



**KPMG Actuarial Pty Ltd**  
Australian Financial Services Licence No. 392050  
10 Shelley Street  
Sydney NSW 2000

PO Box H67  
Australia Square NSW 1215  
Australia

ABN: 91 144 686 046  
Telephone: +61 2 9335 7000  
Facsimile: +61 2 9335 7001  
DX: 1056 Sydney  
www.kpmg.com.au

**Valuation of Asbestos-Related Disease  
Liabilities of former James Hardie entities  
("the Liable Entities") to be met by the AICF  
Trust**

**Prepared for Asbestos Injuries  
Compensation Fund Limited ("AICFL")**

**Effective as at 31 March 2012**

**21 May 2012**



**KPMG Actuarial Pty Ltd**  
Australian Financial Services Licence No. 392050  
10 Shelley Street  
Sydney NSW 2000

ABN: 91 144 686 046  
Telephone: +61 2 9335 7000  
Facsimile: +61 2 9335 7001  
DX: 1056 Sydney  
www.kpmg.com.au

PO Box H67  
Australia Square NSW 1215  
Australia

21 May 2012

Narreda Grimley  
General Manager  
Asbestos Injuries Compensation Fund Limited  
Suite 1, Level 7, 233 Castlereagh Street  
Sydney NSW 2000

Cc Russell Chenu, Chief Financial Officer, James Hardie Industries SE  
Paul Miller, General Counsel, Department of Premier and Cabinet, The State of  
New South Wales  
The Board of Directors, Asbestos Injuries Compensation Fund Limited

Dear Narreda

**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 2012 and has taken into account claims data and information provided to us by AICFL as at 31 March 2012.

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

Yours sincerely

Neil Donlevy MA FIA FIAA  
Executive, KPMG Actuarial Pty Limited  
*Fellow of the Institute of Actuaries  
(London)*  
*Fellow of the Institute of Actuaries of  
Australia*

Jefferson Gibbs BSc FIA FIAA  
Executive, KPMG Actuarial Pty Limited  
*Fellow of the Institute of Actuaries  
(London)*  
*Fellow of the Institute of Actuaries of  
Australia*

## Table of Contents

Executive Summary .....	i
1 Scope and Purpose.....	1
1.1 Introduction .....	1
1.2 Scope of report.....	2
1.3 Areas of potential exposure .....	6
1.4 Data reliances and limitations.....	11
1.5 Uncertainty .....	11
1.6 Distribution and use.....	12
1.7 Date labelling convention used in this Report .....	12
1.8 Author of the report .....	13
1.9 Professional standards and compliance .....	13
1.10 Control processes and review .....	13
1.11 Funding position of the AICF Trust .....	14
1.12 Basis of preparation of Report .....	14
2 Data .....	15
2.1 Data provided to KPMG Actuarial .....	15
2.2 Data limitations.....	15
2.3 Data reconciliation and testing.....	15
2.4 Data conclusion.....	19
3 Valuation Methodology and Approach.....	20
3.1 Previous valuation work and methodology changes .....	20
3.2 Overview of current methodology .....	20
3.3 Disease type and class subdivision .....	22
3.4 Numbers of future claims notifications .....	24
3.5 Incidence of claim settlements from future claim notifications.....	28
3.6 Average claim costs of IBNR claims .....	29
3.7 Proportion of claims settled for nil amounts .....	30
3.8 Pending claims.....	30
3.9 Insurance Recoveries.....	33
3.10 Cross-claim recoveries .....	37
3.11 Discounting cashflows .....	38
4 Claims Experience – Claim Numbers .....	39
4.1 Overview .....	39
4.2 Mesothelioma claims .....	40
4.3 Asbestosis claims.....	44
4.4 Lung cancer claims .....	44
4.5 ARPD & Other claims .....	45
4.6 Workers Compensation and wharf claims.....	45

---

4.7	Summary of base claims numbers assumptions.....	45
4.8	Exposure information.....	46
4.9	Latency period of reported claims.....	48
4.10	Assumed peak year of claims and estimated future notifications .....	53
4.11	Baryulgil .....	55
5	Claims Experience – Average Claims Costs .....	56
5.1	Overview .....	56
5.2	Mesothelioma claims .....	57
5.3	Asbestosis claims.....	60
5.4	Lung cancer claims .....	61
5.5	ARPD & Other claims .....	62
5.6	Workers Compensation claims .....	63
5.7	Wharf claims .....	64
5.8	Large claim size and incidence rates.....	65
5.9	Summary assumptions .....	67
6	Claims Experience – Nil Settlement Rates .....	68
6.1	Overview .....	68
6.2	Mesothelioma claims .....	69
6.3	Asbestosis claims.....	70
6.4	Lung cancer claims .....	71
6.5	ARPD & Other claims .....	72
6.6	Workers Compensation claims .....	73
6.7	Wharf claims .....	74
6.8	Summary assumptions .....	75
7	Economic and Other Assumptions .....	76
7.1	Overview .....	76
7.2	Claims inflation.....	76
7.3	Superimposed inflation .....	81
7.4	Summary of claims inflation assumptions.....	85
7.5	Discount rates: Commonwealth bond zero coupon yields.....	85
7.6	Cross-claim recovery rates .....	86
7.7	Settlement Patterns.....	87
8	Valuation Results .....	89
8.1	Central estimate liability.....	89
8.2	Comparison with previous valuation .....	90
8.3	Cashflow projections .....	92
8.4	Amended Final Funding Agreement calculations.....	95
8.5	Insurance Recoveries.....	96
8.6	Accounting liability calculations: James Hardie.....	96
9	Uncertainty.....	97

---

9.1	Overview .....	97
9.2	Sensitivity testing.....	98
9.3	Results of sensitivity testing.....	99

### **Tables**

Table 2.1:	Grouping of financial data from claims and accounting databases .....	17
Table 2.2:	Comparison of amounts from claims and accounting databases (\$m).....	18
Table 3.1:	Change in cost of claims during 2011/12 financial year (\$m) – claim award component only .....	32
Table 4.1:	Number of claims reported annually .....	39
Table 4.2:	Claim numbers experience and assumptions for 2012/13 .....	46
Table 4.3:	Assumed underlying latency distribution parameters from average date of exposure to date of notification .....	52
Table 4.4:	Assumed peak year of claim notifications.....	53
Table 5.1:	Average attritional non-nil claim award (inflated to mid 2011/12 money terms) .....	56
Table 5.2:	Average mesothelioma claims assumptions.....	59
Table 5.3:	Average asbestosis claims assumptions .....	60
Table 5.4:	Average lung cancer claims assumptions .....	61
Table 5.5:	Average ARPD & Other claims assumptions.....	62
Table 5.6:	Average Workers Compensation claims assumptions.....	63
Table 5.7:	Average wharf claims assumptions .....	64
Table 5.8:	Summary average claim cost assumptions .....	67
Table 6.1:	Nil settlement rates .....	68
Table 6.2:	Summary nil settlement rate assumptions.....	75
Table 7.1:	Claims inflation assumptions.....	85
Table 7.2:	Zero coupon yield curve by duration.....	85
Table 7.3:	Settlement pattern of claims awards by delay from claim reporting .....	88
Table 8.1:	Comparison of central estimate of liabilities.....	89
Table 8.2:	Amended Final Funding Agreement calculations.....	95
Table 8.3:	Insurance recoveries at 31 March 2012 .....	96
Table 9.1:	Summary results of sensitivity analysis .....	101

### **Figures**

Figure 1.1:	Mix of claims reported by nature of exposure .....	8
Figure 3.1:	Illustration of timeline of exposure, latency and claim reporting (example shown is for mesothelioma) .....	25
Figure 3.2:	Consumption and production indices – Australia 1930-2002.....	26

---

Figure 4.1: Proportion of claims by disease type.....	39
Figure 4.2: Mix of claims by state (all disease types) .....	40
Figure 4.3: Monthly notifications of mesothelioma claims.....	41
Figure 4.4: Rolling annualised averages of mesothelioma claim notifications .....	42
Figure 4.5: Number of mesothelioma claims by state.....	43
Figure 4.6: Mix of claims by duration of exposure (years) .....	46
Figure 4.7: Exposure (person-years) of all Liable Entities' claimants to date .....	47
Figure 4.8: Exposure (person years) of all claimants to date by report year and exposure year .....	48
Figure 4.9: Latency of mesothelioma claims .....	49
Figure 4.10: Latency of asbestosis claims.....	51
Figure 4.11: Latency of lung cancer claims .....	51
Figure 4.12: Latency of ARPD & Other claims .....	52
Figure 4.13: Expected future claim notifications by disease type .....	54
Figure 5.1: Average awards (inflated to mid 2011/12 money terms) and number of non- nil claims settlements for mesothelioma claims.....	57
Figure 5.2: Proportion of mesothelioma claim settlements by settlement size cohort ..	58
Figure 5.3: Contribution to attritional average claim size of mesothelioma claim settlements by settlement size cohort .....	58
Figure 5.4: Average awards (inflated to mid 2011/12 money terms) and number of non- nil claims settlements for asbestosis claims .....	60
Figure 5.5: Average awards (inflated to mid 2011/12 money terms) and number of non- nil claims settlements for lung cancer claims .....	61
Figure 5.6: Average awards (inflated to mid 2011/12 money terms) and number of non- nil claims settlements for ARPD & Other claims.....	62
Figure 5.7: Average awards (inflated to mid 2011/12 money terms) and number of non- nil claims settlements for Workers Compensation claims.....	63
Figure 5.8: Average awards (inflated to mid 2011/12 money terms) and number of non- nil claims settlements for wharf claims .....	64
Figure 5.9: Distribution of individual large claims by settlement year.....	65
Figure 5.10: Number of large claims by year of notification .....	66
Figure 6.1: Mesothelioma nil claims experience.....	69
Figure 6.2: Asbestosis nil claims experience.....	70
Figure 6.3: Lung cancer nil claims experience .....	71
Figure 6.4: ARPD & Other nil claims experience.....	72
Figure 6.5: Workers Compensation nil claims experience.....	73
Figure 6.6: Wharf nil claims experience .....	74
Figure 7.1: Trends in Bond Yields .....	77
Figure 7.2: Trends in CPI and AWOTE .....	78
Figure 7.3: Age profile of mesothelioma claimants by report year .....	80

---

Figure 7.4: Average mesothelioma claim settlement amounts by decade of age .....	81
Figure 7.5: Average mesothelioma awards of the Liable Entities (uninflated).....	83
Figure 7.6: Cross-claim recovery experience .....	86
Figure 7.7: Settlement pattern derivation for mesothelioma claims: paid as % of ultimate cost .....	87
Figure 7.8: Settlement pattern derivation for non-mesothelioma claims: paid as % of ultimate cost .....	87
Figure 8.1: Analysis of change in central estimate liability .....	91
Figure 8.2: Historical claim-related expenditure of the Liable Entities.....	92
Figure 8.3: Annual cashflow projections – inflated and undiscounted (\$m) .....	93
Figure 9.1: Sensitivity testing results – Impact around the Discounted Central Estimate (in \$m) .....	100

### **Appendices**

A	Credit rating default rates by duration.....	103
B	Projected inflated and undiscounted cashflows (\$m).....	104
C	Projected discounted cashflows (\$m) .....	105
D	Derivation of US GAAP net accounting liability of James Hardie .....	106
E	Allocation of central estimate liabilities to AICFL entities .....	108
F	Australian asbestos consumption and production data: 1930-2002.....	109
G	Data provided by AICFL.....	110
H	Glossary of terms used in the AFFA.....	112

---

## Executive Summary

### Important Note: Basis of Report

This valuation report (“**the Report**”) has been prepared by KPMG Actuarial Pty Limited (ABN 91 144 686 046) (“**KPMG Actuarial**”) 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 “**the Amended Final Funding Agreement**”) between James Hardie Industries NV (now known as James Hardie Industries SE) (hereafter referred to as “**James Hardie**”), 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 judgment as of the date of the Report.

The information contained in this Report is of a general nature and is not intended to address the objectives, financial situation or needs of any particular individual or entity. It is provided for information purposes only and does not constitute, nor should it be regarded in any manner whatsoever, as advice and is not intended to influence a person in making a decision in relation to any financial product or an interest in a financial product. No one should act on the information contained in this Report without obtaining appropriate professional advice after a thorough examination of the accuracy and appropriateness of the information contained in this Report having regard to their objectives, financial situation and needs.

In preparing the Report, KPMG Actuarial has relied on information supplied to it from various sources and has assumed that the information is accurate and complete in all material respects. KPMG Actuarial 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 Actuarial, its executives, 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.





*Valuation of the asbestos-related disease  
liabilities of the Liable Entities to be met by the AICF Trust  
Effective as at 31 March 2012*

---

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 Actuarial 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 20 October 2011.

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 the “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 2012. It has been based on claims data and information as at 31 March 2012 provided to us by AICFL.

## **Overview of Recent Claims Experience and comparison with previous valuation projections**

In this section we will compare the actual experience in 2011/12 (referred to in the following tables as “FY12 Actual”) with the projections for 2011/12 that were contained within our previous valuation report at 31 March 2011. We will refer to these projections for 2011/12 as “FY12 Expected” in the tables that follow.

### *Claim numbers*

The number of mesothelioma claims reported has shown a reduction in the year. There have been 260 claims reported in 2011/12 compared with 269 claims reported in 2010/11.

For non-mesothelioma claims, there have been 196 claims reported in 2011/12 compared to 227 claims reported in 2010/11. This reduction is predominantly due to a significant reduction in reporting activity for asbestosis claims.

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

**Table E.1. Comparison of claim numbers**

	FY12 Actual	FY12 Expected	Ratio of Actual to Expected (%)	FY11 Actual
Mesothelioma	260	288	90%	269
Asbestosis	110	138	80%	139
Lung Cancer	15	30	50%	13
ARPD & Other	37	48	77%	38
Wharf	5	6	83%	8
Workers	29	48	60%	29
<b>Total</b>	<b>456</b>	<b>558</b>	<b>82%</b>	<b>496</b>

*Average Claim Awards*

Average claims awards in 2011/12 have typically been in line with expectations.

There have been three large mesothelioma claim settlements (being claims in excess of \$1m in 2006/07 money terms) in 2011/12. This is below our annual allowance of five large claims. Total claims expenditure on large claims has been 58% below expectations, reflecting the lower number and average settlement sizes of large claims, although random variability in the number and size of large claims is to be expected.

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

**Table E.2. Comparison of average claim size of non-nil claims**

	FY12 Actual (\$)	FY12 Expected (\$)	Ratio of Actual to Expected (%)	FY11 Actual (\$)
Mesothelioma	283,605	287,800	99%	259,685
Asbestosis	107,309	106,600	101%	86,677
Lung Cancer	124,555	125,300	99%	137,242
ARPD & Other	96,980	95,900	101%	72,185
Wharf	59,135	106,600	55%	46,837
Workers	900,000	138,600	649%	0
Mesothelioma Large Claims Costs	3 claims @ \$1,375,000 = \$4,125,000	5 claims @ \$1,972,000 = \$9,860,000	42%	4 claims @ \$1,409,000 = \$5,636,000

Note: FY11 Actual values are expressed in 2010/11 money terms. FY12 Actual values and FY12 Expected values are expressed in 2011/12 money terms.

*Cashflow expenditure: gross and net*

Gross cashflow expenditure, at \$99.1m, was 9% below expectations.

Net cashflow expenditure, at \$75.2m, was 20% below expectations.

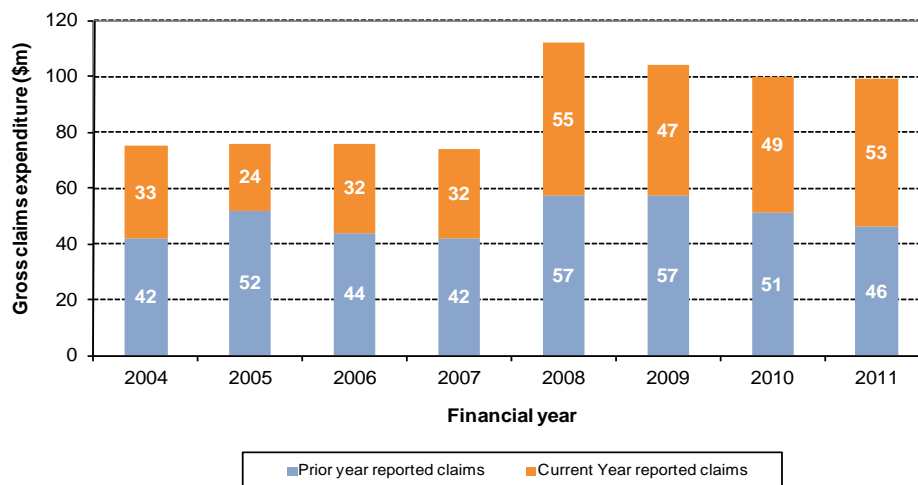
**Table E.3. Comparison of cashflow**

	FY12 Actual (\$M)	FY12 Expected (\$M)	Ratio of Actual to Expected (%)	FY11 Actual (\$M)
Gross Cashflow	99.1	108.4	91%	100.6
Insurance and Other Recoveries	(12.4)	(14.4)	86%	(16.4)
Insurance recoveries from HIH (under 562A(4)) and from commutations	(11.5)	0.0	n/a	(7.8)
Net Cashflow	75.2	94.0	80%	76.4

Insurance and Other Recoveries have been considerably higher than expected. This is due to proceeds from insurance collections from HIH and associated entities as a result of successful application of Section 562A(4).

The following chart shows the composition of the gross cashflow between current and prior years' reported claims over the past eight financial years.

**Figure E.1. Composition of gross cashflow between current and prior years' reported claims**



Payments in relation to claims reported in the financial year have shown a slight increase compared with the previous year. This is because whilst claim numbers reported have fallen by approximately 10%, an increased proportion of reported claims have related to mesothelioma, and such claims are typically quicker to settle.

Payments in relation to prior years' reported claims have shown a reduction compared with previous years' experience. This is consistent with the lower numbers of claims being settled.

### **Liability Assessment**

At 31 March 2012, our projected central estimate of the liabilities of the Liable Entities (the Discounted Central Estimate) to be met by the AICF Trust is \$1,580.1m (March 2011: \$1,477.6m).

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

**Table E.4. Comparison of central estimate of liabilities**

	31 March 2012		31 March 2011	
	\$m		\$m	
	<b>Gross of insurance recoveries</b>	<b>Insurance recoveries</b>	<b>Net of insurance recoveries</b>	<b>Net of insurance recoveries</b>
Total projected cashflows (uninflated)	1,526.5	213.4	1,313.1	1,364.4
Future inflation allowance	1,384.5	172.6	1,211.9	1,297.0
Total projected cash-flows with inflation	2,911.0	386.0	2,525.0	2,661.4
Discounting allowance	(1,095.3)	(150.4)	(944.9)	(1,183.7)
<b>Net present value liabilities</b>	<b>1,815.7</b>	<b>235.6</b>	<b>1,580.1</b>	<b>1,477.6</b>

### **Comparison with previous valuation**

In the absence of any change to the claim projection assumptions from our 31 March 2011 valuation, other than allowing for the changes in the discount rate, we would have projected a Discounted Central Estimate liability of \$1,610.7m as at 31 March 2012, i.e. an increase of \$133.1m from our 31 March 2011 valuation result.

This increase of \$133.1m is due to:

- A reduction of \$24.1m, being the net impact of expected claims payments (which reduce the liability) and the “unwind of discount” (which increases the liability and reflects the fact that cashflows are now one year nearer and therefore are discounted by one year less).
- An increase of \$157.2m resulting from the lower discount rates prevailing at 31 March 2012 compared with those adopted at 31 March 2011.

Our liability assessment at 31 March 2012 of \$1,580.1m represents a decrease of \$30.6m (or 2% of the liability), which arises from changes to the claim projection assumptions.

The decrease of \$30.6m is principally a consequence of:

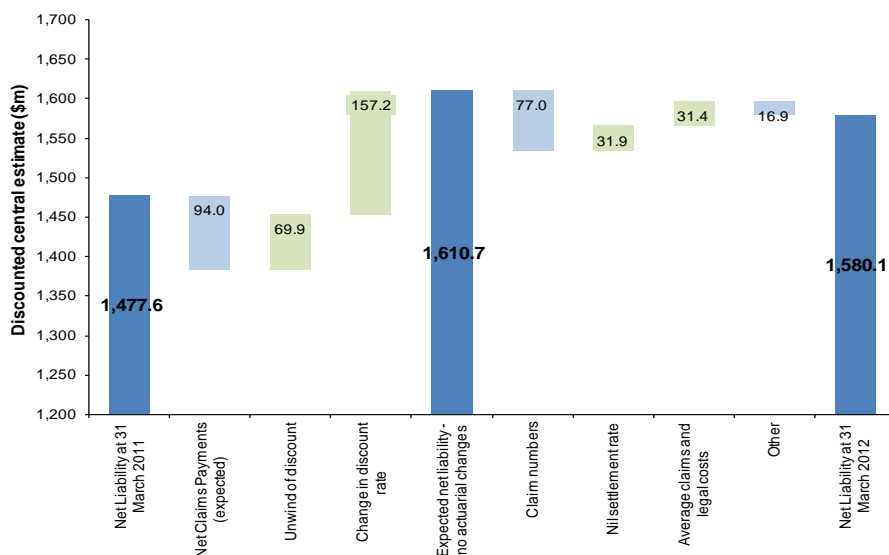
- A reduction in the projected future number of claims for most disease types; and
- An increase in projected future insurance recoveries;

offset by

- Higher assumed average claim awards, in particular for mesothelioma; and
- Lower assumed future nil settlement rate for most disease types.

The following chart shows an analysis of the change in our liability assessments from March 2011 to March 2012.

**Figure E.2. 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.*

The undiscounted liability as of 31 March 2012 has reduced from \$2,567m (based on the 31 March 2011 valuation) to \$2,525m. This represents a reduction of \$42m (approximately 2% of the undiscounted 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:

- 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)	1,580.1
Period Actuarial Estimate (net of cross-claim recoveries, gross of Insurance and Other Recoveries) comprising:	355.1
Discounted value of cashflow in 2012/13	117.8
Discounted value of cashflow in 2013/14	118.5
Discounted value of cashflow in 2014/15	118.9
Term Central Estimate (net of cross-claim recoveries, Insurance and Other Recoveries)	1,576.0

The actual funding amount due 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 James Hardie Group in the preceding financial year; and
- the Period Actuarial Estimate in the latest Annual Actuarial Report.

### **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.

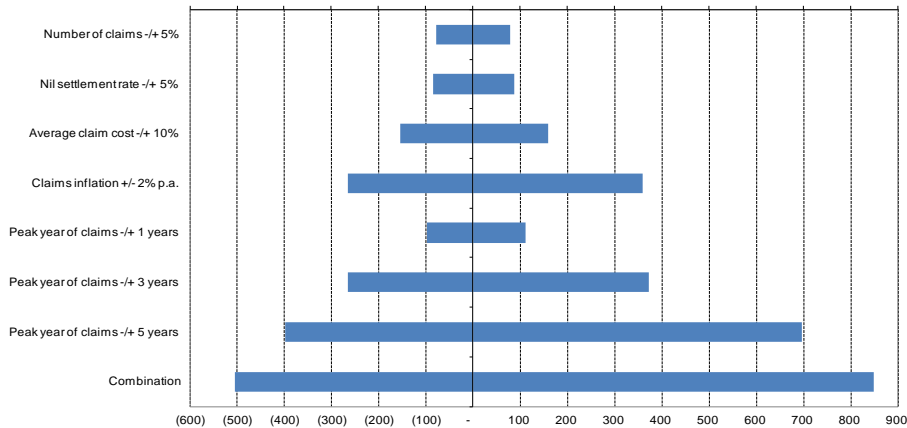
Thus, no assurance can be given that the actual liabilities of the Liable Entities to be met by the AICF Trust will not ultimately exceed the estimates contained in this Report. Any such variation may be significant.

We have performed sensitivity testing to identify the impact of different assumptions upon the size of the liabilities.

We note that these sensitivity test ranges are not intended to correspond to a specified probability of sufficiency, nor are they intended to indicate an upper bound or a lower bound of all possible outcomes.



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



The single most sensitive assumption shown in the chart is the peak year of claims reporting against the Liable Entities. Shifting the peak year of claims reporting by 5 years (e.g. for mesothelioma, it would be equivalent to shifting the peak year from 2010/11 to 2015/2016) could imply an increase in the discounted central estimate of approximately 50%.

**Table E.6. Summary results of sensitivity analysis**

	Undiscounted	Discounted
Central estimate	\$2.53bn	\$1.58bn
Range around the central estimate	-\$950m to +\$1,790m	-\$500m to +\$850m
Range of liability estimates	\$1.58bn to \$4.32bn	\$1.08bn to \$2.43bn

Whilst the table above indicates a range around the discounted central estimate of liabilities of -\$500m to +\$850m, the actual cost of liabilities could fall outside that range depending on the actual experience.

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

We have been provided with the following data by AICFL:

- Claims dataset at 31 March 2012 with individual claims listings;
- Accounting transactions dataset at 31 March 2012 (which includes individual claims payment details); and
- Detailed insurance bordereaux information (being a listing of claims filed with the insurers of the Liable Entities) produced by Randall & Quilter Investment Holdings as at 31 March 2012.

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.

# 1

## Scope and Purpose

---

### 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 documented in Section 1.2 and in Appendix H of this Report.

#### 1.1.3 *Purpose of report*

KPMG Actuarial 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 20 October 2011.

The prior written consent of KPMG Actuarial 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 2012 and has been based on claims data and information as at 31 March 2012 provided to us by AICFL.

## **1.2 Scope of report**

We have been requested to provide an actuarial assessment as at 31 March 2012 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 2012.

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 within the limits of funding for

such claims as outlined within the Amended Final Funding Agreement.

- Workers Compensation claims, being claims from 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 for 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 policies placed from 1986 onwards which were placed on a “claims made” basis.
  - the future Operating Expenses of the Liable Entities or the AICF Trust. Separate allowance for future Operating Expenses needs to be considered by the management of AICFL.
  - the inherent uncertainty of the liability assessment. That is, no additional provision (or risk margin) has been included in excess of a central estimate.

Readers of this Report may refer to our previous reports which are available at [www.ir.jameshardie.com.au](http://www.ir.jameshardie.com.au) and [www.aicf.org.au](http://www.aicf.org.au).

### *1.2.1 Workers Compensation*

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

Under the Amended Final Funding Agreement, the part of a future Workers Compensation claim that is met by a Workers Compensation Scheme or Policy of the Liable Entities is 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 policies 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 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 may be available to meet such obligations.

### *1.2.2 Dust Disease 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 an 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 (aggregated across the DDB and Workers Compensation Schemes), 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 any reimbursements that will not be met by the AICF Trust owing to the application of these limits and 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; and, in the case of Amaca, includes claims made in relation to the joint venture (Asbestos Mines Pty Ltd) established with Wunderlich in 1944 to begin mining at Baryulgil.
- 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 4.11.

#### *1.2.4 Risk Margins*

Australian-licensed insurance companies are required to hold, and many non-insurance companies elect to hold, insurance and self-insurance 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, 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 2012 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 2012) 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) it 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.

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 such bonds being around 10 to 15 years.

This means we need to take a long-term view on bond yields that is not measured by market-observable rates of return.

Our approach at this valuation has been to take the bond yields implied by bond market prices, without adjustment, for the periods 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 adjustment for the impact of ageing upon claims award levels).

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

However, for completeness we note that spot rate at duration 9 was approximately 4.9% at 31 March 2012 (31 March 2011: 5.9%), and therefore considerably lower than the 6.0% assumption we have made for 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, 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.

#### *1.3.1 General areas of potential exposure*

Areas of potential changes in claims exposure we have not explicitly allowed for in our valuation include, but are not limited to:

- 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. In this regard, we note the 2010/11 decisions by the Supreme Court (in relation to two cases: *Tamareisis v Amaca* and *Galea v Amaca*) which indicated that the AICF Trust was not required to meet the cost of nervous shock claims brought by individuals who have not been exposed to asbestos;
- 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 the removal of asbestos or the 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 (we note the decisions in *Amaca v Ellis [2010] HCA 5* and *Evans v Queanbeyan City Council [2010] NSWDDT 7* which we understand are consistent with the previous decision in *Judd v Amaca [2002] NSWDDT 25*);
- Any changes to GST or other taxes; and
- Future bankruptcies of other asbestos claim defendants (i.e. other liable manufacturers or distributors).

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

### 1.3.2 New Zealand and other overseas exposures

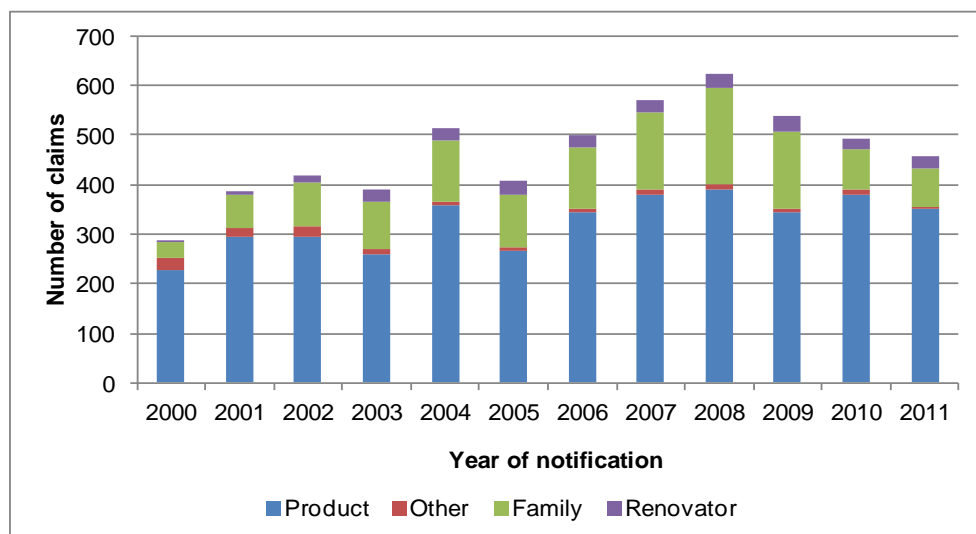
We have made no allowance for the risk of further development in relation to New Zealand exposures and the rights of claims from New Zealand claimants in Australian courts (as per *Frost vs. Amaca Pty Ltd (2005)*, NSWDDT 36 although this decision was successfully appealed by Amaca in August 2006) nor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

### 1.3.3 Third-wave claims

We have made some implicit allowance for so-called “third-wave” claims. These are defined as 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 these tertiary exposures in its projection.

The number of pure home renovator claims reported has remained broadly stable since 2003/04 (at approximately 25 claims per annum). “Family” type exposures (e.g. childhood exposures, exposure through clothes washing) had been the main source of the increase in claims reporting from 2004/05 to 2008/09. However, in the past three years, these claims have reduced in number and are now in line with levels of claims activity observed in the early 2000s.

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



We have not allowed for a surge in third-wave 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 as to 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 is not required to be met by the AICF Trust.

#### *1.3.4 New South Wales Law Reform Commission Report 131*

On 3 November 2010, the New South Wales Law Reform Commission was provided with terms of reference that asked the Commission to inquire into the legislation governing the provision of damages including under the Compensation to Relatives Act 1897, Law Reform (Miscellaneous Provisions) Act 1944, Dust Diseases Tribunal Act 1989 and Civil Liability Act 2002.<sup>1</sup>

In October 2011, the New South Wales Law Reform Commission published Report 131 entitled “Compensation to Relatives” (this followed a Consultation paper, CP14).

The Law Reform Commission Report 131 recommended, amongst other things:

- Abolition of the Strikwerda principle, such that there would be no offset of the non-economic loss amount paid under the Estate claim, when assessing the Compensation to Relatives/dependency action.
- A requirement to allow recovery of damages for non-economic loss when claims are commenced within 12 months after the death of the person.

On 16 February 2012, a bill entitled “Compensation to Relatives Legislation Amendment (Dust Diseases) Bill 2012” was introduced to the NSW Parliament.

On 11 May 2012, the NSW Government released its response to the NSW Law Reform Commission Report 131.

The NSW Government concluded that it would not be appropriate to implement the Law Reform Commission’s key recommendations.

---

<sup>1</sup> See [www.lawlink.nsw.gov.au/lrc](http://www.lawlink.nsw.gov.au/lrc) for Terms of Reference and the Report of the NSW Law Reform Commission

Accordingly, we have made no allowance within our claim size or claim number assumptions for any impact of the recommendations of the NSW Law Reform Commission Report 131.

#### 1.3.5 Recent court cases of potential significance

During the most recent financial year, there have been a number of court cases of relevance to both current and potential future levels of claim awards.

The explanations and overview that follow are based on our reading and interpretation of the cases and as such they do not reflect formal or informal advice provided by AICF or by its lawyers.

These cases include:

- *Amaca Pty Ltd vs. Booth [2011] HCA 53*. In this case, Mr Booth was a retired motor mechanic who was diagnosed with mesothelioma. The Dust Diseases Tribunal delivered its decision and awarded \$326,640. Amaca appealed to the Court of Appeal on the issue of causation and then this was appealed to the High Court of Australia. The High Court of Australia delivered its decision in relation to this matter on 14 December 2011. The finding was, in summary, that all exposure other than a *de minimis* exposure was causative of mesothelioma. The award of \$326,640 included an amount of \$250,000 for general damages for pain and suffering. This level of general damages is consistent with previous general damages awards in NSW.
- *Amaca Pty Ltd vs. King [2011] VSCA 447*. In this case, a Victorian jury determined compensation at \$1,150,000 which it is reported as comprising \$730,000 for general damages for pain and suffering and for loss of expectation of life. The Supreme Court of Victoria did not overturn the original decision of the jury, and handed down its judgment on 22 December 2011.
- *Hamilton vs. BHP [2012] SADC 25*. This case was conducted in South Australia District Court. The judge awarded \$115,000 for general damages. This is consistent with the level of general damages awarded in *Ewins vs. BHP* which awarded \$100,000 and which is now 6 years old.

- *Lowes vs. Amaca [2011] WASC 87.* In this case, Mr Lowes was a 42 year old man diagnosed with mesothelioma, which he alleged he had contracted from playing at a miniature railway at Castledare Boys Home in Perth in the 1970s as a very young child. The total amount awarded was \$2.07m, the major component of which related to economic loss. Submissions were made by Amaca were made that an appropriate award for general damages would be between \$150,000 and \$200,000 having regard to a number of cases in WA; whilst lawyers for the plaintiff referenced a number of cases in the Dust Diseases Tribunal (NSW) which indicated general damages in the range \$250,000 to \$300,000. In closing written submissions for the plaintiff, it was indicated that “an appropriate and fair” amount for general damages was \$500,000. The judgment of \$2.07m included an amount for general damages for pain and suffering of \$250,000. We understand the case is currently subject to appeal, with the key areas of appeal being in relation to foreseeability and causation.

#### **1.4 Data reliances and limitations**

KPMG Actuarial has relied upon the accuracy and completeness of the data with which it has been provided. KPMG Actuarial has not verified the accuracy or completeness of the data, although we have undertaken steps to test its consistency with data previously received. However, KPMG Actuarial 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 additional third-wave exposures and social and economic conditions such as inflation.

Therefore, it should 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. Any such variation may be significant.

## **1.6 Distribution and use**

The purpose of this Report is as stated in Section 1.1.

This Report should not be used for any purpose other than those specified.

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

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

We understand that this Report will also be placed on AICFL's website in its entirety.

KPMG Actuarial consents to this Report being 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, neither KPMG Actuarial nor its Executives, directors or employees will be responsible to third parties for the consequences of any actions they take based upon the opinions expressed with this Report, including any use of or purported reliance upon this Report not contemplated in Section 1.2. Any reliance placed is that party's sole responsibility.

Where distribution of this Report is permitted by KPMG Actuarial, 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 Actuarial.

Readers are also advised to refer to the "Important Note: Basis of Report" section at the front of the Executive Summary of this Report.

## **1.7 Date labelling convention used in this Report**

In our analyses throughout this report (unless otherwise stated), the "year" we refer to aligns with the financial year of AICFL and James Hardie and runs from 1 April to 31 March.

A “2008” notified claim would be a claim notified in the period 1 April 2008 to 31 March 2009. This might also be referred to as “2008/09”.

Similarly, a “2011” claim settlement would be a claim settled in the period 1 April 2011 to 31 March 2012. This might also be referred to as “2011/12”.

## **1.8 Author of the report**

This Report is authored by Neil Donlevy, an Executive of KPMG Actuarial Pty Limited, a Fellow of the Institute of Actuaries (London) and a Fellow of the Institute of Actuaries of Australia.

This Report is co-authored by Jefferson Gibbs, an Executive of KPMG Actuarial Pty Limited, a Fellow of the Institute of Actuaries (London) and a Fellow of the Institute of Actuaries of Australia.

In relation to this Report, the primary regulator for both Neil Donlevy and Jefferson Gibbs is the Institute of Actuaries of Australia.

## **1.9 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 revised standard is applicable for balance sheet dates occurring after 23 February 2010.

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

## **1.10 Control processes and review**

This valuation report and the underlying analyses have been subject to technical review and internal peer review.

The technical review focuses on ensuring that the valuation models and supporting claims experience analyses that are carried out are done correctly and that the calculations are being correctly applied. The technical review also focuses on ensuring that the data that is being used has been reconciled insofar as possible.

Internal peer review involves a review of the approach, the methods, the assumptions selected and the professional judgments applied.

Both the technical review and internal peer review processes are applied to the Report as well as the valuation models.

### **1.11 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, nor of its likely funding needs and its potential use of the loan facility provided by the NSW Government.

This is because to do so requires consideration and estimation of the future financial performance of James Hardie.

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

### **1.12 Basis of preparation of Report**

We have been advised by the management of AICFL to prepare the Report on a “going concern” basis (i.e. we should assume that AICFL will be able to meet the cost of the liabilities of the Liable Entities as they fall due).



## 2

## Data

---

### 2.1 Data provided to KPMG Actuarial

We have been provided with the following data by AICFL:

- Claims dataset at 31 March 2012 with individual claims listings;
- Accounting transactions dataset at 31 March 2012 (which includes individual claims payment details); and
- Detailed insurance bordereaux information (being a listing of claims filed with the insurers of the Liable Entities) produced by Randall & Quilter Investment Holdings as at 31 March 2012.

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.

The data structures for the claims and accounting databases provided to us by AICFL as of 31 March 2012 are detailed in Appendix G.

### 2.2 Data limitations

We have tested the consistency of the various data sets provided to us at different valuation dates. Section 2.3 outlines the nature of the testing 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 internal administration 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 reconciliation and testing

We have performed a reconciliation of the data provided at 31 March 2012 with the data provided at 31 March 2011.

We have undertaken a number of tests and reconciliations to test 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 2012 with that provided at 31 March 2011. Our findings are:

- Claims notifications: There is 1 new claim with a report date prior to 31 March 2011 that was not present in the database at 31 March 2011.
- Portfolio Category: 16 claims changed category. Of these, 7 claims have been re-labelled as asbestosis, 1 claim has been re-labelled as mesothelioma and 4 claims have been re-labelled as Workers Compensation claims.
- Notification Date: 5 claims have changed their notification date. Two of these claims have changed notification date by an immaterial amount (i.e. less than one month). The remaining three claims did not have a notification date in the 31 March 2011 database.
- Settlement date: 12 claims have changed their settlement date, but only 3 claims have changed their settlement date by a material amount (which we have defined as a change of greater than one month).

Changing and developing data is not unexpected or to be considered as adverse. Indeed, changing data is common to all claims administration systems. We do not consider the number or extent of the changes noted above to be unreasonable.

### *2.3.2 Reconciliation with previous valuation's data – nil claims restatement of 2010/11 claim settlements*

At 31 March 2011 there were a number of mesothelioma and asbestosis claims which had a nil settlement date but not a settlement amount: the implication being that these claims were nil claims.

Since that time, there have been 19 mesothelioma claims and 16 asbestosis claims that have had a settlement amount recorded on them when no such amount was recorded at 31 March 2011 (and where there was a settlement date recorded at 31 March 2011).

The impact of this change is that the nil settlement rate for the 2010/11 settlement year has reduced compared with that reported at 31 March 2011. We discuss this further in Section 6 of this Report.

As a consequence of this matter, AICFL has now put in place a process for ensuring that a settlement date is not entered into the claims system prior to the settlement amount being entered into the claims system.

### 2.3.3 *Reconciliation of claims settlement amounts between claims and accounting databases*

The accounting database extract contains the following fields:

- Damages – which are gross of cross-claim recoveries;
- Costs;
- DDB reimbursements;
- Other costs;
- Payments to Medicare; and
- Defence legal costs.

The claims database extract contains the following fields:

- Damages – which in some cases are net of cross-claim recoveries, and which in others are gross of cross-claim recoveries. We are able to identify which records are gross of cross-claims recoveries and which records are net of cross-claim recoveries. We have then restated all damages data to be gross of cross-claim recoveries;
- Costs;
- DDB reimbursements;
- Other costs (which include payments to Medicare); and
- Defence legal costs.

We then mapped the financial data between the two databases into standardised groupings as follows:

**Table 2.1: Grouping of financial data from claims and accounting databases**

	CLAIMS DATABASE	ACCOUNTING DATABASE
Award	Damages (gross of cross-claims) <b>plus</b> DDB reimbursement <b>plus</b> Medicare (from Accounting Database)	Damages <b>plus</b> DDB reimbursements <b>plus</b> Medicare
Costs / Other	Costs <b>plus</b> Other <b>less</b> Medicare (from accounting database)	Costs <b>plus</b> Consulting
Defence legal costs	Defence legal costs	Defence legal costs

*Note: Recovery amounts are available from the accounting database*

We have compared the payment records between the claims database and the accounting database from the earliest date to the current file position. Table 2.2 shows the results of this reconciliation for all claim transactions to date.

**Table 2.2: Comparison of amounts from claims and accounting databases (\$m)**

CLAIMS DATABASE		ACCOUNTING DATABASE	
Damages (gross of recoveries, excluding medicare)	858.2	Damages (gross of recoveries)	863.9
Costs	25.6	Costs	25.9
DDB	7.8	DDB	7.9
Other (inc Medicare)	5.8	Consulting	2.6
		Medicare	3.1
Defence legal costs	127.9	Defence legal costs	128.1
<b>Total Value</b>	<b>1,025.2</b>	<b>Total Value</b>	<b>1,031.4</b>
<b>Standardisation</b>			
Award plus Medicare plus DDB	869.0	Award plus Medicare plus DDB	874.8
Costs / Other	28.3	Costs / Other	28.5
Defence legal costs	127.9	Defence legal costs	128.1
<b>Total Value</b>	<b>1,025.2</b>	<b>Total Value</b>	<b>1,031.4</b>

The standardisation is the most relevant comparison because, as noted earlier, the two database extracts allocate the information (particularly in relation to Medicare) in slightly different ways.

Once the standardisation has been undertaken, the two datasets reconcile closely – with reconciliation differences totalling approximately 0.6% (\$6.2m). This difference has not materially changed compared with the difference at 31 March 2011 (\$5.8m).

Our approach for each claim record has been to take the maximum value of the two databases for each claim record. This results in the following overall totals being used in our analysis:

- \$876.4m for the claims award component;
- \$28.7m for the costs / other component; and
- \$128.2m for the defence legal costs component.

This approach, of taking the maximum value for each claims record, may result in some minor prudence in our overall analysis although the amount of prudence is not considered to be significant 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 not verified the underlying data nor have we undertaken “auditing at source”.

We have assumed that any material data issues will have been identified by the Approved Auditor of AICFL (Ernst & Young) during their testing and would have been notified to us.

We have tested the data for internal consistency with the data provided at the previous valuation (31 March 2011).

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

- Generally, the data is consistent between valuations, with any differences in the data being readily explainable;
- The financial data appears to reconcile reasonably between the two data sources (the claims dataset and the accounting dataset);
- Any data issues that have emerged are not significant in relation to the size of the liabilities; and
- Therefore, the data is appropriate for use for the purposes of this Report.

# 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 at 31 March 2011.

### 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 (“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. 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 expected future incidence of mesothelioma and other diseases and also the past rate of co-joining of the Liable Entities;
- Analyse past average attritional claim costs of non-nil claims in mid 2011/12 money terms. We have defined attritional claims to be claims which are less than \$1m in 2006/07 money terms. We estimate a baseline attritional non-nil average claim cost in mid 2011/12 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 historical average plaintiff and defendant legal costs for non-nil claim settlements;

- Analyse past historical 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 size and legal cost sizes of such claims (being claims which are in excess of \$1m in 2006/07 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/other 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 non-nil amounts in a period by the inflated average non-nil claim costs (including the “large claims loading”) and plaintiff/other 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) after making allowance for the assumed settlement pattern of pending claims;
- 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 at the valuation date, and a long term spot rate of 6.00% per annum for cashflows from 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 all 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.

### **3.3 Disease type and class subdivision**

#### *3.3.1 Claims records excluded from our analysis*

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 in the claims dataset does not indicate an additional claim (or liability against the Liable Entities). In these circumstances such claims records are not counted in our analysis.

We have also excluded “insurance recovery” claims records. This is because the insurance recovery record is a separate record that exists for claims records where an insurance recovery is due. In other words, the claim against the Liable Entity has already been included in our analysis and the insurance recovery record exists for operational purposes only. We have, however, made separate, explicit allowance in the valuation for insurance recoveries.

#### *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 former employees of the Liable Entities; and
- Wharf claims, being claims by individuals whose occupations involved 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 insurance policies 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 such claims are likely to have a different exposure and incidence profile compared with product and public liability claims.

### *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 there is sufficient volume of claims to do so, because different disease types display substantially different average claim sizes, and because the incidence pattern of future notifications is expected to vary between the different disease types.

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 (given the low numbers of claims reported).

For the purposes of our analysis, we have allocated each claim once and therefore to one disease only. 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 product or public liability claim has mesothelioma as one of its listed diseases, it is automatically included as a mesothelioma claim. If a product or public liability claim has lung cancer or other cancer as one of its listed diseases (but not mesothelioma), it is included as a lung cancer claim. If a product or public liability 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**

To project the pattern of incidence of claims against 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 stable market share, but thereafter were not involved in asbestos products;
- The average period over which claimants are typically exposed; and
- The statistical distribution of the latency period from average exposure for each disease type, together with the underlying parameters (the mean and the standard deviation) of the latency model.

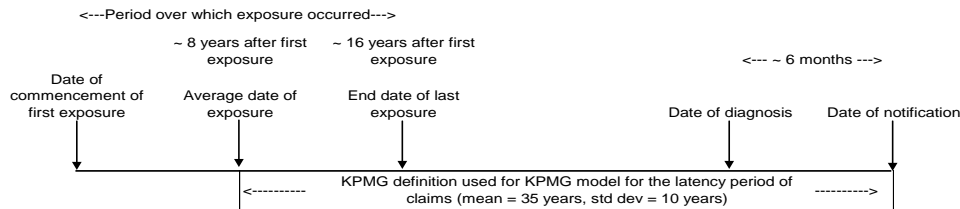
Statistically speaking, the projected peak incidence of mesothelioma is not equal to the peak year of production (or consumption) plus the average latency of mesothelioma.

Instead, the projected peak of claims reporting derived from our model is a function of the overall shape of the exposure and the full distribution of the latency period. In statistical terminology, the projected claims incidence curve is a "convolution" of the statistical distribution of "modelled consumption" and the statistical distribution of the latency period.

Furthermore, the notification pattern will not be symmetrically distributed around the peak year. The notification pattern is derived from the combined impact of the exposure model and the latency model. The exposure model is not a symmetrical distribution; however the latency model is a symmetrical distribution.

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

**Figure 3.1: Illustration of timeline of exposure, latency and claim reporting (example shown is for mesothelioma)**



### 3.4.1 Exposure Model

We have constructed a proxy for an “exposure model” by reference to statistics showing the levels of 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’ exposure.

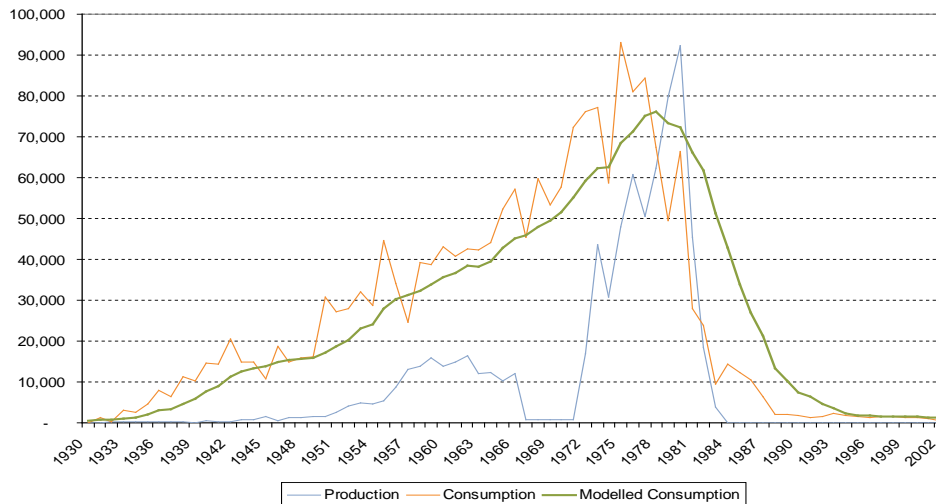
We start by constructing an exposure index from the annual consumption of asbestos within Australia from 1900-2002. We split this between the various asbestos types and by year of consumption.

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. In any event, we have made separate explicit allowance for mining activities at Baryulgil within our liability assessment.

Figure 3.2 shows measures of the production and consumption of asbestos in Australia in the period 1930 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 through to 2002.

**Figure 3.2: Consumption and production indices – Australia 1930-2002**



Source: *World Mineral Statistics Dataset, British Geological Survey, www.mineralsuk.com*  
*R Virta, USGS Website Annual Yearbook*  
*The data underlying this chart is shown in Appendix F.*

The “modelled consumption” is derived as the consumption averaged over the previous eight years, i.e. from the implied start date of exposure to the average date of exposure.

This selection of eight years is based on the analysis contained in Section 4.8.1 which shows that a typical claimant has an average exposure period of 16 years and that the average date of exposure is therefore typically eight years after the start date of exposure.

It is the “modelled consumption” which is used, together with an assumption about the statistical distribution of the latency period, as a basis for projecting future mesothelioma claim numbers.

There is an implicit assumption within the use of the “modelled consumption” to derive the level of future claim notifications that:

- the consumption of asbestos is directly correlated with, and a suitable proxy for, the number of people exposed to asbestos in any year; and
- the rate of incidence of individuals developing an asbestos-related disease arising from exposure to asbestos is the same for each exposure year and is independent of the type of asbestos used.

### 3.4.2 Latency model

Our assumption is that the latency pattern (from the average date of exposure) for all disease types is statistically distributed with a normal distribution.

The parameters (i.e. the mean and standard deviation) of the distribution have been set by reference to previous work undertaken by Professor Berry et al<sup>2</sup>, by Jim Leigh et al<sup>3</sup> and by Yeung et al<sup>4</sup>.

The parameters for the mean and, in particular, for the standard deviation have also been set taking into account the claims experience of the Liable Entities to date.

The parameters vary by disease type.

The analysis supporting the selection of these parameters is summarised in Section 4.9.

### *3.4.3 Projecting the claims notification curve using the exposure and latency model*

Our methodology is to take each year of exposure, using “modelled consumption” of asbestos in tonnage for that year, and project an index of the number of claims we project to emerge in each future reporting year resulting from that exposure year.

The latency period is assumed to be normally distributed with a mean and a standard deviation which vary by disease type.

This means that for any given exposure year, the peak incidence of reporting claims would be (in the case of mesothelioma) 35 years after the average exposure date from that exposure year.

We then aggregate the claims notification index curves projected for each exposure year to produce an overall curve which shows the index of claim notifications arising from all exposure periods.

The curve is described as an index because consumption is used as a proxy measure for the number of individuals exposed and because we don't know what proportion of those people who were exposed will develop asbestos-related diseases.

Therefore the methodology produces a shape of the number of claims, rather than an absolute level of the number of claims to be reported.

---

<sup>2</sup> Malignant pleural and peritoneal mesothelioma in former miners and millers of crocidolite at Wittenoom, Western Australia; G Berry, N H de Klerk et al (2004)

<sup>3</sup> Malignant Mesothelioma in Australia: 1945-2000; J Leigh et al (2002)

<sup>4</sup> Distribution of Mesothelioma Cases in Different Occupational Groups and Industries, 1979-1995: P Yeung, A Rogers, A Johnson (1999)

This methodology provides not only the shape of claims reporting as an index but it also projects the peak year of incidence assumed for mesothelioma claims reported to the Liable Entities and the rate of decay in claims reporting levels after the peak year of incidence.

The model projects the peak year of reporting for mesothelioma claims to have been 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.

These are summarised in Section 4.10.

#### *3.4.4 Calibrating the curve index to current reporting experience*

We take the claim curve index and then calibrate the number of notifications in each future year by reference to the recent levels of claims reporting and the number of claims we have projected for the 2012/13 financial year.

This approach implicitly assumes that:

- The future rate of incidence of asbestos-related diseases manifesting as a result of a past exposure to asbestos will remain stable;
- The pattern of diagnosis and the delay between diagnosis and reporting remain stable;
- The “propensity to claim” by individuals will remain stable; and
- The rate of co-joining Liable Entities in claims will remain stable.

Our analysis and assumptions are summarised in Section 4.7.

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

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

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 summarised in Section 7.7.

### **3.6 Average claim costs of IBNR claims**

#### *3.6.1 Attritional claims*

We define a large claim as one for which the award is greater than or equal to \$1m in 2006/07 money terms (which equates to approximately \$1.22m in mid 2011/12 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 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 / other costs of a non-nil “attritional” claim.
- Average defence legal costs of a non-nil “attritional” claim.
- Average defence 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 mid 2011/12 money terms using a historical base inflation index (of 4% per annum). This allows for basic inflation effects when identifying trends in historical average settlements. We then determine a prospective average cost in mid 2011/12 money terms.

We perform the same analysis for the defence legal costs for nil and non-nil claims and for plaintiff legal / other costs in respect of non-nil claims (together “Claims Legal Costs”).

Our analysis and assumptions are summarised in Section 5.

### 3.6.2 Large claims loading

We analyse the historical 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 size and legal costs of these claims. We have determined a prospective incidence rate and average cost in mid 2011/12 money terms to arrive at a “per claim” loading (being the average large claim cost multiplied by the large claim 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 summarised in Section 5.8.

### 3.6.3 Future inflation of average 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 summarised in Sections 7.2 to 7.4.

## 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 defence legal costs) and those which will be settled for a non-nil claim cost.

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

Our analysis and assumptions selected are summarised in Section 6.

## 3.8 Pending claims

### 3.8.1 Definition of pending claims

At 31 March 2012, there were 608 claims for which claim awards have not yet been fully settled by the Liable Entities. This includes a large number of workers compensation claims (154), the majority for which the liability to be met by the AICF Trust is expected to be zero. 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.
- Where there is no closure date but the claim has a settlement date, there is the possibility of further emerging defendant legal costs, even though the claim award has been settled.
- Where there is no settlement date, there is the possibility of award, plaintiff legal costs and defendant legal costs 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 terms Incurred But Not Enough Reported (“IBNER”).

Depending on the case estimation procedure of a 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 extent of IBNER (whether positive or negative) required, 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 comparison 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 due to limited data volumes and 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, i.e. a negative IBNER.

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%.

AICFL's own analysis also suggests that historically there have also been savings which have typically varied between 20% and 30%.

Furthermore, we have assessed whether the cost of claims reported up to and including 31 March 2011 has deteriorated compared to our prior estimate (as at 31 March 2011).

The table below shows that there has been no deterioration compared to the estimates we previously adopted and are currently adopting (both of which have already made allowance for a 25% saving on case estimates). This analysis lends further support to the view that the allowance we have made for the extent of redundancy in case estimates of 25% is reasonable and is borne out by the actual experience.

We have maintained our assumption for the level of redundancy in case estimates on currently reported claims at 25% at this valuation (March 2011: 25%). This assumption is only applied to the case estimates for the claim award, i.e. it is not applied to plaintiff/other costs or defence costs.

**Table 3.1: Change in cost of claims during 2011/12 financial year (\$m) – claim award component only**

Figures in \$ millions	Current year reported claims	Prior year reported claims	Total
Estimates for pending claims at 31 March 2011 (undiscounted)	0.0	76.1	76.1
Paid amounts in year to 31 March 2012	47.9	34.8	82.7
Estimates for pending claims at 31 March 2012 (undiscounted)	51.3	33.7	85.0
<b>Incurring Cost in the financial year</b>	<b>99.2</b>	<b>(7.6)</b>	<b>91.6</b>

It should also be noted that making allowance for savings from case estimates is expected to have a more significant impact on the near term cash flows and a lesser impact on the longer-term cashflows, with more than 95% 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 claims.

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 more than 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 policies with a \$1m primary policy layer.

In addition, until 31 May 1986, the Liable Entities maintained further excess “umbrella” insurance policies, with varying retentions and policy limits. That is, the insurance policies 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 insurance policies on an “in the aggregate” basis whilst public liability claims were insured on an “each and every loss” basis.

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

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

The insurance 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 (through to 30 June 2014).
- 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 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 Insurance Ltd retained some share on some of the layers.

### *3.9.2 Modelling insurance recoveries on the claims occurring programme*

Our methodology for projecting the future insurance recoveries to be collected by AICFL involves the following steps:

- Identify the current contract positions for each insurance policy year. This assumes that all monies due have been collected, and does not allow for the impact of commutations that have taken place.

- Allocate the projected future gross cashflows to individual insurance policy years using an allocation basis that has been determined by reference to the exposure methodology used to project future claim numbers and also using a “period of exposure” and “time on risk” allocation.
- This gives a projection of how the insurance programme is utilised over time.

This method allows us to:

- evaluate the total insurance recoveries due by payment year;
- determine how the insurance recoveries due will be assigned to each layer and therefore to each insurer; and
- identify and allow for when the individual layers are projected to be fully exhausted.

We then make an additional adjustment to the projected recoveries to exclude those projected future insurance recoveries that are assigned to the participations of insurers who have already commuted their coverage with AICFL and the Liable Entities or insurers who have settled the coverage by way of a Scheme of Arrangement.

### *3.9.3 Commutations*

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.

Other commutations have been entered into, but these commutations have involved the payment of a lump sum amount, rather than an annual cashflow amount paid over a period of time. In these circumstances, we have assumed that the insurance liabilities of that company to the Liable Entities have been fully discharged and no further recoveries fall due.

We have made no allowance for any future commutations.

### *3.9.4 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.

### *3.9.5 Unpaid insurance recoveries*

We have not included within our estimate any allowance for insurance recoveries under the claims occurring period that are due but have not yet been collected (“unpaid balances”), as these are more appropriately dealt with as a debtor of AICFL. We are advised that such monies amount to approximately \$2m at 31 March 2012.

### *3.9.6 Claims made 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. For the purpose of this Report, we have made no allowance for the value of insurance policies 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 being considered by the liquidators of HIH and we have not, for the purposes of this report, attempted to estimate any recovery for it.

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 James Hardie (all other things being equal).

### *3.9.7 Bad and doubtful debt allowance on Insurance Recoveries*

We have made allowance for bad and doubtful debts on future Insurance Recoveries within our valuation by use of the default rates specified in Appendix A. These have been sourced from Standard & Poors’ 2011 Annual Global Corporate Default Study and Rating Transitions, March 2012 and they are based on bond default rates.

We have considered the credit rating of the insurers of the Liable Entities as at March 2012 and applied the relevant credit rating default rates to the expected future cashflows by year, treaty and insurer.

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 policies where 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 decision of *Amaca Pty Ltd v McGrath & Anor as liquidators of HIH Underwriting and Insurance (Australia) Pty Ltd [2011] NSWSC 90*.

In that decision, Justice Barrett determined that Section 562A(4) of the Corporations Act could apply in relation to proceeds already collected by the liquidator of HIH on the relevant reinsurance policies.

However, Justice Barrett also said that the Court did not have the power to make a general order under Section 562A(4) of the Corporations Act in relation to future proceeds collected by the liquidator of HIH from relevant reinsurance policies.

Accordingly, our approach for this Report is to continue to assume that future cut-through is not achieved given the obstacles that still remain.

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 strength 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.

### **3.10 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 the claims experience.

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 historical experience of such recoveries.

Our analysis and assumptions selected are summarised in Section 7.6.

### **3.11 Discounting cashflows**

Cashflows are discounted on the basis of yields available at the valuation date 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 6.00% per annum 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 valuation dates.

At 31 March 2012, as compared with 31 March 2011, there have been significant reductions in observed yields on Commonwealth Government Bonds at most durations.

Our selected assumptions for the discount rates are summarised in Section 7.5.



# 4

## Claims Experience – Claim Numbers

### 4.1 Overview

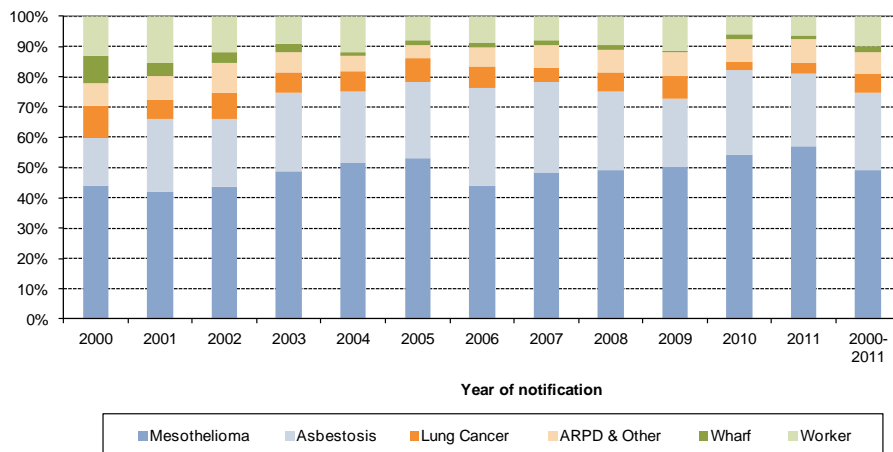
Table 4.1 shows the number of claims reported by year of notification and by disease category.

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

	Mesothelioma	Asbestosis	Lung Cancer	ARPD & Other	Wharf	Worker	Total
1997	111	32	20	17	2	50	232
1998	93	25	12	13	3	30	176
1999	95	41	16	12	14	39	217
2000	126	46	30	22	26	37	287
2001	162	93	24	30	17	59	385
2002	182	93	36	41	15	50	417
2003	189	101	26	27	10	36	389
2004	266	121	34	26	6	62	515
2005	217	103	32	17	6	33	408
2006	219	161	36	31	7	44	498
2007	276	171	28	43	8	46	572
2008	304	162	40	45	11	59	621
2009	270	120	40	43	3	61	537
2010	269	139	13	38	8	29	496
2011	260	110	15	37	5	29	456
2000-2011	2,740	1,420	354	400	122	545	5,581
All Years	3,467	1,716	483	578	165	1,236	7,645

*Note: Throughout Sections 4 to 7, 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.*

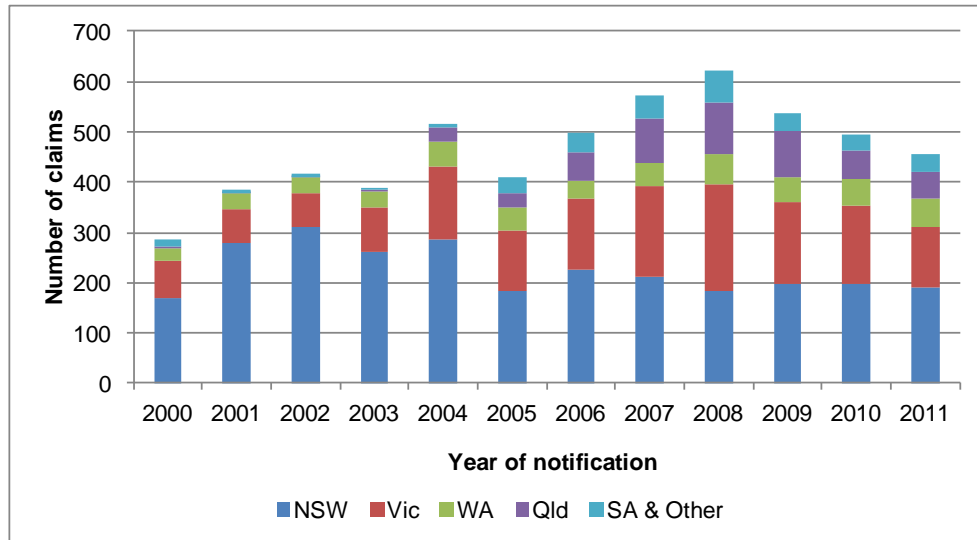
**Figure 4.1: Proportion of claims by disease type**



Historically, mesothelioma has accounted for more than 45% of claims by number. This percentage has increased from 42% in 2001/02, and was 57% in 2011/12.

Asbestosis has also shown an increase, from less than 20% in 2000/01 to 32% in 2006/07 but reducing to around 25% more recently.

**Figure 4.2: Mix of claims by state (all disease types)**



Since 1997, NSW has contributed approximately 50% of all claims reported. However, in the past five years, its proportion has declined and NSW now contributes typically 35% to 45% of all claims by number (although a higher proportion by cost). In relation to mesothelioma claims, NSW has typically represented around 45% of mesothelioma claims by number and around 50% of mesothelioma claims by cost.

The reduction in the proportion of claims which have a jurisdiction of NSW since 2004/05 has likely been a consequence of the decision in *BHP Billiton vs. Schultz [2004] HCA 61*. Claims reporting activity in NSW has been approximately 190 to 200 claims per annum.

## 4.2 Mesothelioma claims

The number of mesothelioma claim notifications increased steadily from 2000/01 (126 claims) to 2003/04 (189 claims). There was a further upward step in claim numbers during 2004/05 with 266 claims reported.

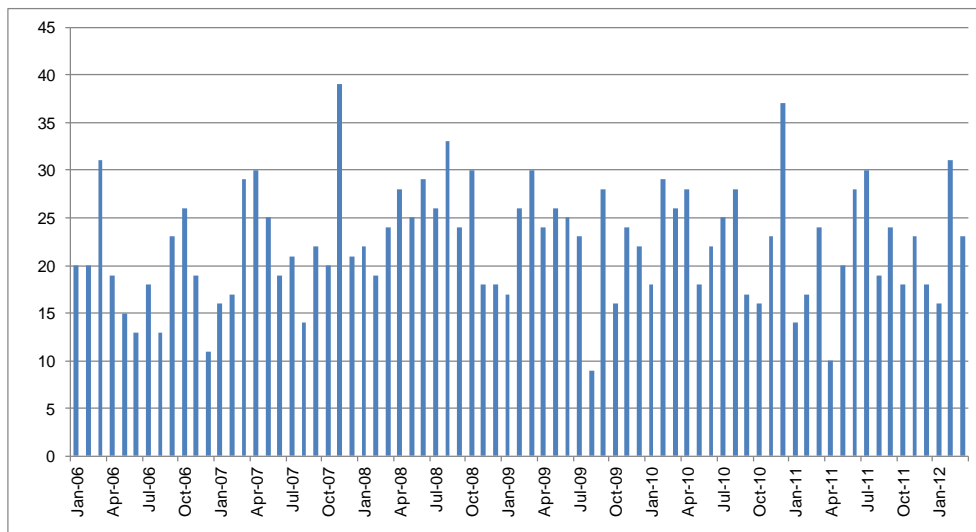
In 2009/10, there were 270 mesothelioma claims and in 2010/11 there were 269 mesothelioma claims.

In 2011/12, there have been 260 mesothelioma 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 claims experience as observed on an annual basis.

**Figure 4.3: Monthly notifications of mesothelioma claims**



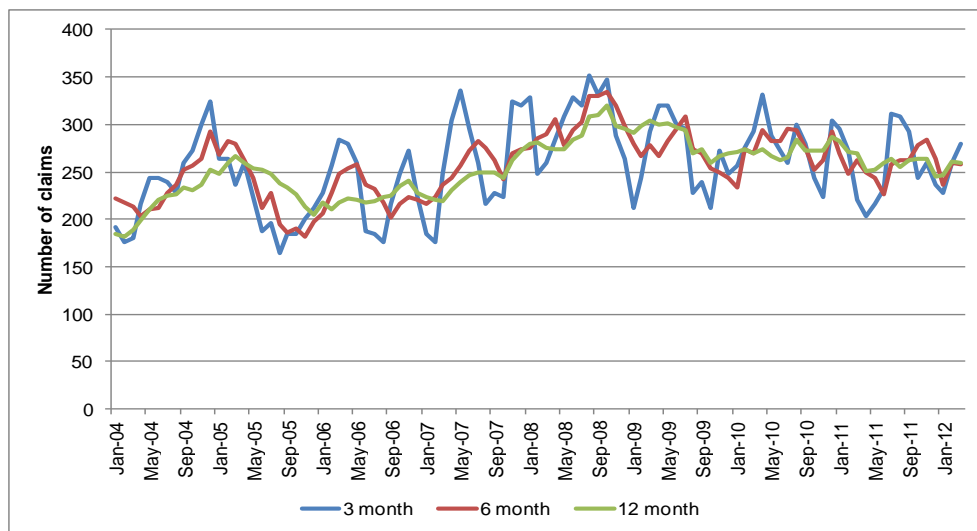
It is observed that:

- The number of claims reported in 2011/12 (260 claims) has been 10% below previous expectations (288 claims).
- In particular, there was a lower level of activity in the first and third quarter of the financial year (approximately 60 claims per quarter), whilst the second and fourth quarter are broadly in line with previous expectations (approximately 70 claims per quarter).
- Typically there is a degree of late development which takes place in the following financial year. The number of claims reported in 2009/10 has increased by 7 since its year ended, and the number of claims reported in 2010/11 has increased by 4 since its year ended.

#### 4.2.2 Rolling averages

We have 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.

**Figure 4.4: Rolling annualised averages of mesothelioma claim notifications**



It can be seen that the current annualised rolling averages are between 280 (3-month average) and 260 (12-month average).

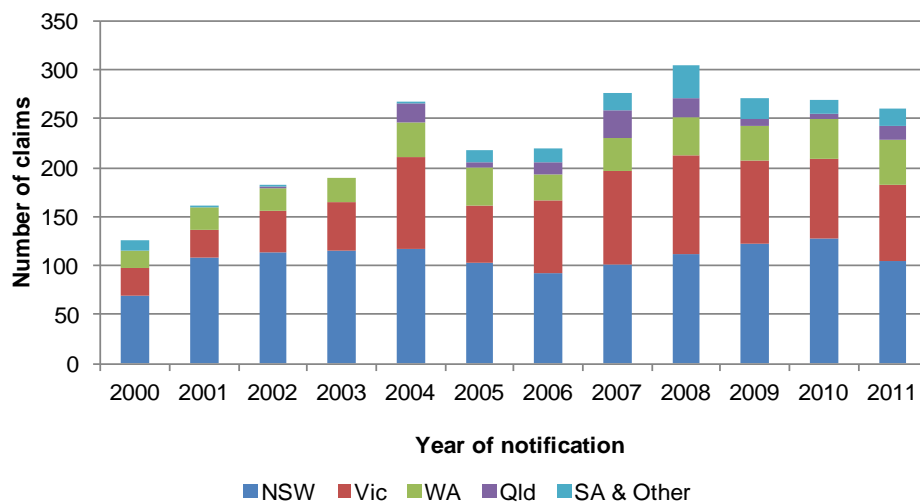
Generally, over the past two years, the 6-month and 12-month averages have remained within the range of 230 to 310 claims per annum.

Not surprisingly, the 3-month averages have shown more volatility, varying between 200 and 340 over the past two years.

#### 4.2.3 Claims notifications by state

We have analysed the number of mesothelioma claim notifications by the state in which the claim is filed. Figure 4.5 shows the number of claims notified by year of notification and by state.

**Figure 4.5: Number of mesothelioma claims by state**



It is of note that for 2011/12:

- Overall, mesothelioma reporting activity is approximately 14% below the levels observed in 2008/09 and is slightly lower than the levels observed in 2009/10 and 2010/11.
- Claim activity in NSW has fallen in 2011/12 and is currently in line with the levels of activity observed between 2005/06 and 2007/08.
- Claim activity in Victoria has gradually reduced from the level observed in 2008/09.
- Claim activity in WA has shown a gradual increase in the last five years.
- Claim activity in Queensland has reduced from the level observed in 2007/08, but increased in 2011/12 following three years of reductions in claim activity.
- Claim activity in South Australia has also reverted more closely to levels observed prior to 2008/09, following a significant increase in 2008/09.

#### **4.2.4 Base valuation assumption for number of mesothelioma claims**

In setting a base valuation assumption for 2012/13, we need to consider whether the observations in the most recent year were one-off fluctuations or may be part of a new or ongoing trend.

We have observed that the total number of claims from NSW, Victoria and SA has reduced from the high levels observed for 2008/09.

We have also observed that four of the last five years have seen claims reporting for mesothelioma in the range 260 to 276.

Based on the above observations, we have assumed 276 claims for 2012/13, which equates to 23 claims per month.

#### **4.3 Asbestosis claims**

For asbestosis, the number of claim notifications showed a step change upwards from 2000/01 and then a gradual increase to 2003/04. There was then another upward step in 2006/07.

For the three years of claims reporting from 2006/07 to 2008/09, claims reporting activity was reasonably stable, between 161 and 171 claims.

There were 120 claims reported in 2009/10 and 139 claims reported in 2010/11. There have been 110 asbestosis claims reported in 2011/12.

We have observed that Victoria (which historically has been the most prevalent state for asbestosis claims, typically contributing more than one-third of all asbestosis claims against the Liable Entities) showed a significant reduction in claim activity in 2009/10 (to 31 claims, down from 52 in the previous year). Claim activity in Victoria increased in 2010/11 (to 51 claims). However a significant reduction in claim activity in Victoria was again observed in 2011/12, falling to 27 asbestosis claims.

The low reporting activity for asbestosis was particularly noticeable in the first half of the financial year (46 claims in total, compared to 64 claims in the second half of the financial year).

We have assumed 126 asbestosis claims will be reported in 2012/13.

#### **4.4 Lung cancer claims**

The number of claims reported has typically been around 35 to 40 claims per annum. However, in 2010/11 this reduced to 13 claims. In 2011/12, there have been 15 lung cancer claims reported.

It is unclear to what extent this reduction has arisen from the decisions in *Amaca vs. Ellis [2010] HCA 5* and *Evans vs. Queanbeyan City Council [2010] NSWDDT 7* as opposed to random variation.

We have assumed 18 lung cancer claims will be reported in 2012/13 given the experience of the most recent two years.

#### **4.5 ARPD & Other claims**

For ARPD & Other claims, the number of claims reported in the past five years has been broadly stable, varying between 37 and 45 claims.

We have assumed 42 ARPD & Other claims will be reported in 2012/13.

#### **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 29 claims to 61 claims in the most recent five years.

There were 29 claims reported in 2011/12 and this was the same number as had been reported in 2010/11.

We have assumed 36 Workers Compensation claims will be reported in 2012/13.

It should be noted that the financial impact of this source of claim is not substantial to the Liable Entities 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 assumed 6 claims will be notified in 2012/13. This compares with 5 claims reported in 2011/12. Again, the financial impact of this source of claim is not significant.

#### **4.7 Summary of base claims numbers assumptions**

In forming a view on the numbers of claims projected to be reported in 2012/13, we have taken into account the emerging experience in the latest financial year and a revised view of the expected numbers of claims reported based on recent trends.

As outlined in Sections 4.2 to 4.6, our assumptions as to the number of claims to be reported in 2012/13 are as follows:

**Table 4.2: Claim numbers experience and assumptions for 2012/13**

	2010/11	2011/12 H1 (annualised)	2011/12 H2 (annualised)	2011/12	2012/13 Assumption
Mesothelioma	269	262	258	260	276
Asbestosis	139	92	128	110	126
Lung Cancer	13	20	10	15	18
ARPD & Other	38	50	24	37	42
Wharf Worker	8	2	8	5	6
<b>Total</b>	<b>496</b>	<b>460</b>	<b>452</b>	<b>456</b>	<b>504</b>

\* 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.

\* 2012/13 Assumption is the assumption selected for 2012/13 in our valuation report of 31 March 2012.

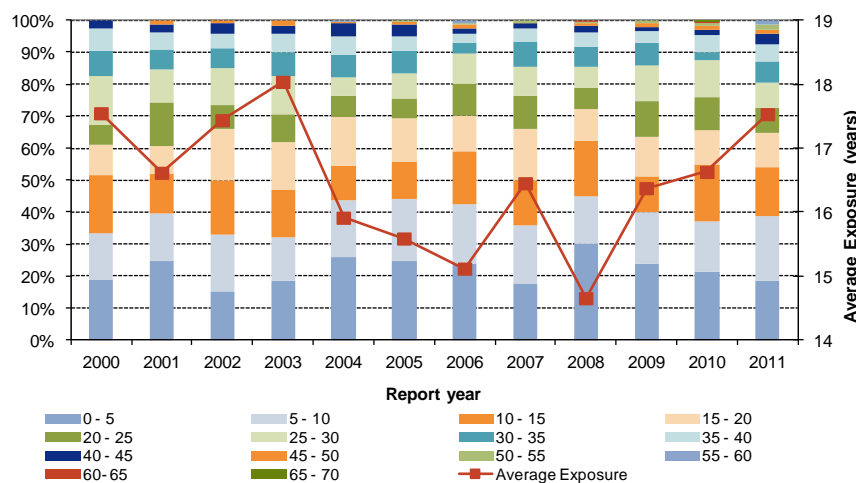
Our projection for 2012/13 of 504 claims compares with a previous projection (as at 31 March 2011) for 547 claims in 2012/13.

## 4.8 Exposure information

### 4.8.1 Average exposure period

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

**Figure 4.6: Mix of claims by duration of exposure (years)**



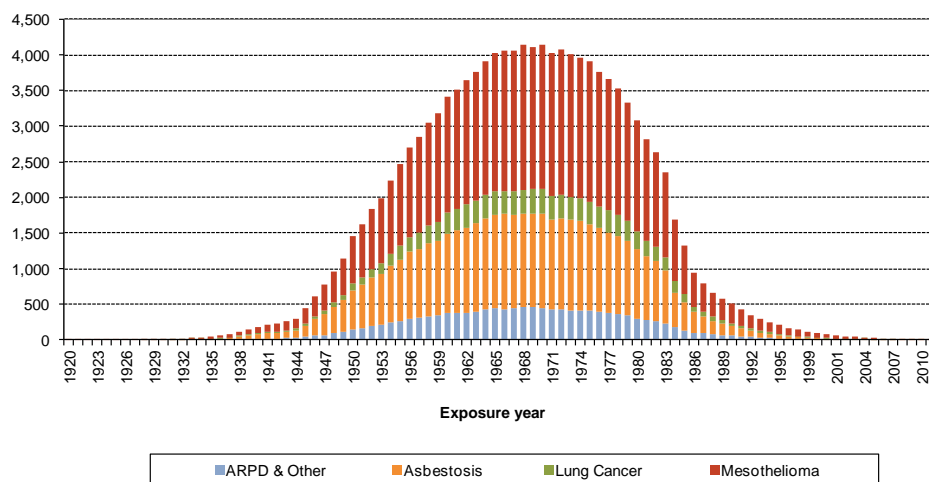
It can be seen that generally the average duration of exposure has varied between 15 years and 18 years.



#### 4.8.2 Exposure information from claims notified to date

We have reviewed the actual exposure information available for 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 all tend to follow a similar pattern.

**Figure 4.7: Exposure (person-years) of all Liable Entities' claimants to date**



The chart shows that the peak year of exposure for claims reported to date is in 1970. It should be recognised that there is a degree of bias in this analysis in that the claims notified to date will tend to have arisen from the earlier periods of exposure.

Over time, we expect the right-hand side of this curve to develop and the peak year of exposure to trend towards the early to mid 1970s, and an increase in the absolute level at all periods of exposure as more claims are notified and the associated exposures from these are included in the analysis.

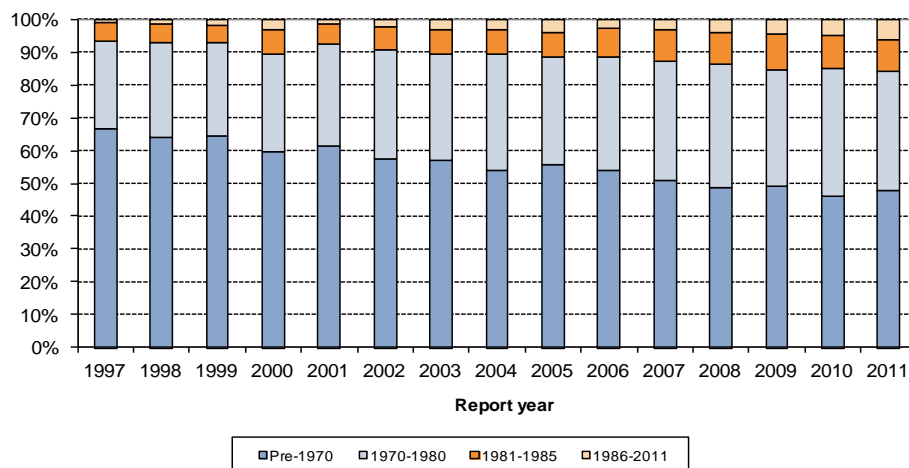
The relatively low level of exposure from 1987 onwards (about 4% of the total) is not unexpected given that all products ceased being manufactured by 1987. The exposure after that date likely results from usage of products already produced and sold before that date.

Figure 4.7 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 towards later exposure periods.

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

**Figure 4.8: Exposure (person years) of all claimants to date by report year and exposure year**



As can be seen in Figure 4.8, there has been a general increasing shift towards the exposure period after 1970, 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 (in relation to future reported claims) will relate to the period 1981/82 to 1985/86.

#### 4.9 Latency period of reported claims

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

We have analysed the actual latency period of the reported claims of the Liable Entities in order to test the validity of these assumptions.

We have measured the average actual 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.

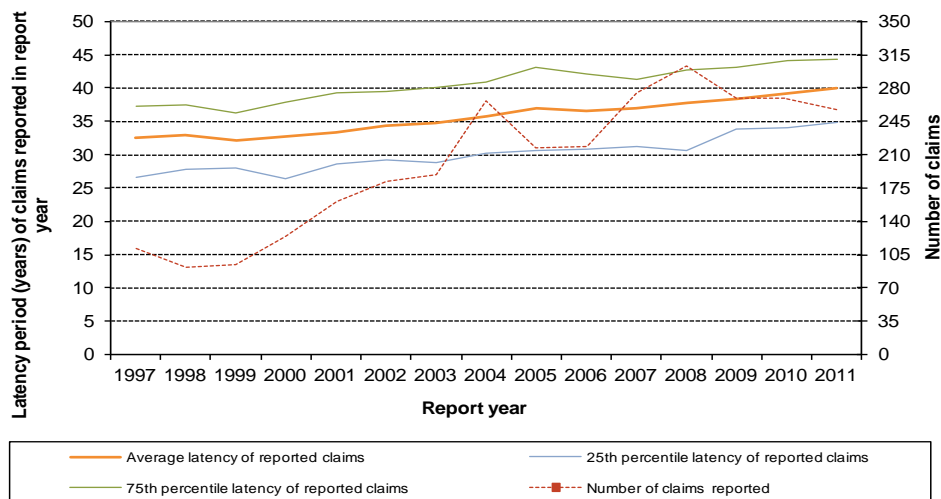
Because our model utilises latency assumptions from the average date of exposure, the latency period reported in the following charts is not directly comparable with that referred to in epidemiological literature.

As indicated in Section 4.8, the average period of exposure for claimants against the Liable Entities is approximately 16 years. This means the actual latency period from the date of first exposure is approximately 8 years greater than indicated in the following charts.

Furthermore, given that the date of notification lags the date of diagnosis by approximately 8 months for mesothelioma and by approximately 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 latency observed for claims reported in each report year from 1997 to 2011, and the 25th percentile and 75th percentile observations.

**Figure 4.9: Latency of mesothelioma claims**



The above chart indicates that the observed average latency period from the average exposure is currently approximately 40 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 approximately 11 years.

Given the average period of exposure is 16 years, this implies our mean 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 approximately 40 years after the main period of exposure, claims currently being reported reflect a broad mix of claims of varying latency periods. Accordingly, any analysis of the observed average latency period of reported claims during the most recent 5 to 10 report years:

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

Over the past ten years, the observed average latency of mesothelioma claims reported in a report year has increased from 33 years to 40 years, increasing at a rate of about 0.7 years with every year that passes.

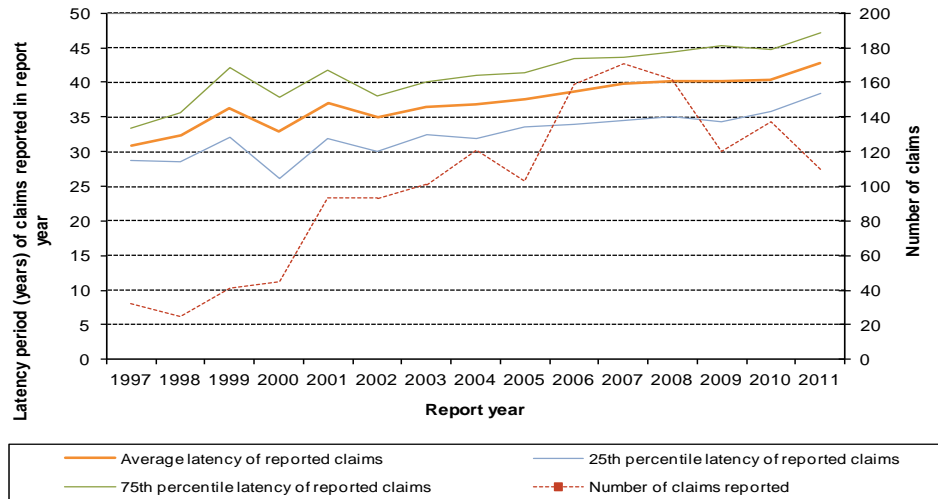
The observed average latency of claims reported in future report years should also be expected to show a further upward trend in the coming years.

The currently observed standard deviation of the latency period is 8.0 years.

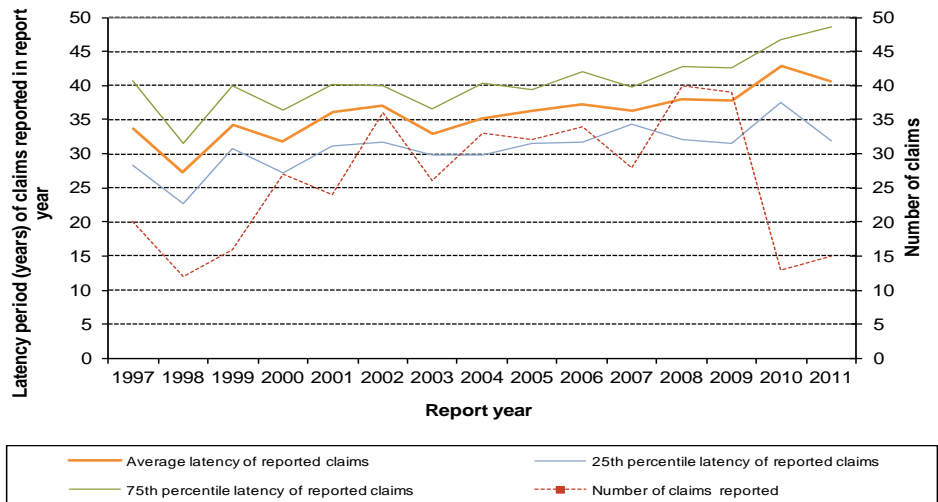
The claims experience to date and the assumptions selected seem to accord with epidemiological research in relation to mesothelioma, once the relevant adjustments to standardise onto a consistent terminology are made.

The trend in latency periods for other disease types is shown in the following charts.

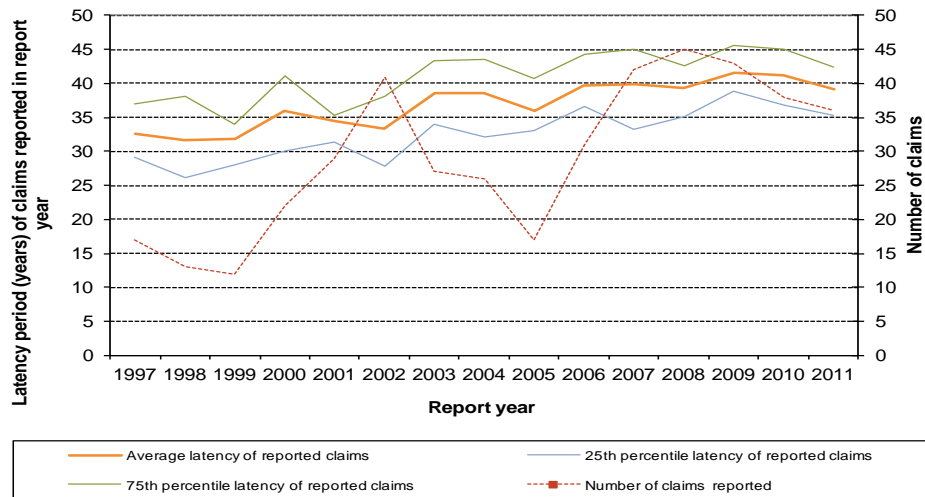
**Figure 4.10: Latency of asbestosis claims**



**Figure 4.11: Latency of lung cancer claims**



**Figure 4.12: Latency of ARPD & Other claims**



The average observed latency periods for the other disease types show a more surprising trend, appearing to be longer than epidemiological literature has tended to suggest.

A summary of our underlying latency assumptions by disease type are shown below. The mean and standard deviation values quoted are applied to a normal distribution model for the latency period.

**Table 4.3: Assumed underlying latency distribution parameters from average date of exposure to date of notification**

	Mean latency (years)	Standard deviation of latency (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

These assumptions are unchanged from the previous valuation.

An indication of how different assumptions would affect the incidence curve and therefore the number of IBNR claims is as follows:

- A higher mean latency period would increase the peak year (i.e. a higher number of IBNR claims).
- A lower standard deviation would lead to a faster decay in the number of claims being reported after the peak year (i.e. fewer IBNR claims).

#### 4.10 Assumed peak year of claims and estimated future notifications

Based on the application of our exposure model and our latency model, and the assumptions contained explicitly or implicitly within those models, as described in detail in Section 3.4, the peak year of notification of claims reporting against the Liable Entities for each disease type is assumed to be as follows:

**Table 4.4: Assumed peak year of claim notifications**

	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

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:

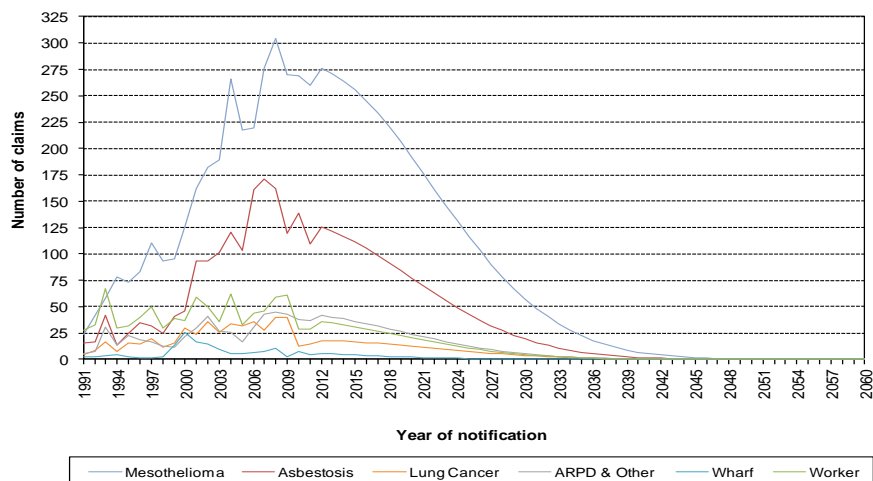
- Many of the studies are based on developing an Australia-wide model of incidence of people who may develop mesothelioma based on the exposures that took place in Australia. Australia continued importing and using Chrysotile asbestos until 31 December 2003, when a ban came into effect.
- The KPMG Actuarial model is a model for the Liable Entities' exposure, and not the whole of Australia's exposure. 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 each disease type for 2012/13 as summarised in Section 4.7.

The following chart 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 of claims reporting activity for 2012/13.

**Figure 4.13: Expected future claim notifications by disease type**



The partial recognition of the emerging experience in 2011/12 has decreased our projected ultimate number of claims compared with our previous valuation by 516 claims. This equates to a reduction of approximately 8% of projected IBNR claim numbers.



#### **4.11 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 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 17 future claims reported, comprising 7 mesothelioma claims, 5 other product and public liability claims and 5 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 2012 of the additional provision (for claims not yet reported) that could potentially be required is an undiscounted liability of \$5.6m and a discounted liability of \$4.2m, all of which is deemed to be a liability of Amaca.

# 5

## Claims Experience – Average Claims Costs

### 5.1 Overview

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

Table 5.1 shows how the average settlement cost for non-nil attritional claims has varied by client settlement year. All data have been converted into mid 2011/12 money terms using a historical base inflation index of 4% per annum.

We refer to these amounts as “inflated average attritional awards” in the charts and tables that follow.

The average amounts shown hereafter relate to the average amount of the contribution made by the Liable Entities, and does 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 award reflects the average contribution by the Liable Entities for claims in which they are joined but relates only to that amount of the award determined against the Liable Entities which is not met by a Workers Compensation Scheme or Policy.

**Table 5.1: Average attritional non-nil claim award (inflated to mid 2011/12 money terms)**

Client Settlement Year	Mesothelioma	Asbestosis	Lung Cancer	ARPD & Other	Wharf	Workers Compensation
2000	323,892	101,905	142,001	80,974	111,610	123,926
2001	376,623	140,368	158,820	152,041	75,657	62,910
2002	345,475	131,151	108,662	120,372	205,940	131,894
2003	299,415	139,229	151,193	127,968	142,811	145,337
2004	273,857	97,820	144,098	97,783	97,137	167,337
2005	258,529	89,047	68,721	90,185	98,679	153,169
2006	264,560	100,841	108,286	80,072	143,037	115,582
2007	261,479	92,112	128,421	55,199	55,341	305,834
2008	298,275	96,438	94,942	100,695	162,720	61,868
2009	266,258	108,862	109,798	95,677	63,672	108,665
2010	270,072	90,145	142,732	75,073	48,710	0
2011	283,605	107,309	124,555	96,980	59,135	900,000

## 5.2 Mesothelioma claims

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

**Figure 5.1: Average awards (inflated to mid 2011/12 money terms) and number of non-nil claims settlements for mesothelioma claims**

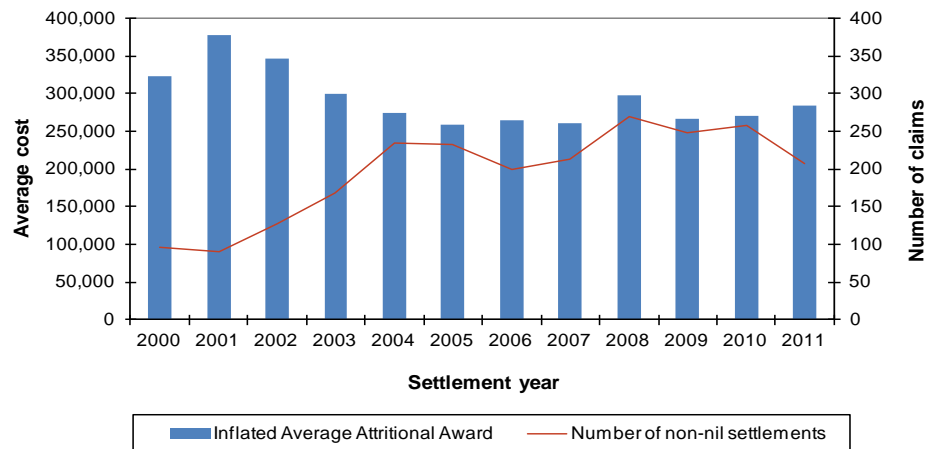


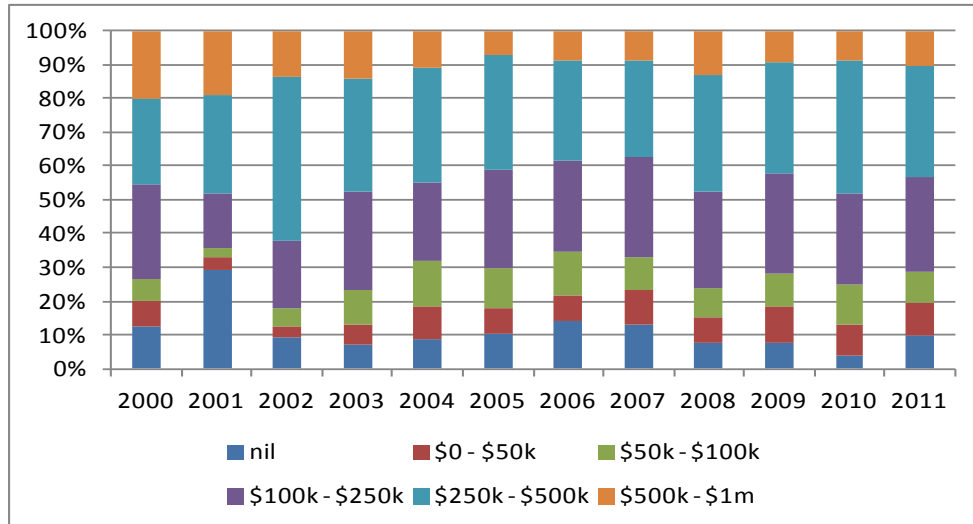
Figure 5.1 shows the historical variability in average claim sizes for mesothelioma, i.e. from \$260,000 to \$380,000 in mid 2011/12 money terms, although over the past eight years there has been a greater degree of stability, varying between \$260,000 and \$300,000.

The average of the past three years is \$273,000; the average of the past four years is \$280,000 and the average of the past five years is \$276,000.

In setting our assumption, it is also important to consider the factors that have led to the increase in average settlement size in 2011/12 relative to that observed in 2010/11.

We have analysed the mix of claims settlements by size of claim (in size bands). The chart below shows the results of the analysis for the numbers of claims settled.

**Figure 5.2: Proportion of mesothelioma claim settlements by settlement size cohort**



The analysis would initially appear to provide limited explanation as to why the average claim size has increased.

However, if we then analyse the overall contribution of each size cohort to the average claim settlement amounts, we see a different picture.

**Figure 5.3: Contribution to attritional average claim size of mesothelioma claim settlements by settlement size cohort**

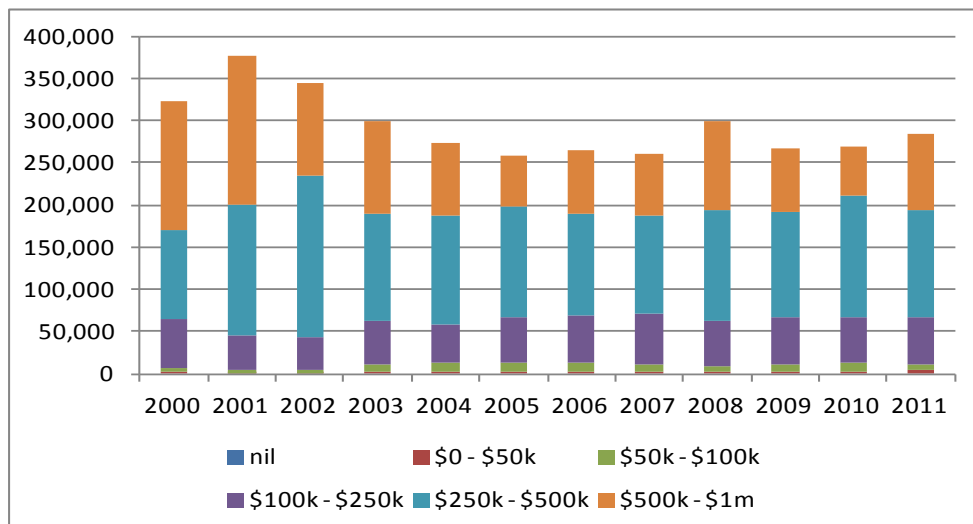


Figure 5.3 shows that the increase in average award for 2011/12 is predominantly a function of the contribution of those claims settled between \$500,000 and \$1m, whereas Figure 5.2 indicates that there is no greater proportion of claims settling in this band.

Our analysis indicates that the average claim settlement size for claims settled between \$500,000 and \$1m (at \$780,000) was higher than experienced in any other year, including 2008/09 (at \$745,000).

In setting our assumption, we have had regard to this recent claims experience.

We have also had regard to the potential impact of some recent court decisions and the impacts they may be having upon claim settlements, or may have upon claim settlements in future years.

Taking all of the above factors into consideration, we have adopted a valuation assumption of \$292,500 for mesothelioma claims in mid 2011/12 money terms. This assumption represents a 2% increase in inflation-adjusted terms.

**Table 5.2: Average mesothelioma claims assumptions**

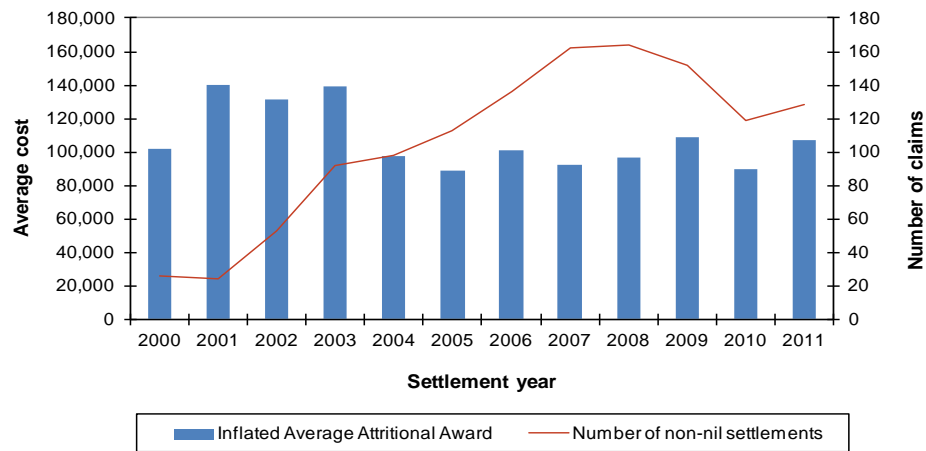
Valuation Report	Claim settlement year	
	2010/11	2011/12
31-Mar-11	270,000	287,800
31-Mar-12	n/a	292,500

*Note: 2010/11 settlements are in 2010/11 dollars whilst 2011/12 settlements are in 2011/12 dollars.*

### 5.3 Asbestosis claims

For asbestosis, it can be seen from Table 5.1 that in the period from 2001/02 to 2003/04 the average award was high relative to more recent experience.

**Figure 5.4: Average awards (inflated to mid 2011/12 money terms) and number of non-nil claims settlements for asbestosis claims**



The average of the past three years is \$103,000; the average of the past four years is \$101,000 and the average of the past five years is \$99,000.

We have adopted an assumption of \$107,500, which broadly reflects the observed experience in 2009/10 and 2011/12. This assumption represents a 1% increase in inflation-adjusted terms.

**Table 5.3: Average asbestosis claims assumptions**

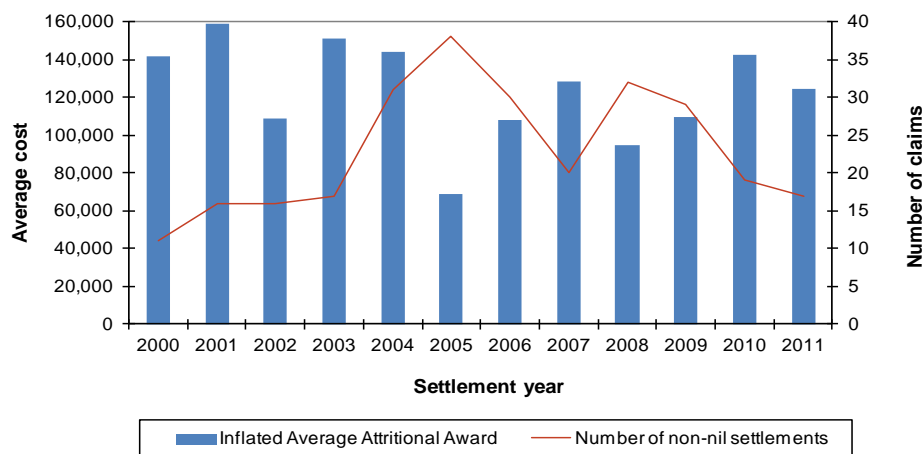
Valuation Report	Claim settlement year	
	2010/11	2011/12
31-Mar-11	100,000	106,600
31-Mar-12	n/a	107,500

*Note: 2010/11 settlements are in 2010/11 dollars whilst 2011/12 settlements are in 2011/12 dollars.*

## 5.4 Lung cancer claims

The average award for lung cancer claims has exhibited some volatility in the past five years, although this is not unexpected given the small volume of claim settlements (approximately 20 to 30 claims per annum).

**Figure 5.5: Average awards (inflated to mid 2011/12 money terms) and number of non-nil claims settlements for lung cancer claims**



The average of the past two years is \$134,000, the average of the past three years is \$123,000; the average of the past four years is \$114,000 and the average of the past five years is \$116,000.

At this valuation, we have adopted an average award size of \$135,000, particularly taking into account the experience in the most recent two years. This assumption represents an increase of 8% in inflation-adjusted terms.

**Table 5.4: Average lung cancer claims assumptions**

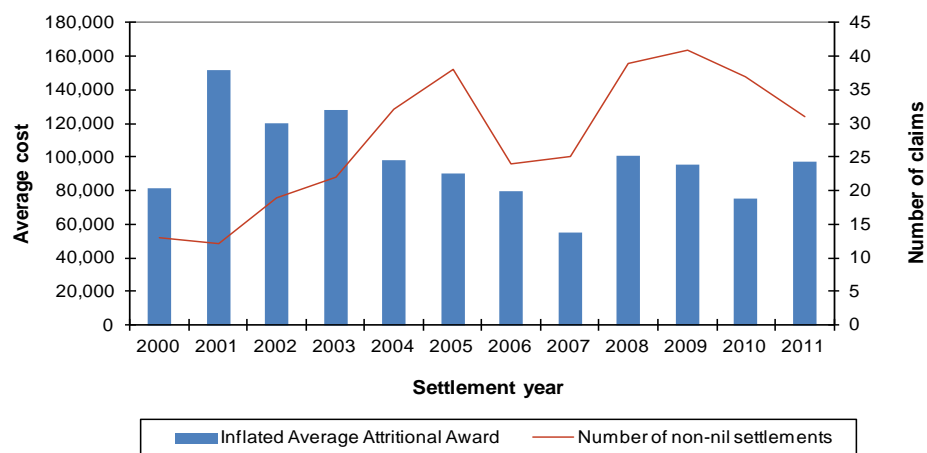
Valuation Report	Claim settlement year	
	2010/11	2011/12
31-Mar-11	117,500	125,300
31-Mar-12	n/a	135,000

*Note: 2010/11 settlements are in 2010/11 dollars whilst 2011/12 settlements are in 2011/12 dollars.*

## 5.5 ARPD & Other claims

The average award size over the past eight years has been relatively stable, with the exception of the low average award size observed in 2007/08.

**Figure 5.6: Average awards (inflated to mid 2011/12 money terms) and number of non-nil claims settlements for ARPD & Other claims**



For ARPD & Other claims, the average of the past three years is \$89,000; the average of the past four years is \$92,000 and the average of the past five years is \$87,000.

We have adopted an average award size of \$97,500 recognising the experience between 2002/03 and 2011/12 (although largely ignoring the experience in 2007/08). This assumption represents a 2% increase in inflation-adjusted terms.

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

Valuation Report	Claim settlement year	
	2010/11	2011/12
31-Mar-11	90,000	95,900
31-Mar-12	n/a	97,500

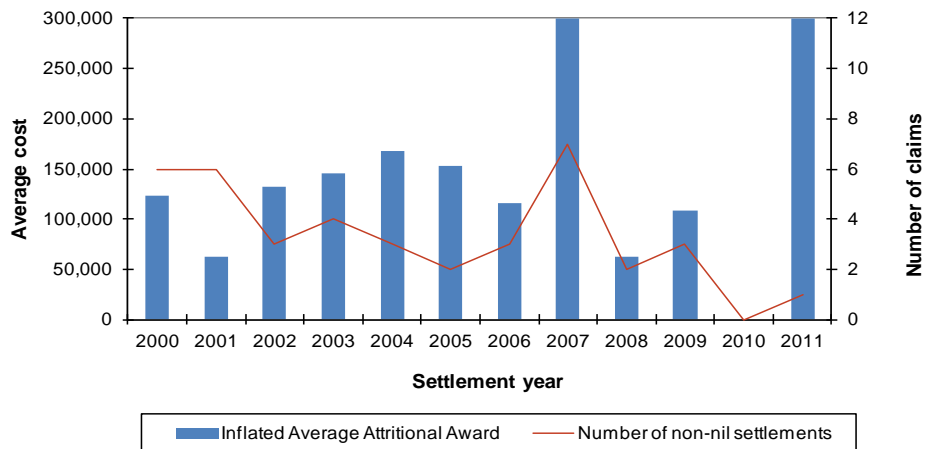
*Note: 2010/11 settlements are in 2010/11 dollars whilst 2011/12 settlements are in 2011/12 dollars.*



## 5.6 Workers Compensation claims

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

**Figure 5.7: Average awards (inflated to mid 2011/12 money terms) and number of non-nil claims settlements for Workers Compensation claims**



*Note: The chart has been “cut-off” at \$300,000. The observation for the 2007/08 year was \$305,834 and the observation for the 2011/12 year was \$900,000. In both cases these high observations are affected by a single claim.*

It should be noted that the high average claim size in 2011/12 is due to one claim. Furthermore, we understand that this claim payment is expected to be fully recovered from the workers compensation insurer.

Given that there has been no new information in the year in relation to average claim sizes, our approach has been to set an average claim size assumption of \$137,500 which is broadly unchanged from the previous valuation.

This assumption is not material to the overall liability given the high proportion of claims which are settled with no retained liability against the Liable Entities.

**Table 5.6: Average Workers Compensation claims assumptions**

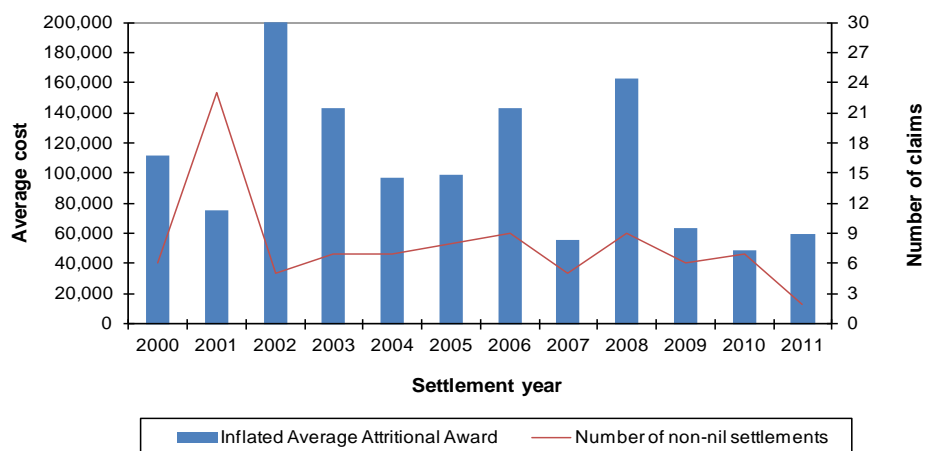
Valuation Report	Claim settlement year	
	2010/11	2011/12
31-Mar-11	130,000	138,600
31-Mar-12	n/a	137,500

*Note: 2010/11 settlements are in 2010/11 dollars whilst 2011/12 settlements are in 2011/12 dollars.*

## 5.7 Wharf claims

For wharf claims, the average of the past three years has been \$56,000; the average of the past four years has been \$96,000 and the average of the past five years has been \$89,000.

**Figure 5.8: Average awards (inflated to mid 2011/12 money terms) and number of non-nil claims settlements for wharf claims**



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

We have adopted a valuation assumption of \$107,500 in mid 2011/12 money terms. This assumption represents a 1% increase in inflation-adjusted terms. Given the small volume of wharf claims, this assumption is not financially significant to the overall results.

**Table 5.7: Average wharf claims assumptions**

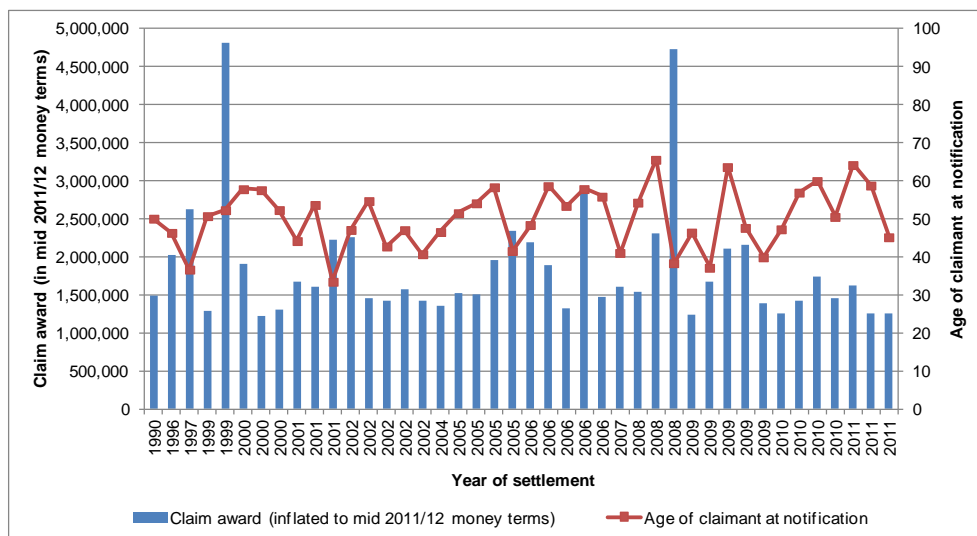
Valuation Report	Claim settlement year	
	2010/11	2011/12
31-Mar-11	100,000	106,600
31-Mar-12	n/a	107,500

*Note: 2010/11 settlements are in 2010/11 dollars whilst 2011/12 settlements are in 2011/12 dollars.*

## 5.8 Large claim size and incidence rates

There have been 42 claims settled with awards in excess of \$1m in 2006/07 money terms. All of these claims are product and public liability claims and the disease diagnosed in each case was mesothelioma.

**Figure 5.9: Distribution of individual large claims by settlement year**



In aggregate these claims have been settled for \$77.4m in mid 2011/12 money terms, at an average cost of approximately \$1.84m. There have been two claims of more than \$4.5m each in mid 2011/12 money terms.

There are six mesothelioma claims which have not yet been settled and for which the current case estimate is in excess of \$1m.

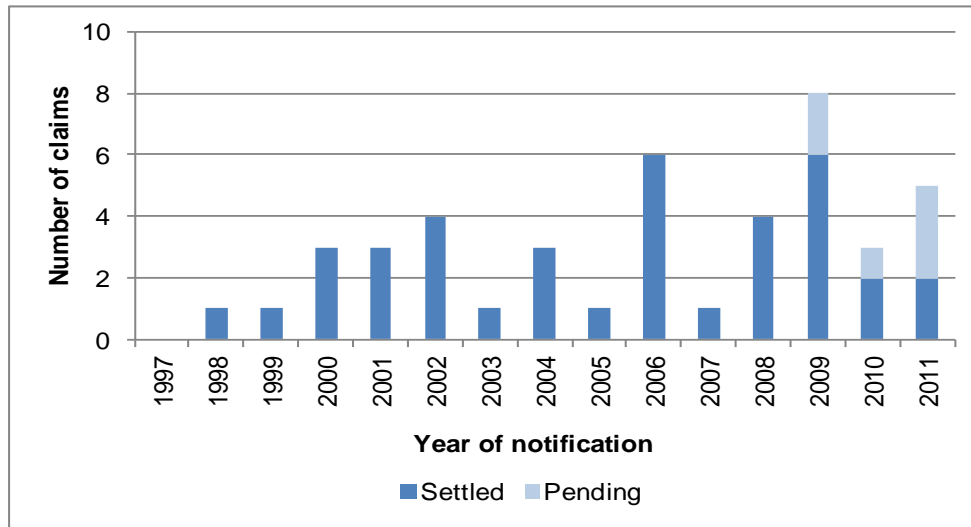
The incidence rate of large claims to non-nil settlements in any one year has been variable, dependent on the random incidence of large claims by settlement year:

- Over the period 1997-2011 there have been 40 large claims at an incidence rate of 1.54% (i.e. the ratio of the number of large claims to the total number of non-nil mesothelioma claims).
- Over the period 2001-2011 there have been 34 large claims at an incidence rate of 1.49%.

In selecting a large claim incidence rate, or expected annual number of large claims, we have analysed the number of large claims by year of notification.

The chart below shows the number of claims that are currently assessed as large and we have separately shown the number of claims that have been settled and the number of claims that are yet to settle but are currently anticipated to be settled as a large claim.

**Figure 5.10: Number of large claims by year of notification**



It would appear that an assumption in the range of 5 to 6 large claims notified per annum may be justified based on recent experience.

We have therefore assumed a future large claim incidence rate of 2.00% over all future years. This equates to an assumption of 5.5 large claims in 2012/13. This assumption is an increase from our previous valuation assumption of 1.75%.

We have taken the average large claim size experienced to date as our base assumption, given the small volume of such claims. This has resulted in an assumption of \$1.85m for the claim award.

Implicitly, this allows for the occasional \$4.5m claim at an incidence rate broadly equivalent to past experience (approximately one such claim every five years).

As a consequence, the overall claim cost loading per non-nil mesothelioma claim (excluding legal cost allowances) to make allowance for large claims is \$37,000 (being 2.00% x \$1,850,000). This is a 7% increase from our previous valuation assumption of \$34,500 (in 2011/12 money terms) (being calculated as 1.75% x \$1,850,000 x 1.066).

In relation to legal costs, we have made an additional allowance of \$60,000 per claim for plaintiff legal costs where such costs are made additional to, rather than included with, the claims award.

We have also made a separate allowance for defendant legal costs of \$100,000 per claim. We note that in the most recent three years, the average defence legal costs incurred for a large claim has been approximately \$80,000 per claim. However, we note that prior to the most recent three years, average defence legal costs for a large claim was considerably higher (in the order of \$150,000).

The actual incidence of, and settlement of, large claims is not readily predictable and therefore deviations will occur from year to year due to random fluctuations because of the small numbers of large claims (approximately 5 per annum).

For other disease types, there have been no claims settled which have exceeded \$650,000 in actual money terms (excluding the \$900,000 Workers Compensation claim to which we have previously referred). Therefore we have made no explicit 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.

**Table 5.8: Summary average claim cost assumptions**

	Current Valuation	Previous Valuation
Mesothelioma	292,500	287,800
Asbestosis	107,500	106,600
Lung Cancer	135,000	125,300
ARPD & Other	97,500	95,900
Wharf	107,500	106,600
Workers Compensation	137,500	138,600
Mesothelioma Large Claims (award only)	Average Size: \$1.85m. Frequency: 2.00%	Average Size: \$1.97m. Frequency: 1.75%

*Note: Both the current valuation assumption and the previous valuation assumption are expressed in 2011/12 money terms.*

# 6

## Claims Experience – Nil Settlement Rates

### 6.1 Overview

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

Table 6.1 shows the observed nil settlement rates by disease type and by settlement year.

**Table 6.1: Nil settlement rates**

Client Settlement Year	Mesothelioma	Asbestosis	Lung Cancer	ARPD & Other	Wharf	Workers Compensation
2000	12%	16%	8%	19%	25%	87%
2001	28%	29%	41%	20%	18%	86%
2002	9%	9%	11%	17%	38%	80%
2003	7%	5%	23%	12%	63%	96%
2004	9%	8%	23%	9%	0%	94%
2005	10%	10%	27%	19%	20%	95%
2006	14%	9%	25%	43%	0%	96%
2007	13%	9%	31%	19%	72%	85%
2008	8%	9%	24%	13%	0%	95%
2009	8%	8%	22%	2%	0%	82%
2010	4%	6%	32%	10%	0%	100%
2011	9%	5%	29%	9%	0%	50%

*Note: For mesothelioma and asbestosis, the nil settlement rates for the 2010/11 settlement year (labelled "2010" in the above table) have fallen materially compared to those stated in our 31 March 2011 valuation report (previously 11% and 20%, now 4% and 6% respectively).*

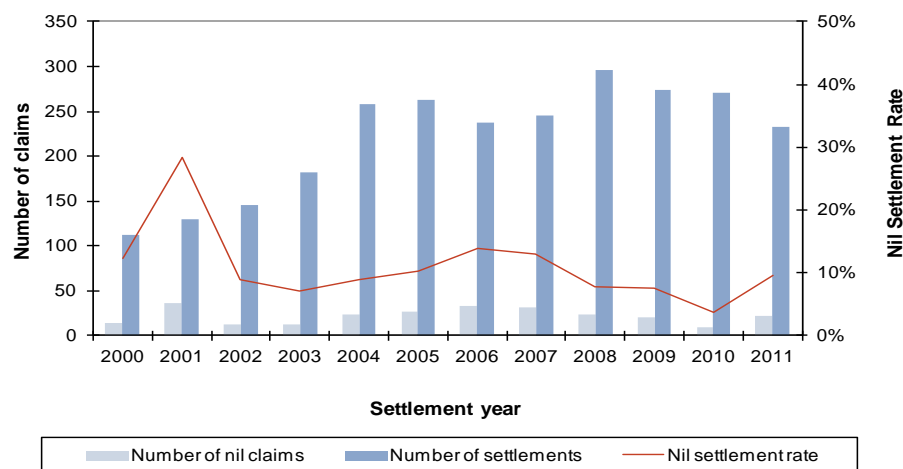
*This is due to a number of claims where the settlement date had been recorded in the database at 31 March 2011 but the settlement amount had not yet been entered (see Section 2.3.2 for further details). This data issue has been corrected at 31 March 2012.*

## 6.2 Mesothelioma claims

The nil settlement rate for mesothelioma has 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 past six years, the nil settlement rate has varied between 4% and 14%.

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

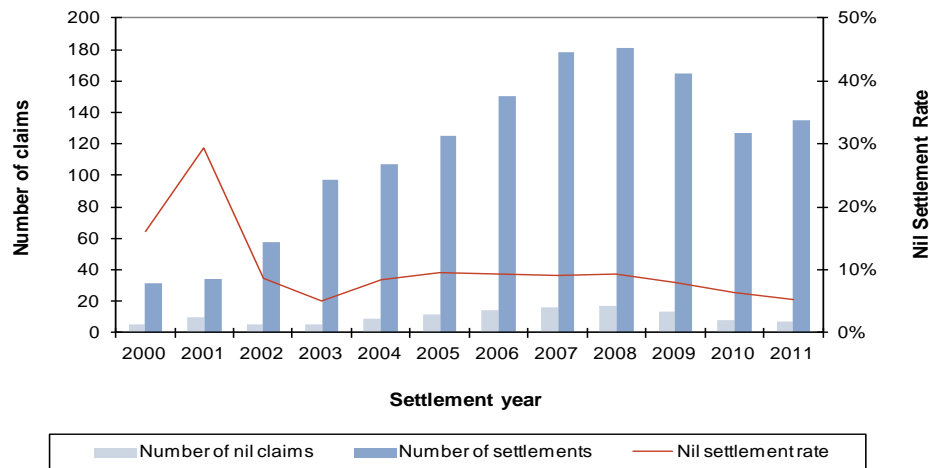
- The nil settlement rate for the past three years has averaged 7%, for the past four years has averaged 7% and for the past five years has averaged 8%. Each of these is significantly impacted by the 4% rate observed in 2010/11;
- The experience during 2006/07 and 2007/08 showed an increased nil settlement rate to approximately 14%; and
- In 2008/09 and 2009/10, the nil settlement rate fell to 8%, and in 2010/11 the nil settlement rate fell again to 4%.
- The experience in 2011/12 was more consistent with the 2008/09 and 2009/10 years, with a nil settlement rate of 9%.

Taking all of these factors into consideration and in particular the variability from year to year, we have reduced the assumed future nil settlement rate to 8% from our previous assumption of 10%.

### 6.3 Asbestosis claims

As with mesothelioma, the historical asbestosis nil settlement rate has been volatile.

**Figure 6.2: Asbestosis nil claims experience**



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

The nil settlement rate for the past three years has averaged 7%, for the past four years has averaged 7% and for the past five years has averaged 8%.

The chart shows a general downward trend from 2005/06 to 2010/11 which has continued in 2011/12.

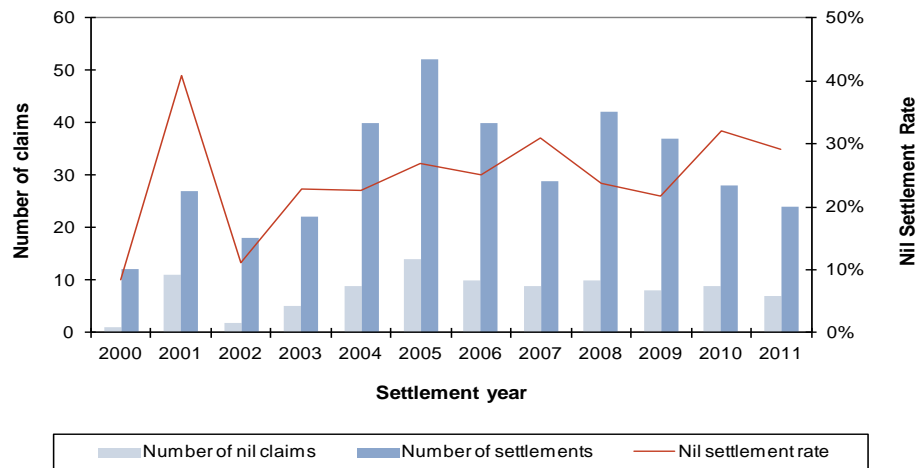
In these circumstances we have reduced the nil settlement rate to 7%, a reduction from our previous valuation assumption of 9%.



## 6.4 Lung cancer claims

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

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



The nil settlement rate for the past three years has averaged 27%, for the past four years has averaged 26% and for the past five years has averaged 27%.

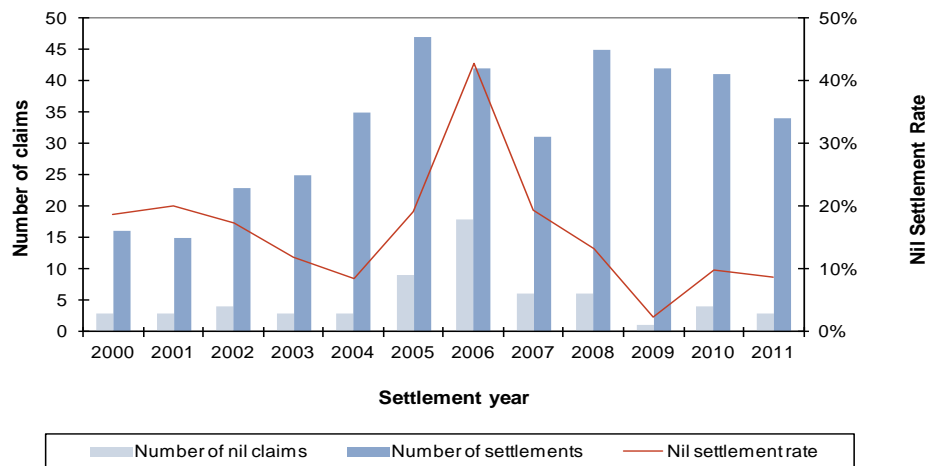
The experience has been relatively stable in recent years, with an overall slight upward trend noticeable since 2002/03.

In these circumstances we have selected 27% as the future nil settlement rate. This is an increase from our previous valuation assumption of 25%.

## 6.5 ARPD & Other claims

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

**Figure 6.4: ARPD & Other nil claims experience**



The nil settlement rate for the past three years has averaged 7%, for the past four years has averaged 9% and for the past five years has averaged 10%. These averages have been materially affected by the very low nil settlement rate (2%) in 2009/10.

We have selected 11% as our nil settlement rate assumption for this class of disease. This is a reduction from our previous valuation assumption of 16%.

## 6.6 Workers Compensation claims

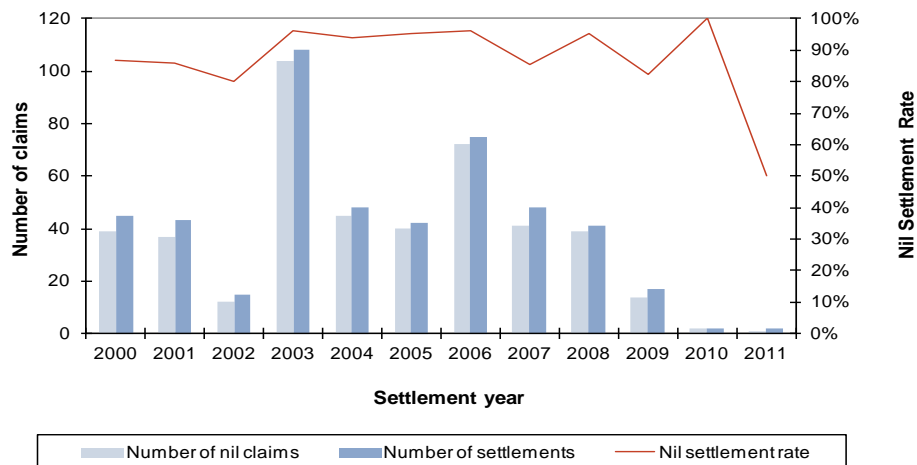
The nil settlement rates for Workers Compensation claims have been high and reflect the portion of claims whose costs are fully met by a Workers Compensation Scheme or Policy. The proportion of such claims which are fully met by insurance has been relatively stable since 1997/98, typically varying between 80% and 90%.

The nil settlement rate has been in excess of 90% for six of the past nine years, and it has been above 80% for each of the past twelve years except for 2011/12.

The nil settlement rate for 2011/12 was a result of there being only two claims settled in the year, with one claim settled for nil amount.

As previously commented, the claim settled in 2011/12 and which is currently non-nil is expected to be fully recovered from the workers compensation insurer.

**Figure 6.5: Workers Compensation nil claims experience**



In these circumstances, and given the absence of any material new information, we have assumed a nil settlement rate of 90% at this valuation, unchanged from our previous valuation assumption.

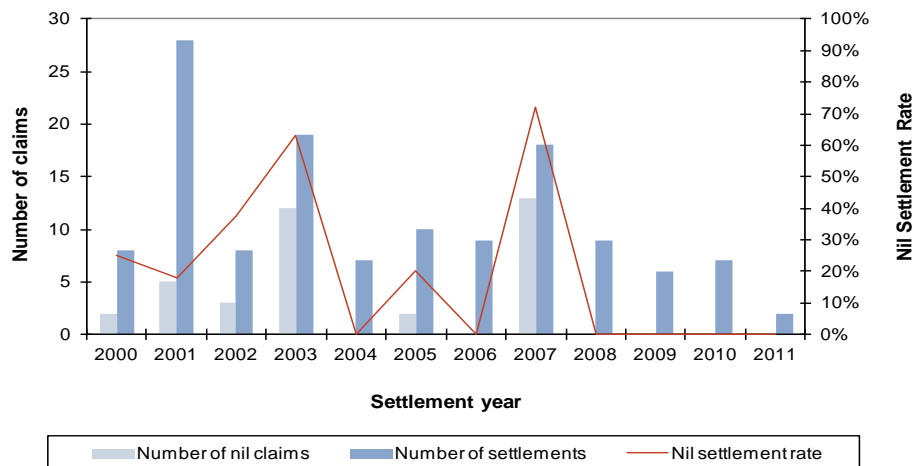
## 6.7 Wharf claims

For wharf claims, the nil settlement rate for the past three years has averaged 0%, for the past four years has averaged 0% and for the past five years has averaged 31%, although these are affected by the high nil settlement rate in 2007/08 and the absence of nil claims in the four most recent years.

With the limited new information in the last financial year, we have maintained our valuation assumption at 18%.

Given the extremely low volume of claims activity for wharf claims, this assumption is highly subjective but is also not material to the overall 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**

	<b>Current Valuation</b>	<b>Previous Valuation</b>
Mesothelioma	8.0%	10.0%
Asbestosis	7.0%	9.0%
Lung Cancer	27.0%	25.0%
ARPD & Other	11.0%	16.0%
Wharf	18.0%	18.0%
Workers Compensation	90.0%	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 future reported claims and pending 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 derived our base inflation assumption from CPI based indicators together with long term CPI / AWOTE relativities.

#### 7.2.2 CPI assumption

We have considered two indicators for our CPI assumption:

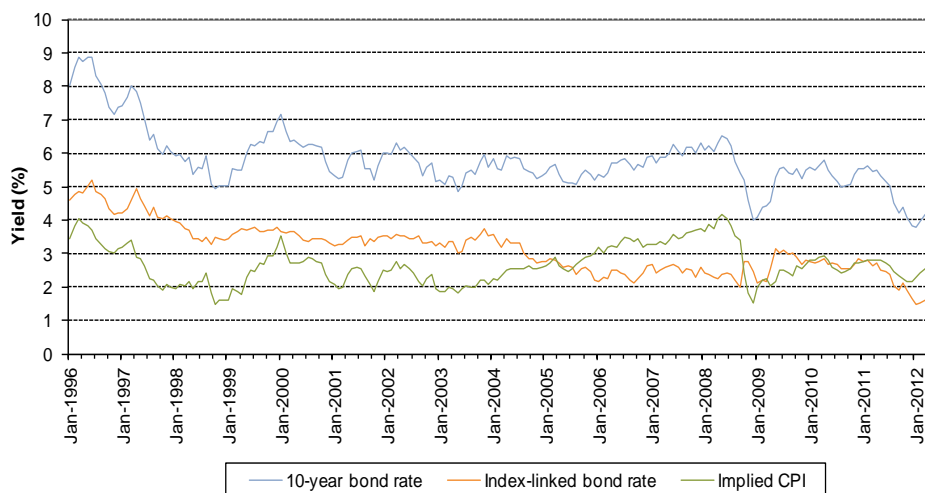
- Market implied CPI measures.

- RBA CPI inflation targets.

We have measured the financial market implied expectations of the longer-term 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: <http://www.rba.gov.au/Statistics/Bulletin/index.html>

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

At 31 March 2012, the effective annual yield on long-term Government bonds was 4.15% per annum and the equivalent effective real yields on long-term index-linked bonds was approximately 1.59% per annum. This implies current market expectations for the long-term rate of CPI are of the order of 2.6% per annum.

In considering this result we note that:

- The yield on both nominal and CPI-linked Government bonds is driven by supply and demand. The yields on both, and their relativity, are subject to some volatility.

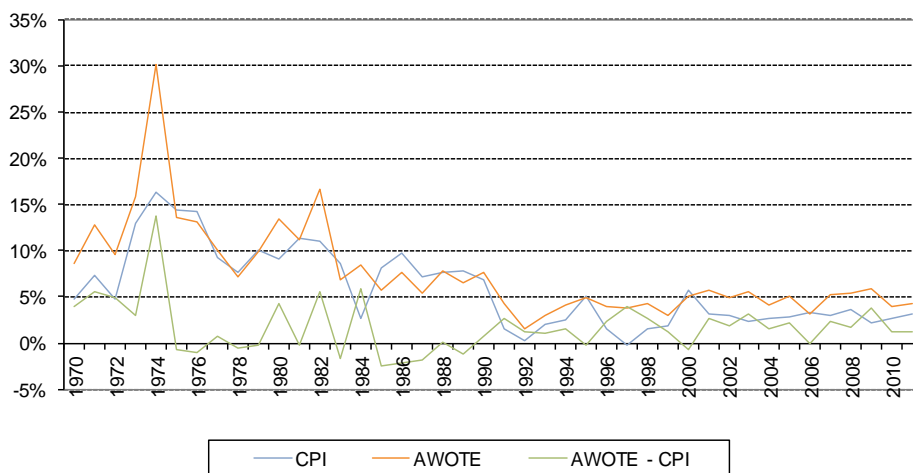
- The RBA's long term target is for CPI to be maintained between 2% and 3% per annum.
- The implied CPI rate stayed consistently above 3.2% per annum from March 2006 to May 2008, peaking at almost 4.2% in May 2008.
- From May 2008 to December 2008, the implied rate of CPI showed a significant reduction from 4.2% to 1.5% per annum.
- It then increased through to April 2010 (to 2.9% per annum) and remained broadly stable at 2.8% per annum until May 2011.
- It then decreased through to December 2011 (to 2.2% per annum) although it has increased to 2.6% per annum in March 2012.

Weighing this evidence together 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 rate of AWOTE and CPI inflation, and their relativity, for the 1970 to 2010 period. The years shown in the chart are calendar years.

**Figure 7.2: Trends in CPI and AWOTE**



In considering the above, we note:

- The 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 historical data suggests a CPI / AWOTE relativity, or gap, of approximately 1.75% to 2.00% per annum.

Given a longer term CPI benchmark of 2.50% to 3.00%, this suggests a longer-term wage inflation (AWOTE) assumption of 4.25% to 5.00% p.a.

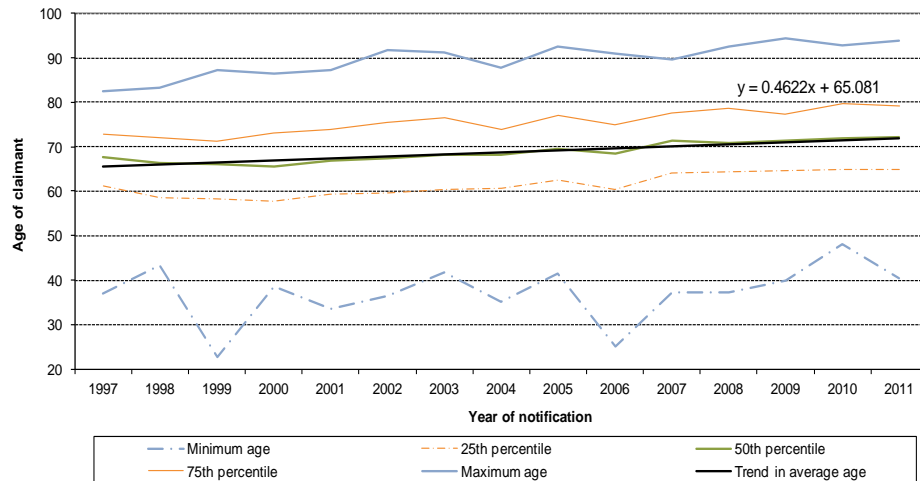
#### *7.2.4 Impact of claimant ageing and non-AWOTE inflation effects*

The overall age profile of claimants is expected to rise over future years with the consequent impact that, other factors held constant, claim 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 increase at a rate 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 typically be expected to increase at CPI or lower;
- other heads of damage, including loss of earnings, would be expected to increase at AWOTE (ignoring the ageing effect); and
- medical expenses and care costs would be expected to increase in line with medical cost inflation which in recent years has been considerably in excess of AWOTE.

**Figure 7.3: Age profile of mesothelioma claimants by report year**



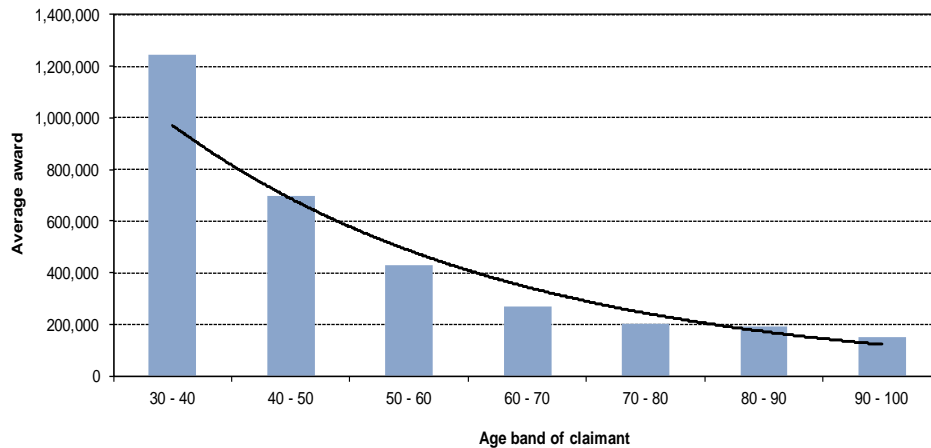
The chart indicates that the median age of mesothelioma claimants is increasing.

The claims experience does not indicate a considerable increase in the number (or 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 is upwards, indicating that the age profile of claimants is typically increasing.

The chart also indicates that the median age of claimants is increasing by approximately 0.46 years each year, with the median age in excess of 70 years.

Figure 7.4 shows how average claim size varies by decade of age.

**Figure 7.4: Average mesothelioma claim settlement amounts by decade of age**



The analysis suggests that the average mesothelioma award reduces by approximately 20% to 30% for each increasing decade of age when considering the typical age range of the claimants (i.e. over 60 years of age), although it can be seen that the rate of reduction in award sizes by decade of age decreases after 70 years of age.

Figure 7.3 suggests that the average mesothelioma claimant is typically ageing by approximately 0.46 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 increases in the average age of claimants upon average sizes is approximately 0.75% to 1.00% per annum.

Taking all of these factors into account, we have adopted a base inflation assumption of 4.25% per annum. This assumption is therefore set after having taken into account the negative effect of ageing upon claims awards.

This is unchanged from our previous long-term assumption for base inflation.

## 7.3 Superimposed inflation

### 7.3.1 Overview

Superimposed inflation is a term used by actuaries to measure the rate at which claims escalate in excess of a base (usually wage) inflation measure.

As a result, superimposed inflation is a “catch-all” for a range of potential factors affecting claims costs, including (but not limited to):

- Courts making compensation payments in relation to new heads of damage;
- Courts changing the levels of compensation paid for existing heads of damage;
- Advancements in medical treatments – for example, this could lead to higher medical treatment costs (e.g. the cost of the use of new drug treatments);
- Allowance for medical costs to rise faster than wages because of the use of enhanced medical technologies;
- Changes in life expectancy;
- Changes in retirement age – this would have the potential to increase future economic loss awards;
- Changes in the relative share of the liability to be borne by the Liable Entities’ (which we refer to as “the contribution rate”); and
- Changes in 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; 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. We have already made some allowance for this by way of an adjustment to the base inflation assumption.

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 recent years (after adjusting for wage inflation), with mesothelioma average claim sizes (adjusted for wage inflation) having increased by less than \$10,000 (3.5%, or 0.5% per annum) in a seven-year period from 2004/05 to 2011/12.

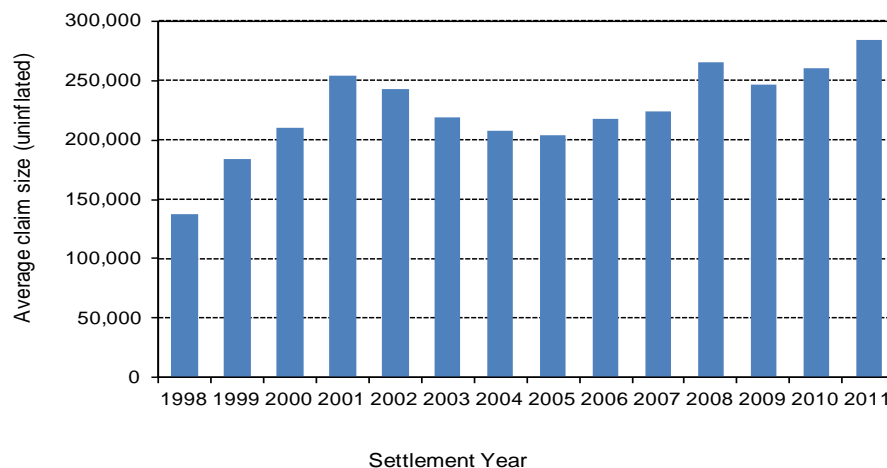
However, the emergence of new or expanding heads of damage does not tend to proceed smoothly but progresses in “steps”, depending on the outcome of legislative and other developments.

### 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 past 14 years for mesothelioma claims. We have assessed this by analysing uninflated claim costs and therefore Figure 7.5 measures the trend in the total rate of claims inflation.

Figure 7.5 can then be used to determine 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 longer term. The rate of inflation of claims costs measured by this chart therefore includes the negative effect of ageing upon claim awards.

**Figure 7.5: Average mesothelioma awards of the Liable Entities (uninflated)**



From Figure 7.5, we have the following observations in relation to the rate of claim inflation of the Liable Entities' share of claims awards:

- Between 1998/99 and 2001/02, claims inflation of the Liable Entities' share of mesothelioma claims awards averaged approximately 23% per annum.
- Between 2001/02 and 2011/12, claims inflation for mesothelioma claims averaged around 1.09% per annum, reflecting a more benign claims environment with no new heads of damage introduced.

- The average rate of claims inflation of the Liable Entities' share of mesothelioma claims awards from 1998/99 to 2011/12 was approximately 5.75% per annum, which would imply a superimposed inflation rate of approximately 1.5% per annum (using a base inflation assumption of 4.25% per annum).
- The average rate of claims inflation of the Liable Entities' share of mesothelioma claims awards from 2004/05 to 2011/12 was 4.5% per annum, which would imply a superimposed inflation rate of approximately 0.25% per annum (using a base inflation assumption of 4.25% per annum).
- The average rate of claims inflation of the Liable Entities' share of mesothelioma claims awards from 2005/06 to 2011/12 was approximately 5.62% per annum, which would imply a superimposed inflation rate of approximately 1.37% per annum (using a base inflation assumption of 4.25% per annum).

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

Furthermore, in considering the future rate of claim inflation, we have had regard to some of the recent court decisions and the impact they can have either directly or indirectly upon claim settlements.

Weighing all of the evidence together, and in particular recognising that the period since 2001 has generally been benign and may not therefore be reflective of a longer-term assumption, we have adopted an assumed long-term rate of future superimposed inflation of 2.25% per annum.

## 7.4 Summary of claims inflation assumptions

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

**Table 7.1: Claims inflation assumptions**

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

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

*Base inflation is net of the negative effect of ageing upon claims awards.*

## 7.5 Discount rates: Commonwealth bond zero coupon yields

We have calculated the zero coupon yield curve at 31 March 2012, underlying the prices, coupons and durations of Commonwealth 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 the Institute of Actuaries of Australia's Professional Standard PS300 and is also consistent with our understanding of the Australian accounting standards.

**Table 7.2: Zero coupon yield curve by duration**

Year	Current Valuation	Previous Valuation
1	3.76%	4.88%
2	3.25%	5.02%
3	3.45%	5.33%
4	3.71%	5.57%
5	3.96%	5.75%
6	4.22%	5.86%
7	4.47%	5.90%
8	4.69%	5.92%
9	4.88%	5.94%
long-term	6.00%	6.00%

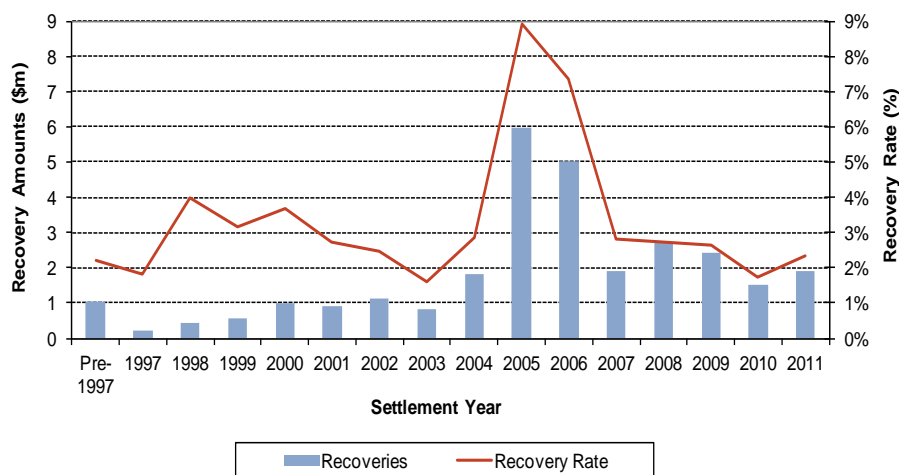
## 7.6 Cross-claim recovery rates

Cross-claim recoveries have totalled \$29m to date. This represents 3.4% of gross claims costs.

The majority of cross-claim recoveries relate to the Hardie-BI Joint Venture with CSR, including more than \$4m paid in 2005/06 and more than \$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**



Cross-claim recoveries in 2005/06 (\$5.9m) and 2006/07 (\$5.0m) were significantly impacted by recoveries from CSR and were due also to the impact of the Hardie-BI Joint Venture.

Our analysis indicates that such recoveries in part relate to recoveries that ought to have been made earlier (i.e. they reflected an element of catch-up). Therefore, we believe the rate of recovery exhibited in those two years is not a good guide to the likely future level of recovery.

Taking this and the recent levels of cross-claim recoveries (which have averaged 2.2% over the past three years) into account we have assumed that future levels of cross-claim recoveries will be 2.0% of the average award. This is unchanged from the previous valuation assumption at 31 March 2011.



## 7.7 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	0	1	2	3	4	5	6	7	8	9	10	11	12
1996	47.2%	96.1%	96.5%	99.2%	99.2%	99.2%	99.2%	99.2%	99.2%	100.0%	100.0%	100.0%	100.0%
1997	33.2%	70.7%	70.7%	71.3%	71.3%	77.9%	80.7%	89.7%	96.6%	99.5%	99.5%	99.5%	100.0%
1998	50.2%	82.2%	87.1%	87.4%	90.8%	90.8%	96.1%	97.4%	100.0%	100.0%	100.0%	100.0%	100.0%
1999	60.9%	92.2%	92.3%	92.5%	95.3%	96.3%	99.3%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2000	60.3%	90.0%	95.7%	97.4%	99.4%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2001	51.8%	88.2%	91.3%	94.4%	95.6%	98.5%	98.5%	98.5%	99.7%	99.7%	99.7%	99.7%	100.0%
2002	54.8%	90.1%	95.7%	98.7%	99.6%	99.9%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2003	55.2%	90.5%	95.6%	99.3%	99.3%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2004	52.7%	93.9%	97.5%	98.6%	99.7%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2005	57.7%	92.1%	97.2%	97.3%	97.7%	99.2%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%
2006	58.2%	88.4%	92.1%	94.4%	94.4%	94.4%	94.4%	94.4%	94.4%	94.4%	94.4%	94.4%	94.4%
2007	49.8%	91.0%	93.3%	93.6%	93.6%	93.6%	93.6%	93.6%	93.6%	93.6%	93.6%	93.6%	93.6%
2008	64.1%	92.0%	93.2%	94.7%	94.7%	94.7%	94.7%	94.7%	94.7%	94.7%	94.7%	94.7%	94.7%
2009	56.6%	86.6%	90.9%	90.9%	90.9%	90.9%	90.9%	90.9%	90.9%	90.9%	90.9%	90.9%	90.9%
2010	69.7%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%
2011	51.9%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%	93.2%

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

Yr of Notification	0	1	2	3	4	5	6	7	8	9	10	11	12
1996	6.6%	23.2%	37.1%	54.7%	58.2%	58.2%	69.5%	85.4%	90.8%	93.1%	99.7%	99.7%	100.0%
1997	4.4%	36.4%	67.4%	72.7%	82.4%	85.6%	92.2%	97.8%	100.0%	100.0%	100.0%	100.0%	100.0%
1998	4.9%	43.2%	72.2%	76.8%	83.4%	90.4%	92.5%	98.0%	98.4%	98.4%	98.4%	98.4%	100.0%
1999	9.3%	56.3%	81.2%	89.8%	91.5%	96.6%	99.5%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2000	15.6%	45.3%	64.0%	79.4%	82.8%	85.7%	88.6%	88.6%	92.5%	92.5%	96.1%	96.1%	100.0%
2001	22.4%	56.0%	81.4%	84.7%	89.2%	91.6%	93.3%	96.4%	96.4%	96.4%	99.2%	99.2%	100.0%
2002	13.1%	62.1%	83.7%	91.4%	95.7%	98.1%	99.3%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2003	17.4%	68.6%	86.4%	92.3%	95.6%	99.1%	99.3%	99.3%	100.0%	100.0%	100.0%	100.0%	100.0%
2004	17.4%	58.7%	83.2%	92.5%	95.2%	96.5%	97.8%	97.8%	97.8%	97.8%	97.8%	97.8%	97.8%
2005	19.5%	81.0%	94.2%	97.7%	99.6%	99.6%	99.6%	99.6%	99.6%	99.6%	99.6%	99.6%	99.6%
2006	22.6%	72.1%	91.5%	94.7%	99.3%	99.3%	99.3%	99.3%	99.3%	99.3%	99.3%	99.3%	99.3%
2007	27.7%	79.7%	89.2%	95.5%	95.9%	95.9%	95.9%	95.9%	95.9%	95.9%	95.9%	95.9%	95.9%
2008	24.8%	80.2%	91.2%	92.7%	92.7%	92.7%	92.7%	92.7%	92.7%	92.7%	92.7%	92.7%	92.7%
2009	35.4%	68.1%	82.4%	82.4%	82.4%	82.4%	82.4%	82.4%	82.4%	82.4%	82.4%	82.4%	82.4%
2010	24.4%	79.5%	79.5%	79.5%	79.5%	79.5%	79.5%	79.5%	79.5%	79.5%	79.5%	79.5%	79.5%
2011	35.5%	79.5%	79.5%	79.5%	79.5%	79.5%	79.5%	79.5%	79.5%	79.5%	79.5%	79.5%	79.5%

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

**Table 7.3: Settlement pattern of claims awards by delay from claim reporting**

Delay (years)	Mesothelioma	Non- Mesothelioma
0	60.0%	25.0%
1	30.0%	50.0%
2	3.0%	10.0%
3	2.0%	9.0%
4	2.0%	3.0%
5	1.0%	1.5%
6	1.0%	0.5%
7	0.5%	0.3%
8	0.3%	0.3%
9	0.1%	0.2%
10	0.1%	0.2%
11	0.0%	0.0%
12	0.0%	0.0%

These assumed settlements patterns have been modified slightly since our previous valuation, resulting in an assumption of a slight speeding up of non-mesothelioma claim settlements.

# 8

## Valuation Results

### 8.1 Central estimate liability

At 31 March 2012, our projected central estimate of the liabilities of the Liable Entities (the Discounted Central Estimate) to be met by the AICF Trust is \$1,580.1 (March 2011: \$1,477.6m).

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.

**Table 8.1: Comparison of central estimate of liabilities**

	31 March 2012		31 March 2011	
	\$m		\$m	
	Gross of insurance recoveries	Insurance recoveries	Net of insurance recoveries	Net of insurance recoveries
Total projected cashflows (uninflated)	1,526.5	213.4	1,313.1	1,364.4
Future inflation allowance	1,384.5	172.6	1,211.9	1,297.0
Total projected cash-flows with inflation	2,911.0	386.0	2,525.0	2,661.4
Discounting allowance	(1,095.3)	(150.4)	(944.9)	(1,183.7)
<b>Net present value liabilities</b>	<b>1,815.7</b>	<b>235.6</b>	<b>1,580.1</b>	<b>1,477.6</b>

## **8.2 Comparison with previous valuation**

In the absence of any change to the claim projection assumptions from our 31 March 2011 valuation, other than allowing for the changes in the discount rate, we would have projected a Discounted Central Estimate liability of \$1,610.7m as at 31 March 2012, i.e. an increase of \$133.1m from our 31 March 2011 valuation result.

This increase of \$133.1m is due to:

- A reduction of \$24.1m, being the net impact of expected claims payments (which reduce the liability) and the “unwind of discount” (which increases the liability and reflects the fact that cashflows are now one year nearer and therefore are discounted by one year less).
- An increase of \$157.2m resulting from the lower discount rates prevailing at 31 March 2012 compared with those adopted at 31 March 2011.

Our liability assessment at 31 March 2012 of \$1,580.1m represents a decrease of \$30.6m (or 2% of the liability), which arises from changes to the claim projection assumptions.

The decrease of \$30.6m is principally a consequence of:

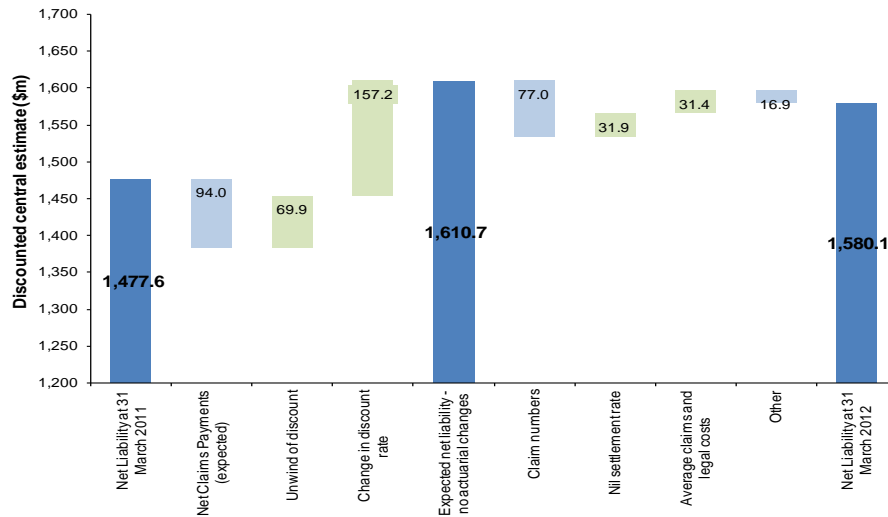
- A reduction in the projected future number of claims for most disease types; and
- An increase in projected future insurance recoveries;

offset by

- Higher assumed average claim awards, in particular for mesothelioma; and
- Lower assumed future nil settlement rate for most disease types.

The following chart shows an analysis of the change in our liability assessments from March 2011 to March 2012.

**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.*

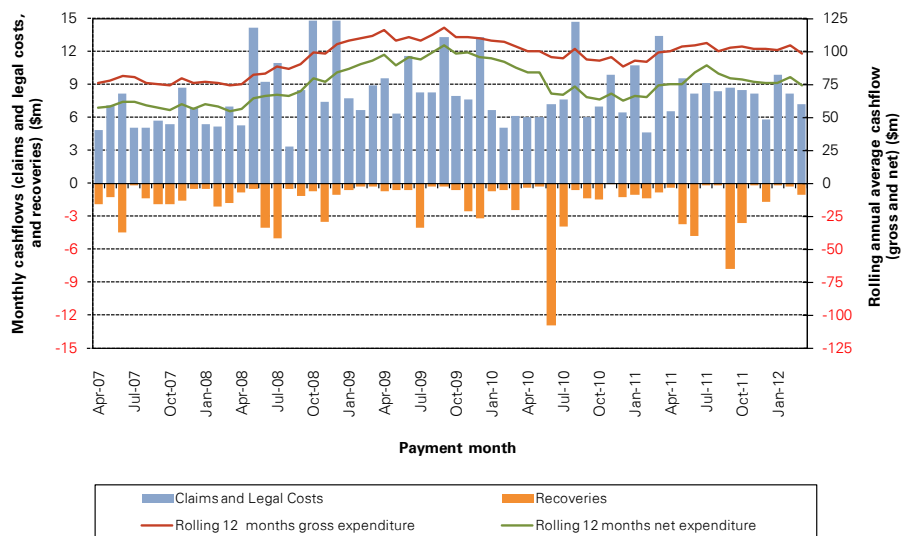
The undiscounted liability as of 31 March 2012 has reduced from \$2,567m (based on the 31 March 2011 valuation) to \$2,525m. This represents a reduction of \$42m (approximately 2% of the undiscounted liability).

### 8.3 Cashflow projections

#### 8.3.1 Historical cashflow expenditure

The following chart shows the monthly rate of expenditure relating to asbestos-related claim settlements over the past five years.

**Figure 8.2: Historical claim-related expenditure of the Liable Entities**



Cashflow payments in the 12 months to 31 March 2012 were approximately \$99m gross of insurance and other recoveries (2010/11: \$101m) and \$75m net of insurance and other recoveries (2010/11: \$76m).

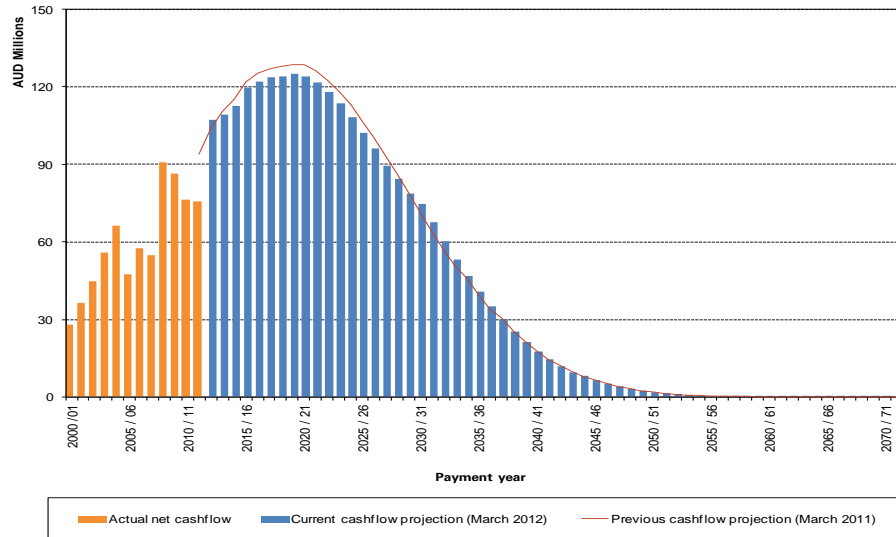
Actual net cashflow in 2011/12 was approximately \$19m (20%) lower than the cashflow projected for 2011/12 in our 31 March 2011 valuation report.

Of this, approximately \$12m was due to the recoveries collected from HIH. The remaining \$7m was due to the numbers of claims settled being 12% below expectations offset by a higher proportion of claims settling which were mesothelioma (and therefore associated with higher average claim sizes).

#### 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 at 31 March 2011.

**Figure 8.3: Annual cashflow projections – inflated and undiscounted (\$m)**



The underlying projected inflated and undiscounted cashflows for this chart are documented in Appendix B.

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

The projected net cashflow for 2012/13 of \$107m represents an increase of approximately \$32m relative to the actual cashflow for 2011/12.

This projected increase relative to 2011/12 is predominantly due to (with approximate estimates of the financial impact shown in brackets):

- An assumption of no recoveries being received from HIH or from other commutations in 2012/13 (\$12m);
- Higher claims numbers projected to be reported in 2012/13 compared with 2011/12 (\$7m);
- Higher average claim sizes for all disease types reflecting wage inflation and superimposed inflation allowances as well as any changes in assumptions in real terms, such as for mesothelioma (\$7m); and
- Higher cashflow projected arising from the higher number of claims and amount of case estimates in relation to large pending claims (\$6m).

The projected gross (and net) cashflow reaches a peak in 2019/20. This is somewhat later than the peak in claims reporting which is assumed to have occurred in 2010/11.

The reason for cashflow continuing to increase after the assumed peak in claims reporting is because the rate of inflation of claims awards (6.6% per annum) is higher than the rate of reduction in claims reporting for a number of years after the assumed peak. Therefore, the cashflow (which is, in simple terms, the numbers of claims multiplied by the average sizes) continues to increase for a number of years after the peak in claims reporting.

Given the extremely long-tailed 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:

- 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)	1,580.1
Period Actuarial Estimate (net of cross-claim recoveries, gross of Insurance and Other Recoveries) comprising:	355.1
Discounted value of cashflow in 2012/13	117.8
Discounted value of cashflow in 2013/14	118.5
Discounted value of cashflow in 2014/15	118.9
Term Central Estimate (net of cross-claim recoveries, Insurance and Other Recoveries)	1,576.0

The actual funding amount due 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 James Hardie Group in the preceding financial year; and
- the Period Actuarial Estimate in the latest Annual Actuarial Report.

## 8.5 Insurance Recoveries

Our liability valuation has made allowance for a discounted central estimate of Insurance Recoveries of \$235.6m. This estimate is comprised as follows:

**Table 8.3: Insurance recoveries at 31 March 2012**

\$m	Undiscounted central estimate	Discounted central estimate
<b>Gross liability</b>	<b>2,911.0</b>	<b>1,815.7</b>
Product liability recoveries	396.4	240.3
Bad and doubtful debt allowance (product)	(43.8)	(27.1)
Public liability recoveries	25.2	14.1
Bad and doubtful debt allowance (public)	(1.0)	(0.6)
QBE commutation	9.3	8.8
<b>Insurance recovery asset</b>	<b>386.0</b>	<b>235.6</b>
<b>Net liability</b>	<b>2,525.0</b>	<b>1,580.1</b>
Insurance recovery rate		14.5%
Bad and doubtful debt rate		10.9%

The combined bad and doubtful debt rate is 10.9% and approximately half of this amount relates to the HIH Group of Companies.

The AICF Facility Agreement requires the Approved Actuary to calculate the discounted central estimate value of certain Insurance Policies, being those specified in Schedule 5 of the Facility Agreement.

At 31 March 2012, the discounted central estimate of the Insurance Policies, as specified in Schedule 5 of the AICF Facility Agreement, is \$209.9m (March 2011: \$177.3m). The increase in the value of the Insurance Policies, as specified in Schedule 5 of the AICF Facility Agreement, is predominantly due to lower discount rates prevailing at 31 March 2012.

## 8.6 Accounting liability calculations: James Hardie

The accounting liability for James Hardie is 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 James Hardie is ultimately a decision for the Board of James Hardie.

However, the Board of James Hardie has indicated that the calculation of the accounting liability will, in part, be based upon the central estimate liabilities outlined within this report.

The basis upon which the US GAAP accounting liability is calculated 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, but are not limited to:

- 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 historical position thereby causing significantly different awards.
- Future actual rates of inflation being different from that assumed.
- The general economic environment being different from that assumed.
- 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 to become notified and then settled, compared with an average delay from exposure to settlement 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 and the lower levels of activity in claims reporting since that time;
- 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, including those relating to life expectancy in general;
  - 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 on 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:

- **number of claims notified:** 5% above and below our central estimate assumption.
- **nil settlement rate:** 5 percentage points above and below our central estimate assumption.
- **average claim cost of a non-nil claim:** 10% above and below our central estimate assumption.
- **claims inflation (being the aggregate impact of base inflation and superimposed inflation):** 2 percentage points above and below our central estimate assumption in each future year. Much of this uncertainty predominantly relates to the possibility of higher or lower superimposed inflation than our central estimate assumption.
- **peak year of claims:** increase/decrease by 1, 3 and 5 years.
- **discount rates:** 1 percentage point above and below our central estimate assumption. This produces a financially similar outcome to a 1 percentage point difference in claims inflation.

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, viewing them as being of less financial significance individually.

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

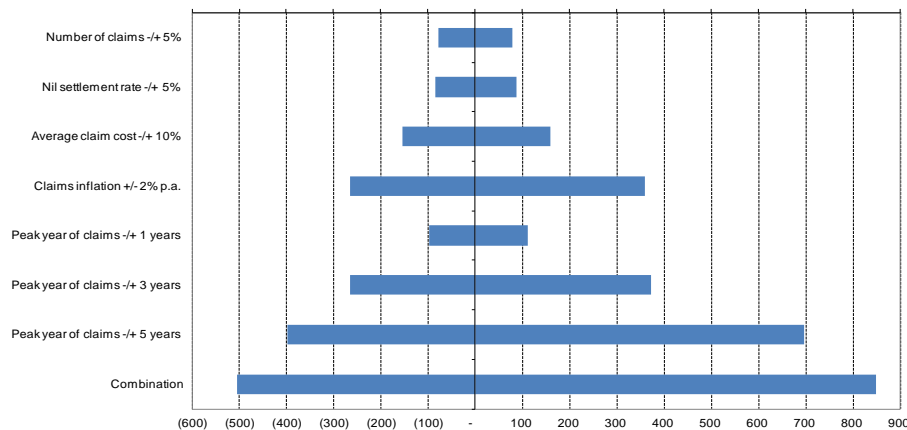
### 9.3 Results of sensitivity testing

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.

Although we have tested multiple scenarios of each assumption, one cannot gauge an overall potential range by simply adding these tests together.

Also, 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 may be 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 present value of the liabilities.

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



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 -\$500m to +\$850m (i.e. \$1.1bn to \$2.4bn), the actual cost of liabilities could fall outside that range depending on the actual experience.

We further note that these sensitivity test ranges are not intended to correspond to a specified probability of sufficiency nor are they intended to indicate an upper bound or a lower bound of all possible outcomes.

The single most sensitive assumption shown in the chart is the peak year of claims reporting against the Liable Entities. Shifting the peak year of claims reporting by 5 years (e.g. for mesothelioma, it would be equivalent to shifting the peak year from 2010/11 to 2015/2016) could imply an increase in the discounted central estimate of approximately 50%.

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 \$8m (or 2%).

**Table 9.1: Summary results of sensitivity analysis**

	Undiscounted	Discounted
Central estimate	\$2.53bn	\$1.58bn
Range around the central estimate	-\$950m to +\$1,790m	-\$500m to +\$850m
Range of liability estimates	\$1.58bn to \$4.32bn	\$1.08bn to \$2.43bn

# 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%	0.03%	0.14%	0.25%	0.37%	0.49%	0.55%	0.64%	0.71%	0.78%	0.81%	0.85%	0.89%	0.97%	1.06%
AA+	0.00%	0.06%	0.06%	0.12%	0.19%	0.25%	0.32%	0.39%	0.46%	0.53%	0.61%	0.70%	0.79%	0.89%	1.00%
AA	0.02%	0.04%	0.09%	0.25%	0.39%	0.51%	0.64%	0.75%	0.84%	0.94%	1.01%	1.07%	1.18%	1.24%	1.31%
AA-	0.03%	0.11%	0.22%	0.32%	0.42%	0.55%	0.64%	0.72%	0.79%	0.87%	0.96%	1.06%	1.09%	1.17%	1.22%
A+	0.06%	0.12%	0.26%	0.44%	0.58%	0.71%	0.86%	1.03%	1.22%	1.43%	1.64%	1.83%	2.07%	2.37%	2.63%
A	0.08%	0.20%	0.32%	0.47%	0.63%	0.85%	1.07%	1.28%	1.53%	1.82%	2.05%	2.20%	2.32%	2.40%	2.65%
A-	0.08%	0.22%	0.37%	0.53%	0.76%	1.01%	1.37%	1.63%	1.84%	2.01%	2.16%	2.33%	2.48%	2.58%	2.65%
BBB+	0.15%	0.42%	0.74%	1.06%	1.43%	1.84%	2.15%	2.47%	2.84%	3.19%	3.51%	3.73%	4.04%	4.52%	5.06%
BBB	0.21%	0.55%	0.86%	1.33%	1.82%	2.29%	2.73%	3.19%	3.70%	4.20%	4.76%	5.25%	5.67%	5.83%	6.12%
BBB-	0.37%	1.11%	1.98%	3.02%	4.03%	4.94%	5.75%	6.53%	7.15%	7.85%	8.56%	9.22%	9.85%	10.76%	11.37%
BB+	0.51%	1.41%	2.64%	3.87%	5.01%	6.19%	7.23%	7.95%	8.93%	9.87%	10.52%	11.20%	11.75%	12.22%	13.11%
BB	0.76%	2.32%	4.48%	6.43%	8.32%	9.99%	11.43%	12.68%	13.76%	14.72%	15.63%	16.45%	16.92%	17.20%	17.59%
BB-	1.23%	3.74%	6.31%	8.81%	10.96%	13.08%	14.91%	16.74%	18.33%	19.64%	20.70%	21.55%	22.47%	23.33%	24.16%
B+	2.50%	6.75%	10.88%	14.44%	17.14%	19.25%	21.19%	22.93%	24.49%	26.06%	27.32%	28.30%	29.27%	30.15%	30.96%
B	5.46%	11.87%	16.84%	20.29%	22.87%	25.38%	26.81%	27.85%	28.73%	29.57%	30.46%	31.28%	32.02%	32.71%	33.54%
B-	8.64%	16.22%	21.89%	25.86%	28.76%	30.56%	32.29%	33.29%	34.00%	34.52%	35.10%	35.63%	35.92%	36.25%	36.79%
CCC+	26.82%	35.84%	41.14%	44.27%	46.72%	47.82%	48.79%	49.66%	50.77%	51.65%	52.42%	53.28%	54.24%	55.13%	55.13%
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	4.21%	8.23%	11.74%	14.56%	16.82%	18.72%	20.31%	21.68%	22.93%	24.08%	25.06%	25.89%	26.65%	27.33%	28.03%
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 & Poors' 2011 Annual Global Corporate Default Study and Rating Transitions, March 2012

CEHUA, CEHU&I and CIC default rates have been estimated based on HIH Scheme Information, available at [www.hih.com.au](http://www.hih.com.au)

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  
Effective as at 31 March 2012*

**B**

**Projected inflated and undiscounted cashflows (\$m)**

Payment Year	Mesotheliom a Claims	Asbestosis Claims	Lung Cancer Claims	ARPD & Other Claims	Legal and Other Costs	Workers Compensation Claims	Workers Compensation Legal and Other Costs	Wharf Legal and Other Costs	Baryulgil	Cross Claim Recoveries	Gross	Insurance	Net	
2012 / 2013	91.4	10.1	2.7	3.4	11.8	1.3	0.4	0.3	0.1	0.5	2.2	120.0	12.7	107.3
2013 / 2014	93.1	12.6	2.3	3.7	13.1	0.9	0.3	0.5	0.1	0.5	2.3	124.9	15.5	109.4
2014 / 2015	96.7	13.7	2.2	4.0	13.3	0.7	0.2	0.5	0.1	0.5	2.4	129.5	16.8	112.8
2015 / 2016	100.5	14.6	2.2	4.2	13.7	0.7	0.2	0.5	0.1	0.4	2.5	134.6	15.1	119.5
2016 / 2017	103.4	15.1	2.3	4.3	13.8	0.6	0.2	0.5	0.1	0.4	2.5	138.2	16.1	122.1
2017 / 2018	105.8	15.3	2.3	4.3	13.8	0.6	0.2	0.5	0.1	0.4	2.6	140.8	17.1	123.7
2018 / 2019	107.4	15.4	2.4	4.3	13.7	0.6	0.2	0.5	0.1	0.4	2.6	142.3	18.3	124.0
2019 / 2020	108.2	15.3	2.4	4.2	13.5	0.6	0.2	0.4	0.1	0.3	2.6	142.6	17.6	125.0
2020 / 2021	107.9	15.1	2.4	4.1	13.3	0.6	0.2	0.4	0.1	0.3	2.6	141.8	17.8	124.0
2021 / 2022	106.8	14.8	2.4	4.0	12.9	0.6	0.1	0.4	0.1	0.3	2.6	139.8	18.2	121.6
2022 / 2023	104.8	14.4	2.3	3.9	12.4	0.5	0.1	0.3	0.1	0.2	2.5	136.6	18.6	118.0
2023 / 2024	102.0	13.8	2.3	3.7	11.8	0.5	0.1	0.3	0.1	0.2	2.5	132.4	18.8	113.6
2024 / 2025	98.4	13.2	2.2	3.5	11.2	0.5	0.1	0.3	0.1	0.2	2.4	127.2	19.0	108.2
2025 / 2026	94.1	12.5	2.1	3.3	10.5	0.4	0.1	0.2	0.1	0.2	2.3	121.2	18.9	102.3
2026 / 2027	89.3	11.7	2.0	3.0	9.7	0.4	0.1	0.2	0.0	0.1	2.1	114.6	18.6	96.0
2027 / 2028	84.0	10.9	1.9	2.8	9.0	0.4	0.1	0.2	0.0	0.1	2.0	107.4	18.1	89.3
2028 / 2029	78.4	10.0	1.8	2.6	8.2	0.3	0.1	0.2	0.0	0.1	1.9	99.8	15.3	84.5
2029 / 2030	72.4	9.2	1.7	2.3	7.4	0.3	0.1	0.1	0.0	0.1	1.7	91.9	13.3	78.6
2030 / 2031	66.3	8.3	1.5	2.1	6.7	0.3	0.1	0.1	0.0	0.1	1.6	83.9	9.3	74.6
2031 / 2032	60.2	7.4	1.4	1.9	5.9	0.3	0.1	0.1	0.0	0.1	1.4	75.9	8.4	67.5
2032 / 2033	54.2	6.6	1.3	1.6	5.3	0.2	0.0	0.1	0.0	0.1	1.3	68.1	7.8	60.3
2033 / 2034	48.4	5.8	1.1	1.4	4.6	0.2	0.0	0.1	0.0	0.0	1.1	60.6	7.3	53.3
2034 / 2035	42.8	5.1	1.0	1.2	4.0	0.2	0.0	0.1	0.0	0.0	1.0	53.4	6.7	46.7
2035 / 2036	37.5	4.4	0.9	1.1	3.4	0.1	0.0	0.0	0.0	0.0	0.9	46.7	6.1	40.6
2036 / 2037	32.6	3.8	0.8	0.9	2.9	0.1	0.0	0.0	0.0	0.0	0.8	40.5	5.5	35.0
2037 / 2038	28.1	3.2	0.7	0.8	2.5	0.1	0.0	0.0	0.0	0.0	0.7	34.8	4.9	29.9
2038 / 2039	24.0	2.7	0.6	0.6	2.1	0.1	0.0	0.0	0.0	0.0	0.6	29.6	4.3	25.3
2039 / 2040	20.3	2.3	0.5	0.5	1.8	0.1	0.0	0.0	0.0	0.0	0.5	25.0	3.8	21.2
2040 / 2041	17.1	1.9	0.4	0.4	1.4	0.1	0.0	0.0	0.0	0.0	0.4	20.9	3.3	17.7
2041 / 2042	14.2	1.5	0.3	0.4	1.2	0.0	0.0	0.0	0.0	0.0	0.3	17.4	2.8	14.6
2042 / 2043	11.7	1.3	0.3	0.3	1.0	0.0	0.0	0.0	0.0	0.0	0.3	14.3	2.4	11.9
2043 / 2044	9.6	1.0	0.2	0.2	0.8	0.0	0.0	0.0	0.0	0.0	0.2	11.6	2.0	9.6
2044 / 2045	7.7	0.8	0.2	0.2	0.6	0.0	0.0	0.0	0.0	0.0	0.2	9.4	1.2	8.2
2045 / 2046	6.2	0.6	0.2	0.1	0.5	0.0	0.0	0.0	0.0	0.0	0.1	7.5	1.0	6.6
2046 / 2047	5.0	0.5	0.1	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.1	6.0	0.8	5.2
2047 / 2048	3.9	0.4	0.1	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.1	4.7	0.6	4.1
2048 / 2049	3.1	0.3	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1	3.7	0.5	3.2
2049 / 2050	2.4	0.2	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	2.8	0.4	2.4
2050 / 2051	1.8	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.3	1.9
2051 / 2052	1.4	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.3	1.4
2052 / 2053	1.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.2	1.1
2053 / 2054	0.8	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.2	0.8
2054 / 2055	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.1	0.6
2055 / 2056	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.5
2056 / 2057	0.3	0.0	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	0.1
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
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
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
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
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
2072 / 2073	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
2073 / 2074	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
<b>TOTAL</b>	<b>2,246.8</b>	<b>296.7</b>	<b>51.9</b>	<b>79.9</b>	<b>259.4</b>	<b>12.5</b>	<b>3.3</b>	<b>7.1</b>	<b>1.7</b>	<b>5.6</b>	<b>53.9</b>	<b>2,911.0</b>	<b>386.0</b>	<b>2,525.0</b>

*Valuation of the asbestos-related disease  
Liabilities of the Liable Entities to be met by the AICF Trust  
Effective as at 31 March 2012*

**C**

**Projected discounted cashflows (\$m)**

Payment Year	Mesothelioma Claims	Asbestosis Claims	Lung Cancer Claims	ARPD & Other Claims	Legal and Other Costs	Workers Compensation Claims		Workers Compensation Legal and Other Costs		Wharf Legal and Other Costs		Cross Claim Recoveries	Gross	Insurance	Net
						Compensation Claims	Legal and Other Costs	Wharf Claims	Legal and Other Costs	Baryulgil					
2012 / 2013	89.7	9.9	2.7	3.3	11.6	1.3	0.4	0.3	0.1	0.5	2.1	117.8	12.5	105.3	
2013 / 2014	88.3	12.0	2.2	3.6	12.4	0.8	0.2	0.5	0.1	0.5	2.1	118.5	14.7	103.8	
2014 / 2015	88.7	12.6	2.0	3.7	12.2	0.6	0.2	0.5	0.1	0.4	2.2	118.9	15.4	103.5	
2015 / 2016	89.0	12.9	2.0	3.7	12.1	0.6	0.2	0.5	0.1	0.4	2.2	119.3	13.4	105.9	
2016 / 2017	88.2	12.9	1.9	3.6	11.8	0.5	0.2	0.5	0.1	0.4	2.2	117.9	13.7	104.2	
2017 / 2018	86.7	12.6	1.9	3.5	11.3	0.5	0.2	0.4	0.1	0.3	2.1	115.4	14.1	101.4	
2018 / 2019	84.4	12.1	1.9	3.4	10.8	0.5	0.1	0.4	0.1	0.3	2.1	111.8	14.3	97.4	
2019 / 2020	81.3	11.5	1.8	3.2	10.1	0.4	0.1	0.3	0.1	0.2	2.0	107.1	13.2	93.9	
2020 / 2021	77.4	10.9	1.7	3.0	9.5	0.4	0.1	0.3	0.1	0.2	1.9	101.7	12.8	88.9	
2021 / 2022	72.6	10.1	1.6	2.7	8.8	0.4	0.1	0.3	0.1	0.2	1.8	95.0	12.4	82.7	
2022 / 2023	67.2	9.2	1.5	2.5	7.9	0.3	0.1	0.2	0.0	0.2	1.6	87.6	11.9	75.7	
2023 / 2024	61.7	8.4	1.4	2.2	7.2	0.3	0.1	0.2	0.0	0.1	1.5	80.1	11.4	68.7	
2024 / 2025	56.2	7.5	1.3	2.0	6.4	0.3	0.1	0.2	0.0	0.1	1.3	72.6	10.9	61.7	
2025 / 2026	50.7	6.7	1.1	1.8	5.6	0.2	0.1	0.1	0.0	0.1	1.2	65.3	10.2	55.1	
2026 / 2027	45.4	5.9	1.0	1.5	4.9	0.2	0.0	0.1	0.0	0.1	1.1	58.2	9.4	48.8	
2027 / 2028	40.3	5.2	0.9	1.3	4.3	0.2	0.0	0.1	0.0	0.1	1.0	51.5	8.7	42.8	
2028 / 2029	35.4	4.5	0.8	1.2	3.7	0.2	0.0	0.1	0.0	0.0	0.8	45.1	6.9	38.2	
2029 / 2030	30.9	3.9	0.7	1.0	3.2	0.1	0.0	0.1	0.0	0.0	0.7	39.2	5.7	33.5	
2030 / 2031	26.7	3.3	0.6	0.8	2.7	0.1	0.0	0.0	0.0	0.0	0.6	33.8	3.7	30.0	
2031 / 2032	22.9	2.8	0.5	0.7	2.3	0.1	0.0	0.0	0.0	0.0	0.5	28.8	3.2	25.6	
2032 / 2033	19.4	2.4	0.5	0.6	1.9	0.1	0.0	0.0	0.0	0.0	0.5	24.4	2.8	21.6	
2033 / 2034	16.3	2.0	0.4	0.5	1.6	0.1	0.0	0.0	0.0	0.0	0.4	20.5	2.5	18.0	
2034 / 2035	13.6	1.6	0.3	0.4	1.3	0.1	0.0	0.0	0.0	0.0	0.3	17.0	2.1	14.9	
2035 / 2036	11.3	1.3	0.3	0.3	1.0	0.0	0.0	0.0	0.0	0.0	0.3	14.0	1.8	12.2	
2036 / 2037	9.3	1.1	0.2	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.2	11.5	1.6	9.9	
2037 / 2038	7.5	0.9	0.2	0.2	0.7	0.0	0.0	0.0	0.0	0.0	0.2	9.3	1.3	8.0	
2038 / 2039	6.1	0.7	0.1	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.1	7.5	1.1	6.4	
2039 / 2040	4.8	0.5	0.1	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.1	6.0	0.9	5.1	
2040 / 2041	3.8	0.4	0.1	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.1	4.7	0.7	4.0	
2041 / 2042	3.0	0.3	0.1	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.1	3.7	0.6	3.1	
2042 / 2043	2.3	0.3	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1	2.9	0.5	2.4	
2043 / 2044	1.8	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.4	1.8	
2044 / 2045	1.4	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.2	1.5	
2045 / 2046	1.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.2	1.1	
2046 / 2047	0.8	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.1	0.8	
2047 / 2048	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.1	0.6	
2048 / 2049	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	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	0.4	0.1	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	0.3	0.0	0.2	
2051 / 2052	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	
2052 / 2053	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	
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	0.1	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	
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	
2058 / 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	
2059 / 2060	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	
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	
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	
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	
2072 / 2073	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	
2073 / 2074	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	
<b>TOTAL</b>	<b>1,388.3</b>	<b>187.2</b>	<b>32.1</b>	<b>51.7</b>	<b>168.3</b>	<b>8.6</b>	<b>2.4</b>	<b>5.1</b>	<b>1.3</b>	<b>4.2</b>	<b>33.5</b>	<b>1,815.7</b>	<b>235.6</b>	<b>1,580.1</b>	

# D

## Derivation of US GAAP net accounting liability of James Hardie

The following tables show how the net US GAAP accounting liability established by James Hardie is derived from, and reconciles to, the valuation estimates contained within this report. For comparison, we have shown the derivation of the net liability figures for 31 March 2011.

The tables below 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 James Hardie at 31 March 2012 for specific details of the required US GAAP disclosures.

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

	Gross	31 March 2012 Insurance	Net	31 March 2011 Net	Change
Discounted Central Estimate	1,815.7	235.6	1,580.1	1,477.6	102.5
Discounting allowance	1,095.3	150.4	944.9	1,183.7	(238.9)
Inflated, Undiscounted Central Estimate	2,911.0	386.0	2,525.0	2,661.4	(136.4)
Inflation allowance	(1,384.5)	(172.6)	(1,211.9)	(1,297.0)	85.1
<b>Uninflated and Undiscounted liability</b>	<b>1,526.5</b>	<b>213.4</b>	<b>1,313.1</b>	<b>1,364.4</b>	<b>(51.3)</b>

### Step 2 – US GAAP adjustments (AUD)

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;
- Inclusion of future direct claims handling allowance on an uninflated & undiscounted basis; and
- Gross-up for recoveries from Workers Compensation insurers – although the net liability impact is zero.

	Gross	31 March 2012 Insurance	Net	31 March 2011 Net	Change
<b>Uninflated and Undiscounted liability</b>	1,526.5	213.4	1,313.1	1,364.4	(51.3)
Adjustment for QBE insurance receivable (as timing of receipts is fixed)	0.0	(0.5)	0.5	1.1	(0.7)
Other insurance receivables adjustment	0.0	6.8	(6.8)	(1.1)	(5.7)
Cross-claim recoveries (on UIUD basis)	27.6	0.0	27.6	27.8	(0.2)
Claims Handling Costs	44.3	0.0	44.3	55.2	(10.9)
<b>Asbestos Liability</b>	<b>1,598.4</b>	<b>219.8</b>	<b>1,378.7</b>	<b>1,447.3</b>	<b>(68.6)</b>
Workers Compensation Additional Liability	80.6	80.6	0.0	0.0	0.0
<b>Net Accounting Liability (pre-tax)</b>	<b>1,679.1</b>	<b>300.4</b>	<b>1,378.7</b>	<b>1,447.3</b>	<b>(68.6)</b>

### Step 3 – Conversion to US Dollars

	Gross	31 March 2012 Insurance	Net	31 March 2011 Net	Change
<b>Net accounting liability (pre-tax) - AUD</b>	<b>1,679.1</b>	<b>300.4</b>	<b>1,378.7</b>	<b>1,447.3</b>	<b>(68.6)</b>
<i>Exchange rate</i>	0.9614	0.9614	0.9614	0.9676	
<b>Net accounting liability (pre-tax) - USD</b>	<b>1,746.5</b>	<b>312.4</b>	<b>1,434.1</b>	<b>1,495.8</b>	<b>(61.7)</b>

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

- Deferred Income Tax Assets (USD463.0m); and
- Other net liabilities (primarily reflecting commitments in the Amended Final Funding Agreement to provide certain educational and medical research funding) (USD2.3m).

This results in a net liability of USD973.4m at 31 March 2012 (2011: USD1,016.6m).

In arriving at the unfunded liability, allowance is then made for the existing net assets of the AICF amounting to USD34.1m at 31 March 2012 (2011: USD61.9m) to leave an unfunded net liability of USD939.3m at 31 March 2012 (2011: USD954.7m).

## **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.

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

Central Estimate Basis (\$ million)		Amaca	Amaba	ABN 60	Total
<b>Current liabilities</b>	Gross	116.9	3.0	0.0	119.9
	QBE receivable	2.9	0.1	0.0	3.0
	Insurance receivable	9.2	0.2	0.0	9.4
	Other receivable	2.1	0.1	0.0	2.2
	<b>Net</b>	<b>102.7</b>	<b>2.6</b>	<b>0.0</b>	<b>105.3</b>
<b>Non-current liabilities</b>	Gross	1,684.3	43.1	1.7	1,729.1
	QBE receivable	5.6	0.2	0.0	5.8
	Insurance receivable	211.6	5.4	0.2	217.2
	Other receivable	30.5	0.8	0.0	31.3
	<b>Net</b>	<b>1,436.6</b>	<b>36.7</b>	<b>1.5</b>	<b>1,474.8</b>
<b>Total liabilities</b>	Gross	1,801.2	46.1	1.7	1,849.0
	QBE receivable	8.5	0.3	0.0	8.8
	Insurance receivable	220.8	5.6	0.2	226.6
	Other receivable	32.6	0.9	0.0	33.5
	<b>Net</b>	<b>1,539.3</b>	<b>39.3</b>	<b>1.5</b>	<b>1,580.1</b>

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

# F

## Australian asbestos consumption and production data: 1930-2002

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	678	14,229	-	14,907
1944	764	14,091	-	14,855
1945	1,629	9,131	32	10,728
1946	620	18,697	496	18,821
1947	1,377	14,246	652	14,971
1948	1,327	14,857	278	15,906
1949	1,645	14,767	346	16,066
1950	1,617	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	71,777	174	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
1976	60,642	60,490	40,145	80,987
1977	50,601	54,267	20,510	84,358
1978	62,383	42,061	37,094	67,350
1979	79,721	23,735	54,041	49,415
1980	92,418	25,239	51,172	66,485
1981	45,494	20,960	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

## Data provided by AICFL

### Claims Dataset

<u>Claim Details</u>	
State	State of jurisdiction of the claim
Old Claim ID	Claim number under the old IT system
New claim ID	Claim number under the new IT system
Include?	This defines whether we count the claim record - we exclude insurance recovery records and cross-claim records
Date of Birth	Date of Birth
Date of Death	Date of Death
Start 1st Exp	Start Date of the first Exposure
End 1st Exp	End Date of the first Exposure
Days 1st Exp	Number of days exposed during the first exposure
Start 2nd Exp	Start Date of the second exposure
End 2nd Exp	End Date of the second exposure
Days 2nd Exp	Number of days exposed during the second exposure
Start 3rd Exp	Start Date of the third exposure
End 3rd Exp	End Date of the third exposure
Days 3rd Exp	Number of days exposed during the third exposure
Start 4th Exp	Start Date of the fourth exposure
End 4th Exp	End Date of the fourth exposure
Days 4th Exp	Number of days exposed during the fourth exposure
Start 5th Exp	Start Date of the fifth exposure
End 5th Exp	End Date of the fifth exposure
Days 5th Exp	Number of days exposed during the fifth exposure
Start 6th Exp	Start Date of the sixth exposure
End 6th Exp	End Date of the sixth exposure
Days 6th Exp	Number of days exposed during the sixth exposure
Start 7th Exp	Start Date of the seventh exposure
End 7th Exp	End Date of the seventh exposure
Days 7th Exp	Number of days exposed during the seventh exposure
Start 8th Exp	Start Date of the eighth exposure
End 8th Exp	End Date of the eighth exposure
Days 8th Exp	Number of days exposed during the eighth exposure
Start 9th Exp	Start Date of the ninth exposure
End 9th Exp	End Date of the ninth exposure
Days 9th Exp	Number of days exposed during the ninth exposure
Start 10th Exp	Start Date of the tenth exposure
End 10th Exp	End Date of the tenth exposure
Days 10th Exp	Number of days exposed during the tenth exposure
Start 11th Exp	Start Date of the eleventh exposure
End 11th Exp	End Date of the eleventh exposure
Days 11th Exp	Number of days exposed during the eleventh exposure
Start 12th Exp	Start Date of the twelfth exposure
End 12th Exp	End Date of the twelfth exposure
Days 12th Exp	Number of days exposed during the twelfth exposure
ClaimsPOE::OccupationType_c	Occupations of claimant
ClaimsPOE::ExposureNature_c	Nature of Exposures of claimant
Pure Home Renovator	Home renovator indicator field
MedicalAsbestosDiseases_c	A list of all the diseases specified by the claimant
Disease	Disease grouping based on hierarchy (mesothelioma, cancer, asbestosis, ARPD&Other)
DefendantAICF_c	Name of Liable Entity liable for claim
Notification Date	Date claim was received by Liable Entity
Client Sett Date	Date claim was settled by the Liable Entity with the claimant
Closure Date	Date claim record was closed (settled all legal costs, no more activity)
Date of Diag	Date of diagnosis of asbestos disease
Claim Type	Standard claim, Cross-claim, Recovery claim, Insurance claim
<u>Transaction Fields</u>	
Settled Damages	Total Damages awarded to claimant (by all defendants)
AICF Damages	Total Damages awarded to claimant (by AICF/JH Liable Entities)
Amount Actual Paid Damages	Total Damages paid to claimant (by AICF/JH Liable Entities)
Settled Costs	Total Costs (by all defendants)
AICF Costs	Total Costs to be borne by AICF/JH Liable Entities
Amount Actual Paid Costs	Total Costs paid by AICF/JH Liable Entities
Settled DDB	Total DDB Reimbursement Costs (by all defendants)
AICF DDB	Total DDB Reimbursement Costs to be borne by AICF/JH Liable Entities
Amount Actual Paid DDB	Total DDB Reimbursement Costs paid by AICF/JH Liable Entities
Settled Other	Total Other Costs (by all defendants)
AICF Other	Total Other Costs to be borne by AICF/JH Liable Entities
Amount Actual Paid Other	Total Other Costs paid by AICF/JH Liable Entities
AICF Legal Costs Total	Total Defence Legal Costs to be borne by AICF/JH Liable Entities
Amount Actual Paid Legal Costs Total	Total Defence Legal Costs paid by AICF/JH Liable Entities
<u>Case Estimate Fields</u>	
Reserve Damages	Case estimate of damages
Reserve Costs	Case estimate of costs
Reserve Legal Fees	Case estimate of defence legal costs
Reserve Disbursements	Case estimate of other disbursements
Reserve DDB	Case estimate of payments to DDB



## Accounting Transactions Datasets

### Accruals File

Date	Date of transaction entry
Claim ID	Claim number under new IT system
Transaction Ref	Transaction reference number
Type	Expense or Income
Description	This contains the values as follows: Bank Fees, Consulting Costs, Costs, Damages, DDB, Interest, Legal Fees, Medicare, Other Bank Charges, Recoveries (or Recovery)
Amount	Amount of transaction
GST	GST component of transaction
Amount - GST	Amount of transaction, net of GST
Account	Which AICF (or MRCF) account the money is credit to or drawn from
Drawer of cheque	The name of the party who has drawn the cheque or from whom a cheque has been received

### Transactions File

Date	Date of transaction entry into system
Claim ID	Claim number under new IT system
Transaction Ref	Transaction reference number
Type	Payment of Receipt
Date Cheque Drawn	Date Cheque Drawn
Date Cheque Banked	Date Cheque Banked
Description	Description of transaction
Amount	Amount of transaction
GST	GST component of transaction
Amt - GST	Amount of transaction, net of GST
Drawer of cheque	The name of the party who has drawn the cheque or from whom a cheque has been received

# H

## Glossary of terms used in the AFFA

The following provides a glossary of terms which are referenced in the AFFA and 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 cross-claim 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:

- (i) 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:
  - (i) 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.