2.0	0.2	0.0	0.0	0.0	0.0	0.8	32.5	3.7	28.8
2039 / 2040	17.6	2.8	0.9	0.6	1.7	0.2	0.0	0.0	0.0	0.0	0.6	27.4	3.3	24.1
2040 / 2041	14.6	2.3	0.8	0.4	1.4	0.2	0.0	0.0	0.0	0.0	0.5	19.0	2.3	16.6
2042 / 2043	12.0	1.9	0.6	0.4	1.0	0.1	0.0	0.0	0.0	0.0	0.4	15.6	1.2	14.4
2043 / 2044	9.7	1.6	0.5	0.3	0.8	0.1	0.0	0.0	0.0	0.0	0.3	12.7	1.1	11.6
2044 / 2045	7.8	1.3	0.4	0.2	0.6	0.1	0.0	0.0	0.0	0.0	0.2	10.3	0.9	9.3
2045 / 2046	6.3	1.0	0.4	0.2	0.5	0.1	0.0	0.0	0.0	0.0	0.2	8.2	0.7	7.5
2046 / 2047	5.0	0.8	0.3	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.2	6.5 5.1	0.6	5.9
2048 / 2049	3.0	0.5	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1	4.0	0.4	3.6
2049 / 2050	2.3	0.4	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1	3.1	0.3	2.8
2050 / 2051	1.8	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	2.4	0.2	2.2
2051 / 2052	1.3	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.2	1.6
2052 / 2053	1.0	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.1	1.2
2053 / 2054	0.8	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.1	0.9
2055 / 2056	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.1	0.5
2056 / 2057	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.4
2057 / 2058	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3
2058 / 2059	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2
2059 / 2060	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2
2060 / 2061	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
2061 / 2062	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
2063 / 2064	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2064 / 2065	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2065 / 2066	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2066 / 2067	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2067 / 2068	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2068 / 2069	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2070 / 2071	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2071 / 2072	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	2,705.2	429.7	108.7	97.6	270.7	29.7	5.4	12.4	2.4	7.4	83.5	3,585.7	462.3	3,123.5



## C. Projected discounted cashflows (\$m)

							Workers							
	Mesothelio		Lung	ARPD &	Defendant	Workers Compensati	Compensati on Legal	Wharf	Wharf Legal		Cross Claim			
Payment Year	ma	Asbestosis	Cancer	Other	Legal Costs	on Claims	Costs	Claims	Costs	Baryulgil	Recoveries	Gross	Insurance	Net
2009 / 2010	82.5	12.1	3.6	3.3	8.5	1.1	0.3	0.5	0.1	0.6	2.5	110.2	14.9	95.3
2010 / 2011	84.8	13.5	3.2	3.4	9.3	1.0	0.2	0.7	0.1	0.6	2.6	114.3	15.2	99.1 102.3
2012 / 2012	87.5	14.3	3.1	3.5	10.0	1.1	0.2	0.7	0.1	0.5	2.7	118.3	14.4	102.0
2013 / 2014	87.8	14.2	3.1	3.5	10.1	1.1	0.2	0.6	0.1	0.4	2.7	118.4	14.4	104.0
2014 / 2015	87.5	14.1	3.1	3.4	9.9	1.0	0.2	0.6	0.1	0.4	2.7	117.8	14.6	103.1
2015 / 2016	86.1	13.9	3.1	3.3	9.7	1.0	0.2	0.6	0.1	0.3	2.7	115.8	12.4	103.3
2016 / 2017	84.2	13.5	3.1	3.2	9.3	1.0	0.2	0.5	0.1	0.3	2.6	112.9	12.6	100.4
2017 / 2018	78.2	12.6	2.9	2.9	8.4	0.9	0.2	0.5	0.1	0.3	2.5	109.3	12.0	90.7
2019 / 2020	74.0	11.9	2.8	2.8	7.8	0.8	0.2	0.4	0.1	0.2	2.3	98.7	10.7	88.0
2020 / 2021	69.5	11.2	2.7	2.6	7.2	0.8	0.1	0.3	0.1	0.2	2.1	92.5	10.3	82.2
2021 / 2022	64.7	10.4	2.5	2.4	6.6	0.7	0.1	0.3	0.1	0.1	2.0	85.9	10.1	75.8
2022 / 2023	59.7	9.5	2.3	2.2	6.0	0.6	0.1	0.3	0.0	0.1	1.8	79.1	9.7	69.4
2023 / 2024	54.7	8.7	2.2	1.9	5.4	0.6	0.1	0.2	0.0	0.1	1.7	72.2 65 A	9.1	63.1 56.8
2024 / 2025	44.7	7.0	2.0	1.6	4.0	0.5	0.1	0.2	0.0	0.1	1.5	58.8	8.0	50.8
2026 / 2027	39.9	6.3	1.6	1.4	3.7	0.4	0.1	0.1	0.0	0.1	1.2	52.4	7.4	45.0
2027 / 2028	35.4	5.5	1.5	1.2	3.3	0.4	0.1	0.1	0.0	0.0	1.1	46.3	6.7	39.6
2028 / 2029	31.1	4.8	1.3	1.0	2.8	0.3	0.0	0.1	0.0	0.0	1.0	40.6	6.2	34.4
2029 / 2030	27.0	4.2	1.1	0.9	2.4	0.3	0.0	0.1	0.0	0.0	0.8	35.3	5.6	29.6
2030 / 2031	23.3	3.6	1.0	0.8	2.0	0.2	0.0	0.1	0.0	0.0	0.7	30.3	5.1	25.3
2031 / 2032	16.8	2.6	0.9	0.5	1.7	0.2	0.0	0.0	0.0	0.0	0.5	23.9	4.5	18.1
2033 / 2034	14.1	2.2	0.6	0.4	1.2	0.1	0.0	0.0	0.0	0.0	0.4	18.4	2.9	15.5
2034 / 2035	11.7	1.8	0.5	0.4	1.0	0.1	0.0	0.0	0.0	0.0	0.4	15.3	2.4	12.9
2035 / 2036	9.7	1.5	0.5	0.3	0.8	0.1	0.0	0.0	0.0	0.0	0.3	12.6	1.7	10.9
2036 / 2037	7.9	1.2	0.4	0.2	0.7	0.1	0.0	0.0	0.0	0.0	0.2	10.3	1.4	8.8
2037 / 2038	6.4	1.0	0.3	0.2	0.5	0.1	0.0	0.0	0.0	0.0	0.2	8.3	0.9	7.4
2038 / 2039	4.1	0.6	0.3	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.2	5.3	0.6	4.7
2040 / 2041	3.2	0.5	0.2	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.1	4.2	0.5	3.7
2041 / 2042	2.5	0.4	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1	3.3	0.4	2.9
2042 / 2043	1.9	0.3	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1	2.5	0.2	2.3
2043 / 2044	1.5	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.2	1.8
2044 / 2045	1.1	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.1	1.4
2045 / 2040	0.6	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.1	0.8
2047 / 2048	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.1	0.6
2048 / 2049	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.4
2049 / 2050	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3
2050 / 2051	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2
2051 / 2052 2052 / 2053	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2
2053 / 2054	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
2054 / 2055	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
2055 / 2056	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2056 / 2057	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2057 / 2058	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2059 / 2059	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2060 / 2061	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2061 / 2062	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2062 / 2063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2063 / 2064	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2064 / 2065	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2066 / 2067	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2067 / 2068	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2068 / 2069	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2069 / 2070	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2070 / 2071	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	1, <b>530.0</b>	243.8	59.3	57.0	159.4	0.0 17.4	0.0 3.4	8.2	1.7	5.3	0.0 47.2	2,038.3	256.7	1,781.6



## D. Derivation of US GAAP net accounting liability of JHINV

The following tables show how the net US GAAP accounting liability established by JHINV is derived from the valuation estimates contained within this report. For comparison, we have shown the derivation of the net liability figures for 31 March 2008.

Note that the tables do not show the split between current and non-current liabilities and nor do they show the breakdown of the exact composition of the accounting liability between the gross liability and any corresponding insurance assets. Readers are referred to the financial statements of JHINV for specific details of the required US GAAP disclosures.

#### Step 1 – KPMGA estimate of uninflated and undiscounted liabilities (AUD)

	31 March 2009			31 March 2008		
	Gross	Insurance	Net	Net	Change	
Discounted Central Estimate	2,038.3	256.7	1,781.6	1,426.3	355.3	
Discounting allowance	1,547.4	205.6	1,341.8	1,601.0	(259.2)	
Inflated, Undiscounted Central Estimate	3,585.7	462.3	3,123.5	3,027.3	96.2	
Inflation allowance	(1,827.9)	(228.7)	(1,599.2)	(1,641.1)	41.9	
Uninflated and Undiscounted liability	1,757.9	233.6	1,524.3	1,386.2	138.1	

#### <u>Step 2 – US GAAP adjustments (AUD)</u>

These include adjustments for:

- > Adjustment to value QBE receivable on a discounted basis as the timing and monetary amounts of the receivable is known;
- Removal of recoveries arising from cross-claims;
- > Future direct claims handling allowance on uninflated & undiscounted basis; and
- > Gross-up for recoveries from workers compensation insurers although the net liability impact is zero.



		31 March 2009		31 March 2008	
	Gross	Insurance	Net	Net	Change
Uninflated and Undiscounted liability	1,757.9	233.6	1,524.3	1,386.2	138.1
Adjustment for QBE insurance receivable (as timing of receipts is	0.0	(1.9)	1 0	4.0	(2.2)
fixed)	0.0	(1.8)	1.0	4.0	(2.2)
Other insurance receivables adjustment	0.0	3.5	(3.5)	(3.1)	(0.4)
Cross-claim recoveries (on UIUD basis)	39.4	0.0	39.4	31.1	8.3
Claims Handling Costs	72.0	0.0	72.0	73.5	(1.5)
Asbestos Liability	1,869.3	235.2	1,634.0	1,491.7	142.3
Workers Compensation Additional Liability	108.2	108.2	0.0	0.0	0.0
Net Accounting Liability (pre-tax)	1,977.5	343.4	1,634.0	1,491.7	142.3

#### Step 3 – Conversion to US Dollars

	31 March 2009			31 March 2008		
	Gross	Insurance	Net	Net	Change	
Net accounting liability (pre-tax) - AUD	1,977.5	343.4	1,634.0	1,491.7	142.3	
Exchange rate	1.4552	1.4552	1.4552	1.0903		
Net accounting liability (pre-tax) - USD	1,358.9	236.0	1,122.9	1,368.1	(245.2)	

Further adjustments are then required to establish the liability, allowing for:

- > Deferred Income Tax Assets (USD368.3m); and
- Other net liabilities (primarily reflecting commitments in the Amended Final Funding Agreement to provide certain educational and medical research funding) (USD2.0m).

This results in a net liability of USD756.6m. In arriving at the unfunded liability, allowance is then made for the existing net assets of the AICF (USD98.3m) at 31 March 2009 to leave an unfunded net liability of USD658.3m (2008: USD829.8m).



## E. Allocation of central estimate liabilities to AICFL entities

We have been requested to provide an actuarially-assessed allocation of the central estimate liabilities set out in this report to each of the three entities (namely Amaca, Amaba and ABN60).

We have also been asked to split this between current and non-current liabilities and to separately identify the gross liabilities and the associated recoveries.

		Amaca	Amaba	ABN 60	Total
	Gross	109.8	2.8	0.1	112.7
Current	QBE receivable	2.9	0.1	0.0	3.1
liabilities	Insurance/Other	14.0	0.4	0.0	14.4
	Net	92.8	2.3	0.1	95.3
	Gross	1,921.7	49.2	2.0	1,972.8
Non-current	QBE receivable	13.2	0.5	0.0	13.7
liabilities	Insurance	265.7	6.8	0.3	272.7
	Net	1,642.9	41.8	1.7	1,686.4
	Gross	2,031.4	52.0	2.1	2,085.5
Total	QBE receivable	16.1	0.7	0.0	16.8
liabilities	Insurance	279.7	7.2	0.3	287.1
	Net	1,735.7	44.2	1.8	1,781.6

#### Table 1: Allocation of central estimate liabilities by Liable Entity (A\$m)

Note: Owing to rounding, the above table may not necessarily reconcile exactly to figures contained earlier in the report; nor may the total column equal the sum of the individual entities. Such differences will, however, only be +/- \$0.1m.

Note: These figures make no allowance for claims handling expenses.



# F. Australian asbestos consumption and production data: 1920-2002

Figures in this table are in 000's metric tonnes

Year	Production	Import	Export	Consumption
1930	82	-	-	82
1931	128	1,200	-	1,328
1932	130	-	-	130
1933	279	2,676	-	2,955
1934	170	2,471	-	2,641
1935	170	4,423	-	4,593
1936	239	7,817	-	8,056
1937	298	6,199	-	6,497
1938	173	11,179	-	11,352
1939	78	10,081	-	10,159
1940	489	14,097	-	14,586
1941	251	14,220	-	14,471
1942	331	20,176	-	20,507
1943	0/8	14,229	-	14,907
1944	1 620	0.121	-	14,000
1945	1,029	9,131	32	10,720
1940	1 377	14 246	490	1/ 071
1948	1,377	14,240	278	15,906
1940	1,527	14,007	346	16,066
1950	1,040	29 536	385	30,768
1951	2 558	25,289	588	27 259
1952	4 059	24 686	868	27 877
1953	4,970	28,784	1.631	32,123
1954	4,713	26,406	2,298	28.821
1955	5.352	42.677	3.287	44.742
1956	8.670	32.219	6.859	34,030
1957	13,098	23,235	11,644	24,689
1958	13,900	34,721	9,315	39,306
1959	15,959	34,223	11,584	38,598
1960	13,940	36,609	7,410	43,139
1961	14,952	32,947	7,196	40,703
1962	16,443	34,915	8,695	42,663
1963	11,941	32,704	2,347	42,298
1964	12,191	38,299	6,500	43,990
1965	10,326	46,179	4,295	52,210
1966	12,024	49,243	4,146	57,121
1967	647	46,950	2,254	45,343
1968	799	59,590	718	59,671
1969	734	52,739	162	53,311
1970	739	57,250	367	57,622
1971	756	/1,///	1/4	72,359
1972	16,884	61,682	2,387	76,179
1973	43,529	61,373	27,810	77,092
1974	30,863	57,051	29,191	58,723
1975	47,922	69,794	24,524	93,192
1970	50,601	54 267	40,145	00,907
1079	62 282	12 0A	20,010	67 350
1979	70 701	23 725	54 0/1	49,415
1980	92 41 8	25,755	51 172	45,415
1981	45 494	20,200	38 576	27 878
1982	18.587	20.853	15.578	23.862
1983	3,909	10,113	4,460	9,562
1984	-	14,432	22	14,410
1985	-	12,194	-	12,194
1986	-	10,597	-	10,597
1987	-	6,294	-	6,294
1988	-	2,072	-	2,072
1989	-	2,128	-	2,128
1990	-	1,706	-	1,706
1991	-	1,342	-	1,342
1992	-	1,533	-	1,533
1993	-	2,198	-	2,198
1994	-	1,843	-	1,843
1995	-	1,488	-	1,488
1996	-	1,366	-	1,366
1997	-	1,556	-	1,556
1998	-	1,471	-	1,471
1999	-	1,316	-	1,316
2000	-	1,246	-	1,246
2001	-	945	-	945
2002	-	515	-	515



## G. Glossary of terms

The following provides a glossary of terms upon which we have relied in preparing our report.

The operation of these definitions cannot be considered in isolation but instead need to be considered in the context of the totality of the Amended Final Funding Agreement.

AICF means the trustee of the Asbestos Injuries Compensation Fund from time to time, in its capacity as trustee, initially being Asbestos Injuries Compensation Fund Limited.

#### AICF Funded Liability means:

- (a) any Proven Claim;
- (b) Operating Expenses;
- (c) Claims Legal Costs;
- (d) any claim that was made or brought in legal proceedings against a Former James Hardie Company commenced before 1 December 2005;
- (e) Statutory Recoveries within the meaning and subject to the limits set out in the Amended Final Funding Agreement;
- (f) a claim or category of claim which James Hardie and the NSW Government agree in writing is a "AICF Funded Liability" or a category of "AICF Funded Liability".

but in the cases of paragraphs (a), (c) and (d) excludes any such liabilities or claims to the extent that they have been recovered or are recoverable under a Worker's Compensation Scheme or Policy

*Claims Legal Costs* means all costs, charges, expenses and outgoings incurred or expected to be borne by AICF or the Former James Hardie Companies, in respect of legal advisors, other advisors, experts, court proceedings and other dispute resolution methods in connection with Personal Asbestos Claims and Marlew Claims but in all cases excluding any costs included as a component of calculating a Proven Claim.



**Concurrent Wrongdoer** in relation to a personal injury or death claim for damages under common law or other law (excluding any law introduced or imposed in breach of the restrictions on adverse regulatory or legislative action against the James Hardie Group under the Amended Final Funding Agreement, and which breach has been notified to the NSW Government in accordance with Amended Final Funding Agreement), means a person whose acts or omissions, together with the acts or omissions of one or more Former James Hardie Companies or Marlew or any member of the James Hardie Group (whether or not together with any other persons) caused, independently of each other or jointly, the damage or loss to another person that is the subject of that claim.

**Contribution Claim** means a cross-claim or other claim under common law or other law (excluding any law introduced or imposed in breach of the restrictions on adverse regulatory or legislative action against the James Hardie Group under the Amended Final Funding Agreement, and which breach has been notified to the NSW Government in accordance with Amended Final Funding Agreement):

- (a) for contribution by a Concurrent Wrongdoer against a Former James Hardie Company or a member of the James Hardie Group in relation to facts or circumstances which give rise to a right of a person to make a Personal Asbestos Claim or a Marlew Claim; or
- (b) by another person who is entitled under common law (including by way of contract) to be subrogated to such a first mentioned crossclaim or other claim;

**Discounted Central Estimate** means the central estimate of the present value (determined using the discount rate used within the relevant actuarial report) of the liabilities of the Former James Hardie Companies and Marlew in respect of expected Proven Claims and Claims Legal Costs, calculated in accordance with the Amended Final Funding Agreement.

*Excluded Claims* are any of the following liabilities of the Former James Hardie Companies:

- personal injury or death claims arising from exposure to Asbestos outside Australia;
- (ii) personal injury or death claims arising from exposure to Asbestos made outside Australia;
- (iii) claims for economic loss (other than any economic loss forming part of the calculation of an award of damages for personal injury or death) or loss of property, including those relating to land remediation and/or Asbestos or Asbestos products removal, arising out of or in connection



with Asbestos or Asbestos products manufactured, sold, distributed or used by or on behalf of the Liable Entities;

- (iv) any Excluded Marlew Claim;
- (v) any liabilities of the Liable Entities other than AICF Funded Liabilities.

Excluded Marlew Claim means a Marlew Claim:

- (a) covered by the indemnities granted by the Minister of Mineral Resources under the deed between the Minister, Fuller Earthmoving Pty Limited and James Hardie Industries Limited dated 11 March 1996; or
- (b) by a current or former employee of Marlew in relation to an exposure to Asbestos in the course of such employment to the extent:
  - (i) the loss is recoverable under a Worker's Compensation Scheme or Policy; or
  - (ii) the Claimant is not unable to recover damages from a Marlew Joint Tortfeasor in accordance with the Marlew Legislation;
- (c) by an individual who was or is an employee of a person other than Marlew arising from exposure to Asbestos in the course of such employment by that other person where such loss is recoverable from that person or under a Worker's Compensation Scheme or Policy; or
- (d) in which another defendant (or its insurer) is a Marlew Joint Tortfeasor from whom the plaintiff is entitled to recover compensation in proceedings in the Dust Diseases Tribunal, and the Claimant is not unable to recover damages from that Marlew Joint Tortfeasor in accordance with the Marlew Legislation.

Former James Hardie Companies means Amaca, Amaba and ABN 60.

**Insurance and Other Recoveries** means any proceeds which may reasonably be expected to be recovered or recoverable for the account of a Former James Hardie Company or to result in the satisfaction (in whole or part) of a liability of a Former James Hardie Company (of any nature) to a third party, under any product liability insurance policy or public liability insurance policy or commutation of such policy or under any other contract, including any contract of indemnity, but excluding any such amount recovered or recoverable under a Worker's Compensation Scheme or Policy.

#### Liable Entities see Former James Hardie Companies

*Marlew* means Marlew Mining Pty Ltd (in liquidation), ACN 000 049 650, previously known as Asbestos Mines Pty Ltd.



*Marlew Claim* means, subject to the limitation on Statutory Recoveries, a claim which satisfies one of the following paragraphs and which is not an Excluded Marlew Claim:

- (a) any present or future personal injury or death claim by an individual or the legal personal representative of an individual, for damages under common law or other law (excluding any law introduced or imposed in breach of the restrictions on adverse regulatory or legislative action against the James Hardie Group under the Amended Final Funding Agreement, and which breach has been notified to the NSW Government in accordance with the Amended Final Funding Agreement) which:
  - arose or arises from exposure to Asbestos in the Baryulgil region from Asbestos Mining Activities at Baryulgil conducted by Marlew, provided that:
    - A. the individual's exposure to Asbestos occurred wholly within Australia; or
    - B. where the individual has been exposed to Asbestos both within and outside Australia, the amount of damages included in the Marlew Claim shall be limited to the amount attributable to the proportion of the exposure which caused or contributed to the loss or damage giving rise to the Marlew Claim which occurred in Australia;
  - (ii) is commenced in New South Wales in the Dust Diseases Tribunal; and
  - (iii) is or could have been made against Marlew had Marlew not been in external administration or wound up, or could be made against Marlew on the assumption (other than as contemplated under the Marlew legislation) that Marlew will not be in the future in external administration;
- (b) any claim made under compensation to relatives legislation by a relative of a deceased individual (or personal representative of such a relative) or (where permitted by law) the legal personal representative of a deceased individual in each case where the individual, but for such individual's death, would have been entitled to bring a claim of the kind described in paragraph (a); or
- (c) a Contribution Claim relating to a claim described in paragraphs (a) or (b).



*Marlew Joint Tortfeasor* means any person who is or would be jointly and severally liable with Marlew in respect of a Marlew Claim, had Marlew not been in external administration or wound up, or on the assumption that Marlew will not in the future be, in external administration or wound up other than as contemplated under the Marlew Legislation.

**Payable Liability** means any of the following:

- (a) any Proven Claim (whether arising before or after the date of this deed);
- (b) Operating Expenses;
- (c) Claims Legal Costs;
- (d) any liability of a Former James Hardie Company to the AICFL, however arising, in respect of any amounts paid by the AICFL in respect of any liability or otherwise on behalf of the Former James Hardie Company;
- (e) any claim that was made or brought in legal proceedings against a Former James Hardie Company commenced before 1 December 2005;
- (f) if regulations are made pursuant to section 30 of the Transaction Legislation and if and to the extent the AICFL and James Hardie have notified the NSW Government that any such liability is to be included in the scope of Payable Liability, any liability of a Former James Hardie Company to pay amounts received by it from an insurer in respect of a liability to a third party incurred by it for which it is or was insured under a contract of insurance entered into before 2 December 2005; and
- (g) Statutory Recoveries within the meaning and subject to the limits set out in the Amended Final Funding Agreement,

but in the cases of paragraphs (a), (c) and (e) excludes any such liabilities or claims to the extent that they have been recovered or are recoverable under a Worker's Compensation Scheme or Policy.



**Period Actuarial Estimate** means, in respect of a period, the central estimate of the present value (determined using the discount rate used in the relevant actuarial report) of the liabilities of the Former James Hardie Companies and Marlew in respect of expected Proven Claims and Claims Legal Costs (in each case which are reasonably expected to become payable in that period), before allowing for Insurance and Other Recoveries, calculated in accordance with the Amended Final Funding Agreement.

**Personal Asbestos Claim** means any present or future personal injury or death claim by an individual or the legal personal representative of an individual, for damages under common law or under other law (excluding any law introduced or imposed in breach of the restrictions on adverse regulatory or legislative action against the James Hardie Group under the Amended Final Funding Agreement, and which breach has been notified to the NSW Government under the Amended Final Funding Agreement) which:

- (a) arises from exposure to Asbestos occurring in Australia, provided that:
  - (i) the individual's exposure to Asbestos occurred wholly within Australia; or
  - (ii) where the individual has been exposed to Asbestos both within and outside Australia, damages included in the Marlew Claim shall be limited to the amount attributable to the proportion of the exposure which caused or contributed to the loss or damage giving rise to the Personal Asbestos Claim which occurred in Australia;
- (b) is made in proceedings in an Australian court or tribunal; and
- (c) is made against:
  - (i) all or any of the Liable Entities; or
  - (ii) any member of the James Hardie Group from time to time;
- (d) any claim made under compensation to relatives legislation by a relative of a deceased individual (or personal representative of such a relative) or (where permitted by law) the legal personal representative of a deceased individual in each case where the individual, but for such individual's death, would have been entitled to bring a claim of the kind described in paragraph (a); or
- (e) a Contribution Claim made in relation to a claim described in paragraph (a) or (b)

but excludes all claims covered by a Worker's Compensation Scheme or Policy.



**Proven Claim** means a proven Personal Asbestos Claim in respect of which final judgment has been given against, or a binding settlement has been entered into by, a Former James Hardie Company, to the extent to which that entity incurs liability under that judgment or settlement, or a Proven Marlew Claim.

**Statutory Recoveries** means any statutory entitlement of the NSW Government or any Other Government or any governmental agency or authority of any such government ("Relevant Body") to impose liability on or to recover an amount or amounts from any person in respect of any payments made or to be made or benefits provided by a Relevant Body in respect of claims (other than as a defendant or in settlement of any claim, including a cross-claim or claim for contribution).

Term means the period

- (i) from the date on which the principal obligations under the Amended Final Funding Agreement will commence to 31 March 2045,
- (ii) as may be extended in accordance with the terms of the Amended Final Funding Agreement.

**Term Central Estimate** means the central estimate of the present value (determined using the discount rate used in the relevant Annual Actuarial Report) of the liabilities of the Former James Hardie Companies and Marlew in respect of expected Proven Claims and Claims Legal Costs (in each case reasonably expected to become payable in the relevant period) after allowing for Insurance and Other Recoveries during that period, from and including the day following the end of the Financial Year preceding that Payment Date up to and including the last day of the Term (excluding any automatic or potential extension of the Term, unless or until the Term has been extended).

Workers Compensation Scheme or Policy means any of the following:

- (a) any worker's compensation scheme established by any law of the Commonwealth or of any State or Territory;
- (b) any fund established to cover liabilities under insurance policies upon the actual or prospective insolvency of the insurer (including without limitation the Insurer Guarantee Fund established under the Worker's Compensation Act 1987 (NSW)); and
- (c) any policy of insurance issued under or pursuant to such a scheme.