



Australian Government

Australian Government Actuary

Thirteenth report on the costs of the Australian Government's Run-Off Cover Scheme for medical indemnity insurers

2016-17 financial year

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CONTENTS

1. INTRODUCTION	1
2. BACKGROUND.....	3
2.1 Medical indemnity insurance	3
2.2 Brief history of private medical indemnity insurance in Australia – the lead-up to the Run-Off Cover Scheme	4
2.3 What is the Run-Off Cover Scheme?	6
3. DATA.....	9
3.1 Data collection	9
3.2 Data verification.....	9
3.3 Number of Eligible practitioners	10
3.4 Number of claims eligible for Run-Off Cover indemnity payments	13
3.5 Amount of Run-Off Cover indemnity payments.....	14
3.6 Run-Off Cover support payments.....	15
4. FINANCIAL MANAGEMENT OF THE RUN-OFF COVER SCHEME	19
4.1 2016 – 17 Cash Flow	19
4.2 Experience and Model.....	19
4.3 Results: Projected Run-Off Cover Indemnity Payments	21
4.4 Results: Liability at 30 June 2017 & Notional Account.....	22
4.5 Results: Projected Liabilities of the Scheme	26
4.6 Actuarial management	27
APPENDIX 1: ELIGIBLE PRACTITIONERS AND RUN-OFF COVER SCHEME CONTRACTS	28
APPENDIX 2: RUN-OFF COVER SCHEME CLAIMS.....	30
APPENDIX 3: RUN-OFF COVER SUPPORT PAYMENTS.....	31
APPENDIX 4: LIABILITIES AT 30 JUNE 2017	32
APPENDIX 5: PROJECTED LIABILITIES	38
APPENDIX 6: HIGH COST CLAIMS.....	52

1. INTRODUCTION

1.1.1. This report has been prepared to comply with certain requirements of the *Medical Indemnity Act 2002* (Medical Indemnity Act). Section 34ZW of the Medical Indemnity Act provides for a report on aspects of the Run-Off Cover Scheme (the Scheme) to be tabled each year in Parliament. The report is required to contain a statement of the:

- number of persons eligible for membership of the Scheme;
- total Run-Off Cover indemnity payments (ROC indemnity payments) paid by the Commonwealth during the financial year, including claims handling and administration expenses;
- total Run-Off Cover support payments (ROC support payments) paid to the Commonwealth during the financial year; and
- a projection of the Commonwealth's liabilities in relation to amounts of Run-Off Commonwealth contributions in future financial years.

1.1.2. This is the thirteenth report that has been prepared under section 34ZW of the Medical Indemnity Act. It relates to financial year 2016-17. The twelfth report was tabled in Parliament on 14 September 2017.

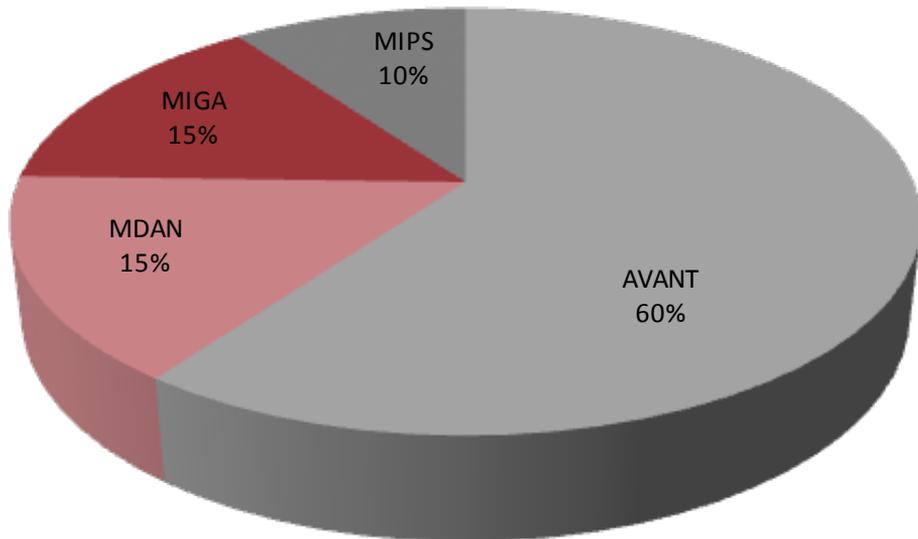
2. BACKGROUND

2.1 MEDICAL INDEMNITY INSURANCE

2.1.1. Medical indemnity insurance is a form of professional indemnity insurance. It covers practitioners for their professional negligence.¹

2.1.2. Medical practitioners who undertake private medical practice in Australia generally purchase medical indemnity insurance from private sector underwriters.² This report considers the six private sector underwriters operating in Australia during 2016-17. They were Avant Mutual Group Limited (Avant), Medical Indemnity Protection Society (MIPS), MDA National (MDAN), Medical Insurance Group Australia (MIGA), Guild Insurance (Guild) and Berkshire Hathaway Specialty Insurance Company (BHSI) distributed by Tego Insurance. Figure 1 below illustrates the market shares of the top four private underwriters calculated on the basis of premium data provided by them. Note that Guild and BHSI are not included in the chart as together they represented only 0.05 per cent of the market.

Figure 1: Market share of medical indemnity insurers



1 Medical indemnity insurance can also cover other costs such as those associated with appearing at coronial inquiries.

2 On the other hand, many employed practitioners such as medical practitioners practising solely in a hospital will be indemnified by their employer against negligence.

- 2.1.3. Medical negligence claims are initiated by, or on behalf of, patients against medical practitioners. Roughly 2,000 claims of negligence might be expected each year in relation to private medical practice in Australia. However, there can be substantial variation from one year to the next. It is difficult to project the number of medical indemnity claims with any precision. A significant number of claims will be successfully defended.
- 2.1.4. The cost of medical negligence claims is highly variable since the claims relate to bodily injury. The cost of a medical negligence claim to the insurer is made up of damages which are payable to the plaintiff, any of the plaintiff's legal costs which the insurer is obliged to pay, and the insurer's own costs of defending and managing the claim. The NCPD data shows that, while most of claims are finalised for less than \$100,000, a small number of claims are large (around 6 per cent of claims cost more than \$500,000). These large claims have a significant impact on the overall cost of medical indemnity insurance. According to the data obtained from the National Claims and Policies Database (NCPD), around 65 per cent of the cost of all finalised medical indemnity claims relates to claims which are larger than \$500,000.
- 2.1.5. The medical indemnity claim process can be long. Years can elapse between the date of a negligent medical incident and the date that legal action against the practitioner is initiated. It is not unusual for claims to take a number of years to finalise after they have been initiated. It is common for the whole process to take more than five years for a single claim. The cost of a claim depends significantly on economic and judicial conditions prevailing at the time the claim is finalised (paid), rather than at the time of the medical incident or the time that the claim is made.
- 2.1.6. All of these factors make medical indemnity insurance difficult for an insurer to underwrite. It is hard to forecast claim numbers and claim sizes reliably. Moreover, much of the cost is likely to relate to a small minority of the claims, which adds further uncertainty. As a result, it is difficult to know how much premium to charge and how much money to hold in reserve to pay claims. For these reasons a robust private market in medical indemnity insurance requires professional and disciplined underwriting and management.

2.2 BRIEF HISTORY OF PRIVATE MEDICAL INDEMNITY INSURANCE IN AUSTRALIA – THE LEAD-UP TO THE RUN-OFF COVER SCHEME

- 2.2.1. Historically, medical indemnity cover was provided to Australian medical practitioners in private practice by medical defence organisations (MDOs). MDOs were not licensed insurers and were therefore not subject to prudential regulation.

- 2.2.2. Medical indemnity cover was originally provided to practitioners on a so-called 'claims-occurring' basis. Practitioners were protected against claims that might be made in relation to the medicine that they had practised while members of the MDO. Thus, practitioners who had claims made against them after retirement could seek assistance from their MDO provided that they had been members at the time of the medical incident. Medical indemnity is difficult to underwrite on a 'claims-occurring' basis, partly due to the often long delay between the date of medical incident and the time at which a claim is initiated.
- 2.2.3. During the 1990s most MDOs came under financial pressure as a result of increasing levels of claim payments and were forced to make calls on their members for additional funds.
- 2.2.4. At the same time, most MDOs progressively changed the basis of their cover from 'claims-occurring' to 'claims-made'. In simple terms, claims-made cover provided protection for the practitioner against claims that were made during the period of membership. Thus, in order to continue to be covered against claims that might emerge in relation to past medical practice, a medical practitioner had to continue his MDO membership. Professional indemnity insurance is generally provided on a 'claims-made' basis.
- 2.2.5. In 2002, Australia's largest MDO, United Medical Protection (UMP), was placed in provisional liquidation. Following this, steps were taken to stabilise the medical indemnity industry.
- 2.2.6. Since 1 July 2003, medical indemnity insurance has been required to be provided to Australian practitioners by insurers licensed under the *Insurance Act 1973* and prudentially supervised by Australian Prudential Regulation Authority (APRA).
- 2.2.7. This has ensured a more disciplined approach to risk management and has reduced the risk of failure of a medical indemnity provider.
- 2.2.8. Consistent with more disciplined risk management, all medical indemnity insurance is now provided on a 'claims-made' basis. Consequently, medical practitioners have to maintain insurance in order to remain covered against claims that might emerge, even when they are no longer practising. This form of insurance cover is known as run-off cover. Put simply, run-off cover provides insurance for medical practitioners who have ceased medical practice. The potential lengthy delay between a medical incident and a claim highlights the need for medical practitioners to maintain run-off cover after ceasing practice.

2.2.9. For some medical practitioners the annual cost of medical indemnity insurance runs into the tens of thousands of dollars. In order to address problems associated with the cost of run-off cover, including the potential threat to the provision of medical services, a scheme was established which requires medical indemnity insurers to provide run-off cover³ to certain groups of medical practitioners who have ceased private practice. The Scheme was intended to be largely cost neutral to taxpayers whilst not threatening the viability of the insurance companies. This scheme is known as the Run-Off Cover Scheme.

2.3 WHAT IS THE RUN-OFF COVER SCHEME?

2.3.1. The Scheme facilitates the provision of medical indemnity insurance cover to particular groups of medical practitioners who have ceased private medical practice.

The rules for the Scheme appear in the *Medical Indemnity (Prudential Supervision and Product Standards) Act 2003* (PSPS Act), the *Medical Indemnity (Run-off Cover Support Payment) Act 2004* (MI ROCSPA) and the *Medical Indemnity Act 2002*. The principal elements of the Scheme are:

- The PSPS Act imposes an obligation on insurers to provide run-off cover to particular groups of medical practitioners who have ceased private practice.
- The Medical Indemnity Act provides for the Commonwealth to make payments to the insurers to reimburse the costs of eligible run-off claims. These payments are known as ROC indemnity payments.
- The Medical Indemnity Act provides for the Commonwealth to make other payments to insurers to offset the relevant costs of administering the Scheme that are incurred by insurers.
- The Medical Indemnity Act also provides for the insurers to make payments to the Commonwealth to ensure that the Scheme is largely cost-neutral to taxpayers. These payments are a levy on insurers' premium income funded by a loading on practitioners' medical indemnity insurance premiums. These payments are known as ROC support payments. The MI ROCSPA sets out the rules for calculating ROC support payments.

³ The premium for the run-off cover is zero for medical practitioners who have ceased private practice. However, they pay a levy on their premiums during the period of private practice.

- 2.3.2. The Scheme provides for ROC support payments to be made by medical indemnity insurers to the Commonwealth and for ROC indemnity payments to be made by the Commonwealth to medical indemnity insurers (MIIs) and MDOs. Ancillary arrangements provide for payments to cover other costs such as administrative costs.
- 2.3.3. Amendments to the primary legislation were passed late in 2006 which simplified the administration of the Scheme. Protocols governing certain administration payments to insurers are now in place.
- 2.3.4. An important financial dynamic of the Scheme is the timing mismatch between the payment of ROC support payments by MIIs and the emergence, payment and reimbursement of medical indemnity claims of eligible medical practitioners who are no longer in private practice. The first ROC support payments were received on 30 June 2005. The Scheme applies to eligible medical indemnity claims that are first notified to the MIIs or MDOs on or after 1 July 2004. As a result of inherent delays in the medical claims process, it is to be expected that the level of ROC support payments will be substantially greater than the level of ROC indemnity payments for a number of years. That is, in a cash flow sense, the Scheme is at a reasonably immature stage. It will probably take until about the middle of the 2020s to reach maturity when income from ROC support payments and expenditure on ROC indemnity payments are of a similar order of size. To preserve the financial integrity of the Scheme, a system of notional accounting is maintained and reported on in section 4 of this report.

3. DATA

3.1 DATA COLLECTION

3.1.1. For the purpose of preparing this report, certain data was collected from the MIIIs by the Department of Human Services (DHS) during late 2017 including:

- details of practitioners who were identified as having become eligible for membership of the Scheme before 30 June 2017;
- details of claims (including incidents) notified to MIIIs and MDOs by 30 June 2017 which might eventually become eligible for reimbursement under the Scheme;
- details of ROC support payments;⁴
- actuarial estimates of that part of the future claims cost of medical incidents projected to be notified during the 2017-18 to 2021-22 financial years which is expected to be reimbursed under the Scheme; and
- actuarial estimates of that part of the future claims cost of medical incidents occurring during 2017-18 which is expected to be reimbursed under the Scheme.

3.1.2. This report also utilises other data and information including that which was previously provided to DHS for the purpose of section 34ZW of the Medical Indemnity Act.

3.1.3. In addition, for the first time we have had access to relevant data from the National Claims and Policies Database (NCPD) maintained by the Australian Prudential Regulation Authority (APRA).

3.2 DATA VERIFICATION

3.2.1. The results in this report rely on information provided by MIIIs. This information is regarded as the most suitable information available for the current purpose.

3.2.2. Steps were taken to ensure, as far as practicable, that the information provided was prepared on a basis suitable for the purpose. Despite this, it is not possible to guarantee that the information provided is free from material error. The information was not independently audited. As was the case in previous years, there were some notable disparities in the data provided. This means that figures and estimates provided in this report need to be treated with some caution.

4 A database of ROC support payments is maintained by DHS.

- 3.2.3. Historically, MII/MDOs have not maintained data in a form which is directly amenable to ROC analysis. For example, it has not been possible to establish a comprehensive list of medical practitioners who were eligible for the Scheme on 1 July 2004. This is not a criticism of the MIIs. It simply reflects that their business and information systems were not developed with a scheme like the Run-Off Cover Scheme in mind. However, in order to monitor the operation of the Scheme effectively, accurate and timely data is obviously important.
- 3.2.4. Certain information was sought from industry actuaries. Guidance was provided as to the nature of the data, calculations and information required.
- 3.2.5. A range of assumptions was used by industry actuaries. Although some significant assumptions differ by only a few percentage points between actuaries, substantially different estimates of Scheme costs are produced. This is indicative of the highly uncertain nature of estimates of the costs of the Scheme.
- 3.2.6. It is to be expected that many of the data issues encountered will diminish in time. However, until data issues subside, Scheme projections will be subject not only to the considerable inherent uncertainty which surrounds medical indemnity insurance business, but also to additional uncertainty associated with the amount and quality of the available data.
- 3.2.7. In general, the results in this report blend estimates provided by industry actuaries with other actuarial estimates based on data provided by the DHS and assumptions and models developed within this office.

3.3 NUMBER OF ELIGIBLE PRACTITIONERS

- 3.3.1. Appendix 1 sets out the test of eligibility for the Scheme and the process of issuing and notifying compulsory run-off cover to eligible practitioners. Eligible practitioners are entitled to receive notification of the terms and conditions of compulsory run-off cover from their MII. MIIs are also required to notify DHS of the details of the compulsory run-off cover provided.
- 3.3.2. Practitioners performing private practice become eligible for the Scheme by means of permanent retirement at age 65 years or older, cessation of private practice for three years, death, permanent disability or maternity leave. In addition, medical practitioners from overseas who have worked in Australia under an appropriate visa become eligible for the Scheme when they have permanently ceased medical practice in Australia and ceased to reside in Australia.

3.3.3. There are inherent lags involved in notification of the details of eligible practitioners to DHS. As a result, it is only possible to estimate the number of practitioners who have become eligible for the Scheme at any given time. For example, there will often be a delay between the time that a practitioner becomes eligible for the Scheme and the time when the insurer becomes aware of this. It is also likely that an insurer is unsure of the eligibility status of a practitioner from year to year. For example, a practitioner that has not renewed their insurance for three years may, or may not, be eligible for cover. For these reasons, the numbers of eligible practitioners reported by insurers needs to be treated with caution. This report summarises the number of practitioners that have become eligible for the scheme as reported by the insurers. Unlike previous reports, this year we have attempted to estimate the total number of practitioners currently eligible at 30 June 2017 by removing the practitioners whose eligibility subsequently ceased and removing multiple entries. Multiple entries are usually associated with maternity leave taken at different time periods.

3.3.4. The number of practitioners who have become eligible for the Scheme in this report is based on:

- data provided to DHS by the medical indemnity industry relating to practitioners identified as having become eligible between 1 July 2004 and 30 June 2017; and
- industry estimates of practitioners eligible for the Scheme as at 1 July 2004, provided for the purpose of the 2004-05 report.

3.3.5. We have relied almost entirely on the eligibility data provided by the industry. As has been the case in all previous reviews, data changes from year to year and inconsistencies within data undermine the reliability of the information. Table 1 summarises the data provided by the industry with minor adjustments.

Table 1: Run-Off Cover Scheme eligible practitioners

Eligible from	2017	2016
Start up (that is 1 July 2004)	2,112	2,112
2004-05	344	344
2005-06	491	494
2006-07	541	542
2007-08	597	600
2008-09	548	553
2009-10	643	649
2010-11	870	876
2011-12	947	951
2012-13	1,128	1,130
2013-14	1,395	1,409
2014-15	1,422	1,429
2015-16	1,419	1,499
2016-17	1,683	n/a
Total number of practitioners at 30 June	14,140	12,588

- 3.3.6. We estimate that 14,140 practitioners are currently eligible for ROCS at 30 June 2017. This includes around 500 practitioners who have taken maternity leave prior to 2016-17. Normally, we would have expected most practitioners to return to private practice one year after commencing maternity leave. However, this group of 500 has been included in our estimate as they still appeared to be eligible in the ROCS data. Note that all practitioners whose eligibility is shown as subsequently ceased in the data have been excluded from the above counts. This is different to the approach taken in previous years where they were included in the table above. The new approach is more closely aligned with the requirement of the Medical Indemnity Act.
- 3.3.7. The estimated number of currently eligible practitioners is subject to considerable uncertainty. On one hand, it is reasonable to expect that a small proportion of the practitioners eligible at start-up have returned to private practice as at 30 June 2017. On the other hand, the delay between the time that a practitioner becomes eligible for the Scheme and the time when the insurer becomes aware of this means that the data is likely to be incomplete.
- 3.3.8. Table 1 shows that that the number of eligible practitioners reported at 30 June 2016, in respect of certain years, decreased by 30 June 2017. Apart from data changes from year to year, this is mainly attributable to a proportion of the eligible practitioners returning to private practice. For example, around 100 practitioners who became eligible in 2015-16 through maternity leave ceased eligibility during 2016-17.
- 3.3.9. Table 2 illustrates the breakup of new entrants by reason of eligibility, based on the data provided by the MIIIs. The numbers are not directly comparable with Table 1 as they include practitioners whose eligibility has subsequently ceased and they include multiple entries in different time periods.

Table 2: Run-Off Cover Scheme new entrants by reason of eligibility

	Industry data									
	2005-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Retired	1,108	306	317	477	503	526	658	743	648	787
Maternity	729	281	295	312	277	267	294	307	327	309
Permanent disability	96	19	20	39	26	21	29	25	30	19
Died	372	93	107	111	105	129	105	117	96	102
Resigned	263	113	144	167	149	155	213	156	203	159
Other(a)	238	127	143	175	228	337	428	348	356	401
Total	2,806	939	1,026	1,281	1,288	1,435	1,727	1,696	1,660	1,777

(a) Overseas trained medical practitioners who had permanently ceased practice in Australia under an appropriate visa.

3.4 NUMBER OF CLAIMS ELIGIBLE FOR RUN-OFF COVER INDEMNITY PAYMENTS

3.4.1. Appendix 2 describes claims which meet the criteria for reimbursement from the Australian Government through Run-Off Cover indemnity payments. Broadly, MIIs and MDOs are entitled to reimbursement from the Australian Government for the costs of claims which:

- are first notified to the MII or MDO on or after 1 July 2004;
- relate to a practitioner who is eligible under the Scheme at the date of notification;⁵ and
- meet the other requirements for 'payable claims'.⁶

3.4.2. As at 30 June 2017, MIIs and MDOs had reported 600 medical incidents relating to eligible medical practitioners since the commencement of the Scheme. 281 of those were shown as "closed" or "finalised" with null case estimate⁷ attached to them, and 42 were shown as "open" with null case estimate. This leaves 277 claims where an amount has been, or is expected to be paid.

3.4.3. Table 3 illustrates the breakup of the reported incidents by the year in which the medical practitioner became eligible for ROCS, based on the data provided by the MIIs in late 2017. Only claims with a positive estimate are shown. Note that the variations between the data provided in 2016 and 2017 are significant. A number of claims presented in 2016 data were not found in the 2017 data, whilst 149 new claims have been reported since 2016 (that have a positive case estimate). This highlights the difficulty in using this data for claim projections.

5 Refer Appendix 1.

6 Refer Appendix 2.

7 Estimate of likely cost to the insurer.

Table 3: Reported incidents by year of eligibility

Eligible from	This year's data ^(a)	Last year's data ^(b)
Start up (that is 1 July 2004)	19	9
2004-05	13	5
2005-06	16	8
2006-07	20	53
2007-08	12	11
2008-09	19	18
2009-10	39	40
2010-11	27	26
2011-12	11	12
2012-13	23	21
2013-14	18	17
2014-15	15	11
2015-16	12	4
2016-17	20	n/a
Total number of reported incidents with a case estimate at 30 June 2017	264	235

(a) The medical practitioner's ROCS eligibility date was missing for 13 incidents.

(b) The medical practitioner's ROCS eligibility date was missing for 6 incidents.

3.5 AMOUNT OF RUN-OFF COVER INDEMNITY PAYMENTS

3.5.1. ROC indemnity payments are the payments made by the Australian Government to MDOs and MILs as reimbursement of the costs of eligible claims.

3.5.2. Table 4 illustrates the progress of ROC indemnity payments (including indirect claims handling expenses) since the beginning of the scheme. We have relied on the data provided by DHS.

Table 4: Run-Off Cover indemnity payments by year of eligibility

Eligible from	This year's data (\$'000) ^(a)	Last year's data (\$'000) ^(b)
Start up (that is 1 July 2004)	8,099	8,099
2004-05	1,168	826
2005-06	938	938
2006-07	1,665	1,451
2007-08	1,311	1,285
2008-09	5,886	5,886
2009-10	1,316	1,314
2010-11	1,940	1,460
2011-12	1,404	794
2012-13	1,332	1,329
2013-14	849	498
2014-15	615	4
2015-16	3	n/a
2016-17	13	n/a
Total Amount of ROC Indemnity Payments at 30 June 2017	26,540	23,884

(a) This excludes a total of \$0.3m recovered from MILs and \$0.41m where the medical practitioner's eligibility date was missing.

(b) This excludes a total of \$0.3m recovered from MILs and \$0.15m where the medical practitioner's eligibility date was missing.

- 3.5.3. ROC indemnity payments totalling \$27 million (including indirect claims handling expenses) have been made up to 30 June 2017, all of them since 1 July 2007. Specifically during 2016-17, \$2.9 million in ROC indemnity payments were made which included payments of \$0.9 million in respect of 8 new claims.
- 3.5.4. The Scheme also provides for payments in respect of compliance costs under the ROC Claims and Administration Protocol (section 34ZN of the Medical Indemnity Act). Around \$15 million in compliance cost payments have been made to MIIIs up to 30 June 2017, and based on applications received by DHS we have estimated that a further \$2.3 million relating to periods prior to 30 June 2017 is payable. Table 5 shows the historical compliance costs paid by the Scheme as provided by DHS.

Table 5: Historical compliance cost payments

Payment year	Compliance cost payments (\$'000)
2005-06	2,842
2007-08	686
2008-09	586
2009-10	639
2010-11	1,284
2011-12	1,392
2012-13	1,233
2013-14	1,224
2014-15	1,597
2015-16	1,563
2016-17	1,502
Total paid at 30 June 2017	14,547

- 3.5.5. The Commonwealth's own administration costs are Budget-funded and so are not considered in this report.

3.6 RUN-OFF COVER SUPPORT PAYMENTS

- 3.6.1. ROC support payments are paid to DHS in the form of an annual lump sum imposed as a tax on each MII from 1 July 2004 under the MI ROCSPA.
- 3.6.2. The amount of the ROC support payments is calculated using a method set out in the MI ROCSPA. Appendix 3 describes the calculation in detail. Very briefly, it is based on:

$$\text{Applicable rate} \times (\text{premium income less taxes and charges}) \div (1 + \text{applicable rate}).$$

- 3.6.3. In 2016-17, the applicable rate was 5 per cent for all insurers.

3.6.4. Table 6 summarises the ROC support payments received. The amounts include minor amendments that were made during the relevant year. The total amount received in 2016-17 increased slightly from the previous year. This was consistent with a slight increase in total medical indemnity premiums paid by practitioners during 2016-17. Some MII's continue to collect membership fees in addition to medical indemnity premiums. In total, the amount of membership fees collected represents around 10 per cent of the amount of medical indemnity premiums collected across the industry. ROC support payments are not payable on membership fees.

Table 6: Run-Off Cover support payments

	ROC support payments (\$'m)									
	2004-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
AVANT	49.535	7.212	7.666	7.426	7.175	7.258	8.271	8.338	8.852	9.823
MDAN	17.469	2.597	2.843	2.522	2.332	2.432	2.624	2.607	2.648	2.546
MIGA	12.317	2.328	2.217	2.061	2.218	2.422	2.115	2.183	2.413	2.451
MIPS	13.334	1.649	1.843	1.718	1.781	1.596	1.617	1.613	1.604	1.630
BHSI	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.080
Guild	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.006	0.006	0.007
Total	92.655	13.786	14.569	13.727	13.506	13.708	14.627	14.746	15.523	16.536

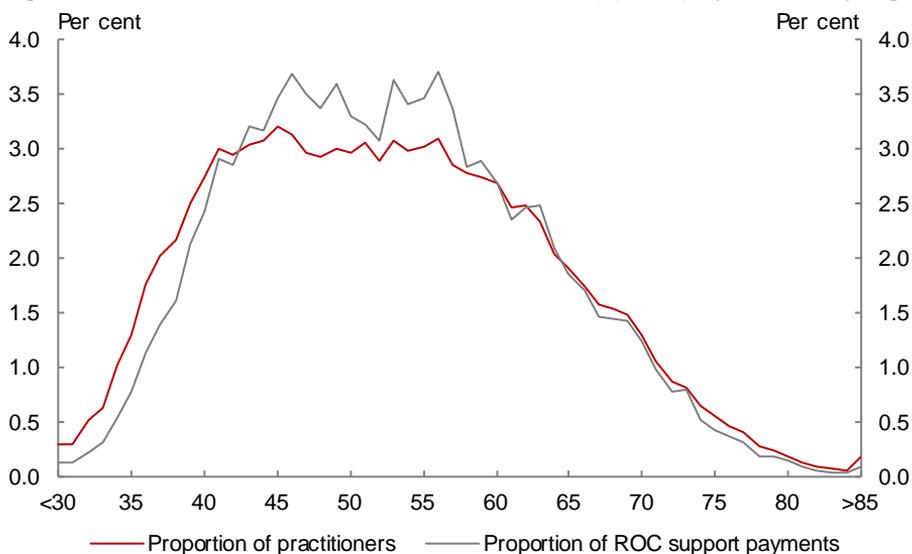
Note: MIGA includes historical payments from Invivo (QBE) and Avant includes historical payments from AMIL and PIICA.

3.6.5. In order to provide full transparency for practitioners, MII's are required to attribute ROC support payments to individual policyholders. Each premium notice specifies the amount that has been included in the policyholder's invoice to meet the MII's ROC support payment obligations. All amounts are reported to DHS, which maintains a record of each practitioner's total run-off cover credit. Interest is applied to this balance annually at the short term bond rate in accordance with section 34ZS of the Medical Indemnity Act.

3.6.6. Part 2, Division 2B, Subdivision E of the Medical Indemnity Act provides for certain payments, should the Scheme ever be wound up without alternative arrangements being put in place. Medical practitioners who are still practising at the time of the wind up of the Scheme would be entitled to have an amount not exceeding their total run-off cover credit paid to their nominated medical indemnity provider. Practitioners who are eligible for the Scheme at the time of its wind up would not be entitled to any refund but would continue to be covered for any future claims that might emerge.

3.6.7. Figure 2 summarises the contribution to ROC support payments by age of practitioner. Note that age and gender were not available for a minority of medical practitioners. The chart is based only on practitioners who paid at least \$1,700 in respect of both medical indemnity premium (net of discounts and loadings) and membership fees during 2016-17. We refer to these practitioners as 'at-risk' medical practitioners. The proportion of ROC support payments is greater than the proportion of practitioners for medical practitioners aged between 40 and 60, and the proportions are similar for medical practitioners aged between 60 and 70. The chart also reflects the low level of premiums for medical practitioners aged in their 20s and 30s and for medical practitioners over age 70 who may tend to wind down their practice hours and possibly perform fewer risky medical procedures (for example, surgery) as they reach more advanced ages.

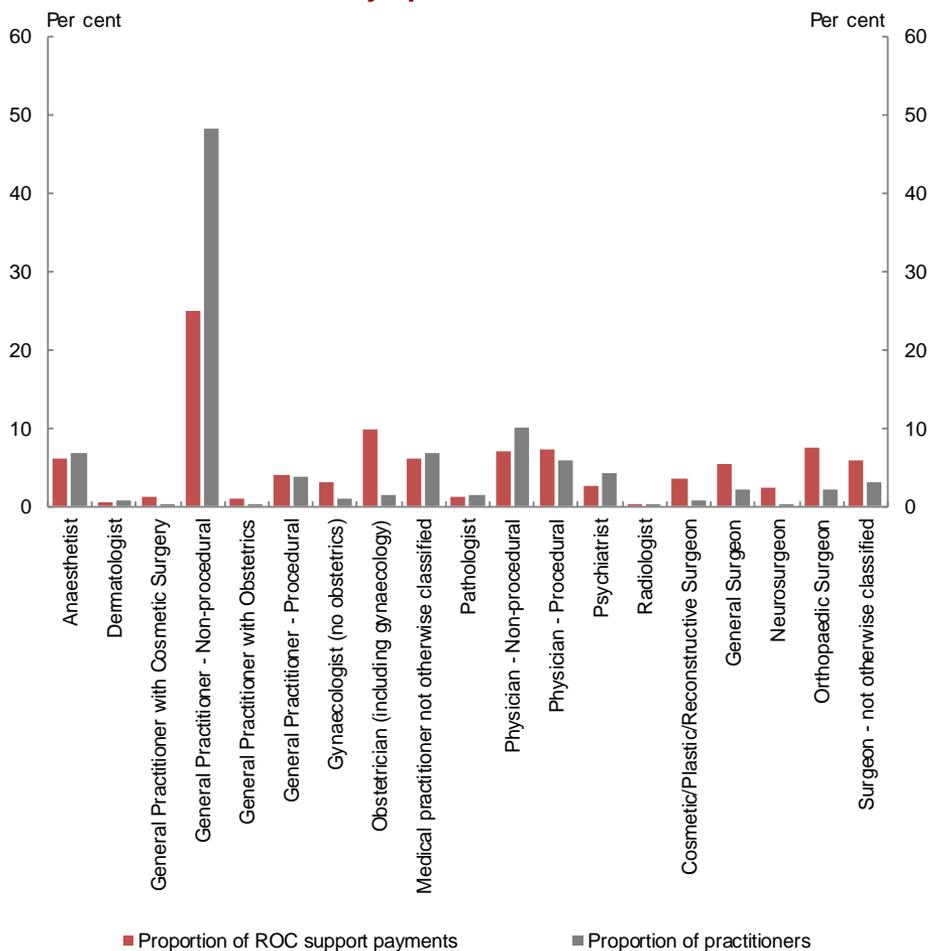
Figure 2: Contribution to Run-Off Cover support payments by age



3.6.8. Figure 3 summarises the contribution to ROC support payments by area of specialty. Specialty codes were not available in relation to a small minority of medical practitioners. Similar to Figure 2, this chart only includes 'at-risk' medical practitioners.

3.6.9. Medical indemnity insurance premiums tend to be risk-based. Thus, practitioners operating in higher risk areas of specialty are likely to incur the highest premiums and, accordingly, the highest ROC support payment liabilities. The largest ROC support payments are for obstetricians, gynaecologists, neurosurgeons, cosmetic/plastic/reconstructive surgeons, orthopaedic surgeons, and general surgeons. General practitioners — non-procedural have the smallest average ROC support payments. Note that most medical practitioners not otherwise classified (including interns and trainees) are not shown in this chart as they are not included in the 'at-risk' group.

Figure 3: Contribution to Run-Off Cover support payments by specialisation



4. FINANCIAL MANAGEMENT OF THE RUN-OFF COVER SCHEME

4.1 2016 – 17 CASH FLOW

4.1.1. Table 7 sets out the cash flow statement of the Notional Account for 2016-17.

Table 7: Cash flow statement of the Notional Account 2016-17

	<u>\$'000</u>
Income	
ROC support payments (received 30 June 2017)	16,536
ROC support payments (in respect of doctors eligible at 1/7/2004 start up)	0
Notional interest	5,237
Expenses	
ROC indemnity payments (in respect of doctors eligible at 1/7/2004 start up)	0
ROC indemnity payments (in respect of doctors eligible post 1/7/2004)	2,905
Administration cost payments to MIIIs	1,502
Net cashflow	<u>17,366</u>

4.2 EXPERIENCE AND MODEL

Comment on experience during 2016-17

4.2.1. In relation to Scheme-eligible claims which had been notified at the time of the previous review (30 June 2016) but not yet paid, actuarial estimates of the corresponding ROC indemnity payments had a present value then of \$15.8 million (excluding claims handling costs). In 2016-17, claim payments of about \$3.9 million were made by MIIIs/MDOs relating to these claims (based on industry data). All else being equal, this would suggest a residual figure at 30 June 2017 of about \$12.7 million in today's dollars. Updated industry estimates put this number at around \$9.2 million (excluding 2016-17 notifications), which is around \$3.5 million lower than expected. This is mainly because we did not apply any margin to the insurer data this year. There was a significant upward revision in the industry's liability estimates this year which brought them more into line with the trend implied by the historical experience, as provided by DHS. Therefore, we believe a margin is not necessary this year.

4.2.2. Based on input from industry actuaries and a margin of 50%, the previous report estimated the incurred-but-not-reported (IBNR) Run-Off Cover Scheme liability at 30 June 2016 as \$38.4 million (excluding claims handling costs). Implied within that estimate was an expectation that approximately \$5.2 million in new notifications would emerge during 2016-17, \$5.5 million during 2017-18, \$5.9 million during 2018-19 and \$6.3 million during 2019-20. The most recent actuarial estimates (without margin) predict about \$4.8 million for 2016-17, \$5.3 million for 2017-18, \$5.7 million for 2018-19 and \$5.9 million during 2019-20. Considering the uncertainty in the scheme, these estimates are not too dissimilar.

Changes to model and assumptions

4.2.3. This year, for the first time we have had access to the NCPD data. This has allowed us to review a range of assumptions, and we have made certain changes as described below.

4.2.4. We have updated our assumption for the claim reporting and size pattern to align with historical experience and assumptions. We have revised down our average size assumption from around \$150,000 to around \$140,000 (net of HCCS) in light of the NCPD experience. The NCPD data also indicated that while claims against obstetricians were on average higher than those against non-obstetricians, the difference is not as significant as we previously thought. As a result, we have set the same assumptions for all specialties in this review.

4.2.5. We have also updated our assumption for the payment pattern, to align with industry experience.

4.2.6. We have not changed our claim frequency assumption as it does not appear to be inconsistent with the NCPD data.

4.2.7. We have performed a comprehensive analysis of the eligibility data provided by the industry as shown in Table 2. This analysis gave us more confidence in the credibility of the eligibility data provided by the industry. We have therefore used the data with minimal adjustments. As a result, we have revised up our eligibility assumptions for future new entrants to align with historical experience.

4.2.8. Unlike our previous review, we have not applied any margin to the industry's estimates of future cash flows as the data provided by the industry in late 2017 was broadly consistent with the trend implied in the past payments data provided by the DHS.

4.2.9. Appendix 4 sets out the main assumptions and describes the methodology that was used to estimate the liabilities at 30 June 2017. Appendix 5 describes the assumptions and methodology used to project future liabilities. Appendix 6 considers the effect of the High Cost Claims Scheme (HCCS). The applicable HCCS threshold will be changed from 1 July 2018 and our model has been adjusted accordingly.⁸

4.3 RESULTS: PROJECTED RUN-OFF COVER INDEMNITY PAYMENTS

4.3.1 This section sets out projections of ROC indemnity payments for the next ten financial years. For the reasons described above, the projections should be regarded as indicative only. The data issues referred to earlier in this report also contribute to the uncertainty. The underlying assumptions and methodology are described in Appendices 4 and 5, with the calculations summarised in Table 20. Table 8 below sets out the projections, which are illustrated in Figure 4. The Scheme is not expected to become mature in a cash flow sense for a number of years. The payments projected below are in nominal dollars and have not been discounted to current dollar values.

4.3.2 The payment figure for 2017-18 is a blend of actual payments to the end of December 2017 and projected payments. Generally, ROC indemnity payments are assumed to be made at the same time as the corresponding claim payment. However, there is strong evidence of a lag when we compared insurers' past payments and DHS reimbursements. According to the industry data provided in late 2017, the amount paid by insurers but not yet reimbursed by DHS was estimated to be \$5.7m as at June 2017. While it is reasonable to expect that DHS reimbursements will always lag insurer payments, the DHS payments data to December 2017 indicates that a significant proportion of the \$5.7m could be paid in 2017/18. Hence we have adjusted the insurers' projected cash flow for 2017/18 before blending with actual payments to December 2017. The projected indemnity payments include indirect costs associated with handling claims, referred to as indirect claims handling expenses (CHE).

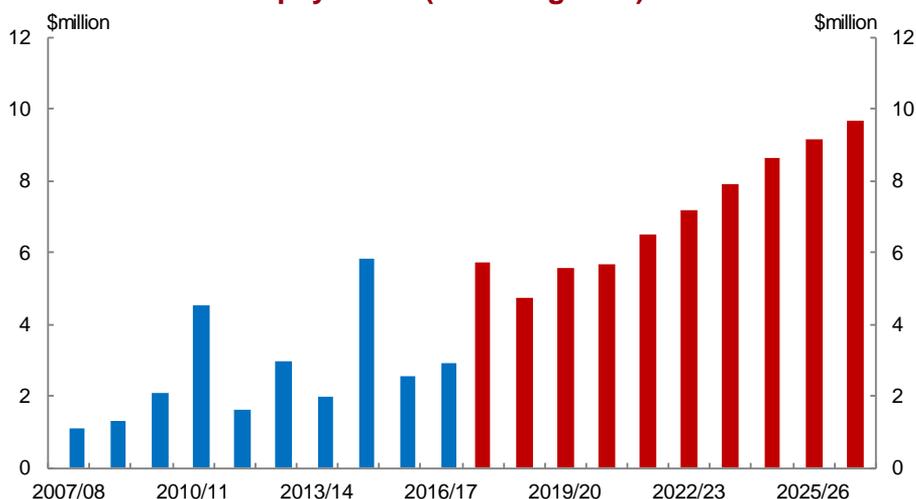
⁸ As announced by the Government on 19 December 2017 in the Mid-Year Economic and Fiscal Outlook 2016-17, the High Cost Claim Threshold will increase from \$300,000 to \$500,000 from 1 July 2018.

Table 8: Projected Run-Off Cover indemnity payments (including CHE)

Year ending 30 June	Projected ROC indemnity payments plus CHE (\$'000) ^(a)
2018	5,721
2019	4,757
2020	5,565
2021	5,700
2022	6,489
2023	7,182
2024	7,902
2025	8,613
2026	9,136
2027	9,654

(a) These projected payments do not include ongoing administration amounts payable to insurers under the ROC Claims and Administration Protocol which are different to CHE.

Figure 4: Historical and projected Run-Off Cover indemnity payments (including CHE)



4.4 RESULTS: LIABILITY AT 30 JUNE 2017 & NOTIONAL ACCOUNT

4.4.1 The estimation of the Commonwealth's liabilities under the Scheme is inherently imprecise. The operation of the Scheme is likely to be characterised by a small number of claims of highly variable size. It is not possible to predict the costs of the Scheme with a high level of confidence. For example, the presence of a single very large claim in any given year could have a substantial effect on the total amount of ROC indemnity payments for that year.

- 4.4.2 The liabilities of the Scheme could be measured in a number of ways. It is normal for insurance-type liabilities to be measured on either a 'notified' or an 'occurrence' basis. On a notified basis, new liabilities would accrue to the Scheme as new claims were notified. On an occurrence basis, new liabilities would accrue to the Scheme at the time of the occurrence of the medical incidents which were expected to give rise to medical indemnity claims which would attract a ROC indemnity payment.
- 4.4.3 Under the occurrence model, liabilities are recognised more quickly than under the notified model. The occurrence model is more consistent with the notion that the Scheme is ongoing. Accordingly, the occurrence model has been adopted for this report. The liabilities of the Scheme are therefore taken as the present value of future ROC indemnity payments (including associated insurer claims handling expenses) which relate to medical incidents which occurred before the effective date of valuation.
- 4.4.4 The Commonwealth's liabilities under the scheme at 30 June 2017 are considered under the following categories:
- Outstanding compliance costs as at 30 June this year;
 - Scheme eligible claims which had been notified at the time of the review and paid by the MIs, but not yet recovered from DHS;
 - Scheme eligible claims which had been notified to the MIs at the time of the review but not yet paid;
 - Incurred claims that have not yet been reported to the MIs; and
 - Claims handling expenses.
- 4.4.5 The Scheme must be managed over a long time frame. As discussed previously, ROC indemnity payments are likely to be 'lumpy' in nature and immature in size for some years. ROC support payments will be received well in advance of ROC indemnity payments. As a result of the payment timing mismatch and the expected volatility in the ROC indemnity payment pattern, it is appropriate to have a system which enables proper tracking of the financial flows over time. Accordingly, a ROC notional account (the Notional Account) is maintained.
- 4.4.6 It is important to appreciate that the Notional Account is not an official Government account. Rather, it is a device established for the sole purpose of facilitating equity between practitioners and other taxpayers.

4.4.7 The Notional Account is credited with:

- ROC support payments;
- amounts to offset ROC indemnity payments which relate to medical practitioners who were eligible at the commencement of the scheme; and
- notional interest.

4.4.8 Notional interest is credited to the Notional Account to ensure reasonable treatment of the time value of money since ROC support payments are received by DHS well in advance of any ROC indemnity payments being made by DHS. Notional interest is applied at the short term bond rate for consistency with section 34ZS of the Medical Indemnity Act which requires interest at the short term bond rate to be applied to the total run-off cover credit balances of individual practitioners.

4.4.9 On establishment of the Scheme, the Government announced that it would fund the opening liability that was attributable to practitioners who were already eligible for cover under the Scheme at the time of its commencement. Since the commencement of ROC indemnity payments, effect has been given to this commitment by ensuring that the Notional Account is credited annually with amounts to offset any ROC indemnity payments which relate to medical practitioners who were eligible at the commencement of the Scheme.

4.4.10 The Notional Account is charged with:

- ROC indemnity payments; and
- Payments made under the ROC Claims and Administration Protocol.

4.4.11 The Scheme will also pay an amount to a MII or MDO to cover the indirect costs associated with handling claims, referred to as indirect claims handling expenses (CHE). The Scheme pays 5 per cent of the cost of each claim to cover CHE.

4.4.12 Appendix 2 provides more detail on claim amounts eligible under the Scheme.

4.4.13 Note that the Scheme 'operates after' the HCCS. The effect of the HCCS is described in detail in Appendix 6.

4.4.14 Table 9 describes how an eligible \$1 million claim notified after 1 July 2018 would be funded⁹. The total amount paid of \$1,050,000 includes claim costs of \$1 million and CHE of \$50,000.

Table 9: Funding sources for a \$1 million claim which is eligible for the Run-Off Cover Scheme

Funding source	Amount
ROC indemnity payment (direct claim costs)	\$750,000
Run-Off Cover Scheme CHE	\$50,000
Run-Off Cover Scheme (Total)	\$800,000
HCCS	\$250,000

4.4.15 As noted earlier, the Medical Indemnity Act provides for payment of a practitioner's total run-off cover credit, should the Scheme ever be wound up without alternative arrangements being put in place. Thus, in this event, a large part of the accumulated ROC support payment balance would become a liability of the Scheme. At the same time, since the Scheme liabilities are being measured on an occurrence basis, some of the liabilities of the Scheme would be released, partially offsetting this impact. However, for the purpose of this report, the Scheme has been assumed to be ongoing and the whole amount of the accumulated ROC support payments has been taken to be available to meet relevant ROC indemnity payments.

4.4.16 The liability estimates given in this report are central estimates. In broad terms, this means that they are intended to be equally likely to be too high or too low. In particular, it is not intended that the liability estimates contain any margin for risk. Funding considerations for the Scheme are not the same as for private sector insurance arrangements. The objective here is to manage the funding over the long term. Since substantial volatility in the liability estimates is likely from time to time, periods of surplus and periods of deficit in the Notional Account might be expected. However, given the long funding time horizon that is appropriate for the Scheme, a short term deficit in the Notional Account is not a cause for concern. As a result of this, there is no strong reason to maintain a risk margin in the liability estimates.

4.4.17 Table 10 below sets out the balance sheet of the Notional Account as at 30 June 2017.

⁹ As announced by the Government on 19 December 2017 in the Mid-Year Economic and Fiscal Outlook 2016-17, the High Cost Claim Threshold will increase from \$300,000 to \$500,000 from 1 July 2018.

Table 10: Balance sheet of the Notional Account as at 30 June 2017

	\$'000
Assets	
Cash as at 1 July 2016	214,143
Net cashflow	17,366
Total	231,509
Liabilities	
Outstanding compliance costs	2,258 ^(a)
Paid by MIs but not yet recovered from DHS	5,733 ^(b)
Notified to MIs but not yet paid by them	14,000 ^(c)
Incurred but not yet notified to MIs	39,670 ^(d)
Claims handling expenses	3,671 ^(e)
Total	65,332

(a) Based on actual payments made by DHS in 2017/18 in relation to prior claim years.

(b) Based mainly on estimates provided in relation to claims/incidents notified to MIs and MDOs by 30 June 2017.

(c) Based mainly on estimates provided by industry actuaries.

(d) Based on estimates provided by industry actuaries and models developed within this office.

(e) Based on 5 per cent of 'grossed up' ROC indemnity payments (to allow for the impact of the HCCS).

4.4.18 The Notional Account at 30 June 2017 has disclosed an estimated notional surplus of about \$166 million. Note again that no account has been taken for possible payments to practitioners under Subdivision E of the Medical Indemnity Act, should the Scheme be wound up without alternative arrangements being put in place. Based on the data provided by DHS, this amount could be up to \$306 million as at 30 June 2017. Generally, the estimated surplus position should be regarded as highly uncertain.

4.5 RESULTS: PROJECTED LIABILITIES OF THE SCHEME

4.5.1 Finally, it is appropriate to provide a benchmark projection of the liabilities of the Scheme. Future liabilities under the scheme are projected having regard to the annual rate at which future liabilities will accrue, the payment of claims and the interest that is required to accrue to the (discounted) reserves each year.

4.5.2 Table 11 sets out estimates of the liabilities of the Notional Account at the end of each of the next five financial years. The purpose is to illustrate the short-term development of the Scheme. There is very substantial uncertainty in these estimates. The numbers shown have been discounted to the end of the relevant financial year but have not been discounted to give values in today's terms. The projected liabilities are not too dissimilar from the corresponding amounts presented in last year's report. Detailed actual versus expected analysis is contained in Appendix 4.

Table 11: Projected balance sheet liabilities of the Notional Account

Year ending 30 June	Liability (\$'000)	New accrual (\$'000)	Interest cost (\$'000)	Payments (\$'000)
2017	65,332			
2018	71,846	8,006	4,229	5,721
2019	80,296	8,527	4,680	4,757
2020	89,007	9,081	5,196	5,565
2021	98,728	9,671	5,750	5,700
2022	108,886	10,300	6,347	6,489

(a) ROC indemnity payments plus CHE only. Does not include liability in respect of outstanding compliance costs. Refer Appendix 4 for further information.

4.6 ACTUARIAL MANAGEMENT

4.6.1 Regular review of the costs and notional assets of the Scheme will allow the ROC support payment rate to be adjusted from time to time, if necessary. Consideration of that rate is beyond the scope of this report. This report has described a framework for the valuation of Scheme liabilities and established the Notional Account. It is intended that the valuation and accounting framework be applied at each future annual review of the Scheme.



Guy Thorburn FIAA
 Australian Government Actuary
 30 April 2018

APPENDIX 1: ELIGIBLE PRACTITIONERS AND RUN-OFF COVER SCHEME CONTRACTS

ELIGIBLE PERSONS

A.1.1 Eligible persons are those who fit one or more of the following eligibility categories at the time the claim (or medical incident) is first notified to the MII or MDO (section 34ZB(2) of the Medical Indemnity Act and *Medical Indemnity Regulations 2003* regulation 12):

- A medical practitioner 65 years or older who has permanently retired from paid medical practice.
- A medical practitioner who has not engaged in paid medical practice during the preceding three years. (Note: unlike other categories, eligibility does not occur immediately upon ceasing practice).
- A legal representative of a deceased medical practitioner (provided that a claim can be made against the deceased's estate).
- A medical practitioner who has ceased paid medical practice due to permanent disability.
- A medical practitioner who has ceased paid medical practice because of maternity.
- An overseas trained medical practitioner, who worked in Australia under an appropriate visa, has permanently ceased medical practice in Australia and does not reside in Australia.

PROVISION AND NOTIFICATION OF COMPULSORY RUN-OFF COVER

A.1.2 The practitioner's last medical indemnity insurer is required to provide run-off cover to an eligible practitioner under section 26A of the PSPS Act.

A.1.3 The compulsory run-off cover must encompass the same nature and range of incidents as the last medical indemnity cover held by the eligible practitioner (subsection 26A(4)(b)).

A.1.4 Section 26D compels MIIIs to notify eligible practitioners of:

- (i) the nature and range of incidents encompassed by the compulsory run-off cover; and
- (ii) the terms and conditions on which it is provided.

A.1.5 The compulsory run-off cover is taken to be a contract of insurance between the MII and the eligible practitioner for the purposes of the PSPS Act (section 26E).

APPENDIX 2: RUN-OFF COVER SCHEME CLAIMS

- A.2.1 The legislation defines claims broadly. Claims need not involve legal proceedings. Claims may include civil claims for negligence, administrative proceedings, disciplinary proceedings (including those performed by a professional body) and inquiries or investigations into conduct (subsection 4(1) of the Medical Indemnity Act).
- A.2.2 A ROC claim is payable to an MII or MDO under section 34ZC in relation to a claim eligible under subsection 34ZB(1) if:
- it was first notified to the MII or MDO on or after 1 July 2004;
 - it relates to a person eligible under subsection 34ZB(2) (see Appendix 1);
 - it relates to incident(s) occurring in connection with the person's practice as a medical practitioner (see paragraph 34ZB(1)(b));
 - either the person is indemnified for the claim by an MII in accordance with section 26A of the PSPS Act, or the person is indemnified under incident-occurring based cover provided by an MDO (paragraph 34ZB(1)(e)); and
 - the claim would be paid in the ordinary course of the MII's or MDO's business.
- A.2.3 Where these criteria are met, the Commonwealth is liable to pay run-off cover indemnities regardless of whether the MII or MDO has sought private reinsurance (section 34ZF).
- A.2.4 Applications for ROC indemnity payments must be made to DHS (section 36 of the Medical Indemnity Act). They are paid by the Chief Executive Medicare before the end of the month that immediately follows the month in which the MII applies for the indemnity (section 37).
- A.2.5 The Scheme operates after the HCCS. Thus, part of the cost of eligible large claims is first met by the HCCS with the rest being picked up by the Scheme (subsection 34ZH(2)). Where the total incurred cost of an eligible ROC claim exceeds the HCCS threshold (currently \$300,000), the HCCS meets 50 per cent of the amount by which it exceeds the threshold.¹⁰

¹⁰ As announced by the Government on 19 December 2017 in the Mid-Year Economic and Fiscal Outlook 2016-17, the High Cost Claim Threshold will increase from \$300,000 to \$500,000 from 1 July 2018.

APPENDIX 3: RUN-OFF COVER SUPPORT PAYMENTS

- A.3.1 ROC support payments are paid to DHS in the form of an annual lump sum imposed as a tax on each MII from 1 July 2004. The lump sum is intended to cover the cost of claims and the MIIs' administration and implementation costs.
- A.3.2 The amount of support payments is calculated as a percentage of premium income received from contributing practitioners. The calculation rules are set out in the MI ROCSPA and regulations. The tax imposed on each MII is the applicable percentage of the insurer's premium income (section 6) for the applicable contribution year ending on 30 June or an alternative date specified in the regulations (section 5).
- A.3.3 All MIIs except for AMIL were required to remit their first ROC support payments on 30 June 2005. Since AMIL's policy year was a calendar year, it was not required to remit ROC support payments until 31 December 2005.
- A.3.4 Under section 7, a MII's premium income for the purpose is the sum of all of the premiums paid to the insurer for medical indemnity cover provided for medical practitioners, reduced according to the formula:

Premium income equals

$$\frac{\text{Net premium}}{\text{Net premium}} \times \frac{\text{Applicable percentage}}{\text{Applicable percentage}} \div (1 + \text{Applicable percentage})$$

- A.3.5 Net premium is calculated according to section 7 as follows:
- sum of all premiums paid to the insurer during the operation of the Scheme for medical indemnity cover provided for medical practitioners (including subsidy payments made to the insurer on behalf of medical practitioners to assist with the cost of purchasing medical indemnity cover under the Medical Indemnity Premium Support Scheme, section 43(1) Medical Indemnity Act) (subsection (1));
 - minus the amount of GST payable (subsection (2)(a)) and the amount of stamp duty payable (subsection (2)(b)) in relation to the premiums; and
 - plus/minus other payments specified in the regulations.
- A.3.6 For premium payments relating to 2016-17, the applicable percentage is specified in the regulations as 5 per cent for all insurers, and thus the ROC support payment will be calculated as net premium x 5 per cent ÷ 1.05.

APPENDIX 4: LIABILITIES AT 30 JUNE 2017

A.4.1 The purpose of this appendix is to describe the approach taken (and assumptions used) to calculate the scheme liabilities.

A.4.2 Claims Liabilities have been assessed on an occurrence basis. New liabilities accrue to the Scheme at the time of the occurrence of the medical incidents which were expected to give rise to medical indemnity claims which would attract a ROC indemnity payment. The liabilities of the Scheme in respect of claims liabilities are therefore taken as the present value of future ROC indemnity payments (plus associated insurer claims handling expenses) which relate to medical incidents which occurred before the effective date of valuation.

SUMMARY OF LIABILITIES AS AT 30 JUNE 2017

A.4.3 Table 12 summarises the estimated accrued Scheme liabilities as at 30 June 2017. The Scheme liabilities are divided into outstanding compliance costs, those attributable to claims notified as at 30 June 2017, those attributable to IBNR claims as at 30 June 2017 and overall claims handling expenses.

Table 12: Run-Off Cover Scheme liabilities related to medical incidents prior to 30 June 2017 (\$'m)

Outstanding Compliance Costs	2,258
Liabilities in relation to claims notified as at 30 June 2017	
Paid by MIs but not yet recovered from DHS	5,733
Notified to MIs but not yet paid by them	14,000
Sub Total	19,733
Liabilities in relation to IBNR claims as at 30 June 2017	39,670
Claims Handling Expenses	3,671
Total Run-Off Cover Scheme liabilities	65,332

A.4.4 This section describes the approach taken and the key assumptions used in the calculation of the key liabilities shown above.

OUTSTANDING COMPLIANCE COSTS

A.4.5 MIIIs apply to DHS for a refund of the costs of complying with the scheme each year. At the end of any one year the government has a liability for any outstanding compliance costs in respect of the previous years' operation of the scheme, that have not yet been refunded. This liability is generally based on the applications received by DHS and estimates by DHS in relation to applications that have not been received at the time of writing for compliance costs that have not yet been settled. For this report, the estimate is based on the actual amount that DHS has paid to insurers after 30 June 2017 in respect of previous years' operation.

LIABILITIES IN RELATION TO NOTIFIED CLAIMS

A.4.6 There are two categories of notified claims, those which have been settled by the insurer, but not yet recovered from DHS and those that are still being managed by the insurer.

A.4.7 In the case of settled claims, we have compared the insurer past payments (including CHE) with the DHS reimbursements as at 30 June 2017. The difference is by definition the amount paid by insurers but not yet reimbursed by DHS.

A.4.8 Where the claim is still being managed by the insurer, all notified claims have a case estimate placed against them by the relevant insurer. The industry has provided a projection of the expected claims payments based on the relevant year of notification. As with any estimate, it is to be expected that the actual payments that will occur to settle the claim will vary from the claims managers' current estimate. The projected cash flow is discounted using the expected long term earning rate to determine a net present value as at the valuation date.

LIABILITIES IN RELATION TO IBNR CLAIMS

A.4.9 Due to the nature of this type of liability, claims may be notified many years (potentially as long as 20 or more years) after the event that actually gives rise to the claim has occurred. Industry provides a projection of claims that will be notified in each year for the next five years. Given the previous comment, most of the claims that will be notified next year will have already occurred at the valuation date, and are therefore already a liability of the scheme.

A.4.10 Industry provides a projection of the total cost of expected notified claims for the next five years which are extrapolated. A proportion of these claims will have already occurred and therefore form part of the IBNR liability. Further, given that claims can be reported many years into the future, some claims that will be notified beyond this five year period will also already be part of the IBNR liability.

A.4.11 Taking this into account, the following approach is adopted to derive the IBNR liability from the industry estimate:

- The industry 5 year projection expressed in current real payments and is extrapolated for the next 20 years.
- We apply our observed pattern of the period of delay from an incident occurring to it being reported and being eligible for ROCS to determine the portion of the projected future total claims payments that have already occurred and are therefore already liabilities of the scheme.
- We then apply the observed cash flow patterns to allow for the time it takes to settle claims once notified, and inflation and discount rates are applied to determine the present value of the liability.

CLAIMS HANDLING EXPENSES

A.4.12 The Scheme pays 5 per cent of the direct cost of each eligible claim to cover claims handling expenses. Where an eligible claim is partly covered by the HCCS, the allowance for claims handling expenses paid under the Scheme is 5 per cent of the total claim cost, including the portion covered by the HCCS. Claims costs are therefore grossed up by an allowance that represents the proportion of Scheme claims that are paid by the HCCS.

ASSUMPTIONS

Industry cash flow projections

A.4.13 We rely heavily on industry projections of future cash flows to determine the value of outstanding notified claims as well as future IBNR claims. Each insurer prepares a projection of cash flows associated with notified claims and a projection of their expected future cash flows for claims expected to be notified over the next five years.

A.4.14 There is limited opportunity to independently review the industry projections noted above. This year we reviewed the historical actual payments data provided by the DHS and compared this to the industry projections. This suggested that the industry's estimates of future cash flows are broadly aligned with the historical trend. We have therefore used the industry projections without any margin. This is different to the previous review where we applied a 50% margin to industry projections.

Proportion of Scheme claims paid by the HCCS

A.4.15 Our model effectively assumes that 17 per cent of ROCS claims costs will be reimbursed by the HCCS, after the threshold change. This has been slightly revised downwards since last review in light of NCPD data. Our assumption is not dissimilar to most insurers.

Economic assumptions – claims inflation & long term discount rate

A.4.16 Medical indemnity claim costs tend to increase at a faster rate than general inflation. Claim payments were projected to increase in line with wage inflation plus superimposed claim cost inflation.

- Wage inflation was assumed to be 4 per cent per annum. This is not inconsistent with general expectations of long term wage growth.
- Superimposed inflation was assumed to be 2.5 per cent per annum. Superimposed inflation refers to the tendency for medical indemnity claim amounts to increase at rates faster than general inflation. Whilst superimposed inflation has been observed in “bursts” the past, the timing is unpredictable. As a consequence, superimposed inflation is typically allowed for with a constant assumption. Due to the limited data, there is some judgement required in selecting this assumption.
- Claim payments were discounted at a rate of 6 per cent per annum. This is the same rate as was assumed last year. The chosen rate provides consistency with the rate adopted in a number of similar contexts and therefore is suitable from a whole of government perspective at 30 June 2017.

COMPARISON OF ACTUAL AND EXPECTED LIABILITIES AT 30 JUNE 2017

A.4.17 In any valuation, it is informative to compare the 'actual' estimated liabilities¹¹ at the valuation date with that which was expected in the prior review. This can highlight areas where a change in approach, or experience has impacted the results.

A.4.18 Table 13 compares the 'actual' estimated Scheme liabilities in relation to prior medical incidents as at 30 June 2017 to the 'expected' amounts, which are based on the prior review and actual cash flows during 2016-17. For simplicity, the liability for the amount paid by MIIIs but not yet recovered and claims handling expense allowance are not included.

Table 13: Actual versus expected liability estimates as at 30 June 2017 (\$'m)

	Actual	Expected	Actual minus expected
Notified but not yet paid	14.0	20.0	-6.0
IBNR	39.7	43.0	-3.3
Total	53.7	63.0	-9.3

A.4.19 The 'actual' estimated notified liability is about \$9 million lower than the 'expected' liability based on the prior review. This is mostly due to a change in our methodology this year whereby we did not apply any margin to the industry actuaries' cash flow projections. The actual payments during 2016-17 were similar to expected.

A.4.20 In regard to liabilities related to future incidents, we have updated a number of assumptions in our internal projection model in light of the NCPD data. This has led to slightly higher estimates of future liabilities from 2019-20.

UNCERTAINTY IN THE LIABILITY AS AT 30 JUNE 2017

A.4.21 The greatest uncertainty arises from the nature of the scheme. Run-off cover claims are inherently long-tailed, which means that it can take decades for the scheme to mature in a cash flow sense. In addition, claims cost related to bodily injury is highly variable and tend to be dominated by a small number of large claims. Therefore, it is impossible to estimate the scheme liability with certainty.

A.4.22 Our approach for estimating scheme liability, by necessity, focuses on reasonableness of assumptions, of the methodology and monitoring the progress between projected and actual payments over time.

¹¹ The estimates have been updated with the latest data, experience and assumptions.

- A.4.23 We have to rely extensively on the high-level cash flow projections provided by industry actuaries. Data often changes significantly year on year, and they are sometime very different to the historical payment trend as suggested by DHS payments data. Attempting to reconcile the two different sources of data is one area of difficulty when estimating run-off cover claims cost.
- A.4.24 The IBNR component is also dependent on the assumed notification pattern. This has been updated a number of times since the beginning of the scheme as more data has become available. This has reflected the shorter notification delays that we have observed. In theory, a shorter notification pattern would imply a lower ROCS liability as the medical practitioner is less likely to have ceased private practice at the time of notification.
- A.4.25 Ultimately, uncertainty is evidenced by the fact that the scheme is still immature. Less than 300 claims have been notified to insurers that have a case estimate attached to them, and less than 200 claims have been reimbursed by DHS. There is insufficient data for a more scientific modelling approach.

APPENDIX 5: PROJECTED LIABILITIES

A.5.1 The Medical Indemnity Act requires that the report include a projection of the Commonwealth's liabilities in relation to amounts of Run-Off Commonwealth contributions in future financial years. This Appendix summarises the results of that projection, describes the methodology and assumptions and discusses the uncertainty in relation to the liability projections.

SUMMARY OF PROJECTED LIABILITY

A.5.2 In line with previous reports, we have projected the liabilities forward from the valuation date by taking the liability at the valuation date, adding the interest assumed in the valuation, adding an amount for new accrued claims and deducting payments expected in that year along with their associated claims handling expenses.

A.5.3 Table 14 below sets out estimates of the liabilities of the Notional Account at the end of each of the next five financial years. The purpose is to illustrate the short-term development of the Scheme. There is substantial uncertainty in these estimates. The numbers shown have been discounted to the end of the relevant financial year but have not been discounted to give values in today's terms. The projected liabilities are not too dissimilar from the corresponding amounts presented in last year's report.

Table 14: Projected balance sheet liabilities of the Notional Account

Year ending 30 June	Liability (\$'000)	New accrual (\$'000)	Interest cost (\$'000)	Payments (\$'000)
2017	65,332			
2018	71,846	8,006	4,229	5,721
2019	80,296	8,527	4,680	4,757
2020	89,007	9,081	5,196	5,565
2021	98,728	9,671	5,750	5,700
2022	108,886	10,300	6,347	6,489

DESCRIPTION OF THE MODEL USED TO PROJECT THE ACCRUAL OF NEW RUN-OFF COVER SCHEME LIABILITIES AFTER 30 JUNE 2017

A.5.4 The approach involved projecting the expected future ROC indemnity payments for each medical practitioner who was practising as at 30 June 2017.

A.5.5 A practitioner can become eligible for the Scheme by reason of:

- retirement at 65 years and older;
- permanent disability;
- death;
- maternity;
- resignation; or
- satisfaction of other eligibility criteria specified in the regulations.

A.5.6 The probability of becoming eligible for the Scheme was estimated for each practitioner based on their age as at 30 June 2017 and their gender. Note that practitioners do not become eligible by means of resignation until three years have passed since cessation of practice.

A.5.7 The estimated likelihood of practitioners becoming eligible for the Scheme was overlaid on the projected claim notifications to give the projected ROC claim notifications for each practitioner. The expected notified claims cost was multiplied by the likelihood of eligibility in each future year, and summed across all practitioners to arrive at the expected cost of ROC claims notified in that year.

A.5.8 It was assumed that on average practitioners who become eligible for the Scheme do so half-way through the financial year.

A.5.9 Projection of indemnity payments entailed the projection of:

- incidents which will result in a claim;
- the delay involved in notification of claims;
- the cost of claims after allowing for the HCCS;
- the likelihood of eligibility for the Scheme at the time a claim is notified; and
- the delay involved in the payment of notified claims.

A.5.10 The total expected future ROC claim notifications were calculated as the scalar product of the vector of claim notifications and the vector of probabilities of Scheme eligibility for each practising medical practitioner in each future year.

RUN-OFF COVER CLAIMS

Components of claim cost

- A.5.11 For the purposes of the model, a ROC claim includes any eligible claim notified and finalised at direct cost to the MII. Claim costs include all costs which are directly attributable to the claim. Indirect claims handling expenses (CHE) are dealt with separately.
- A.5.12 Directly attributable claim costs include damages, plaintiff legal costs to the extent that they are awarded, and legal defence costs to the extent that they are directly attributable to the claim.

ASSUMPTIONS

Overview of changes in assumptions

- A.5.13 According to the data provided by the industry, 1,376 practitioners (excluding overseas trained medical practitioners who had permanently ceased practice) became eligible for cover under the Scheme during 2016-17. This is higher than our estimate in our previous review that 975 practitioners (excluding 'Other') would become eligible for cover during 2016-17. Whilst we had a relatively low estimate in our previous review, we also had low confidence in the accuracy of the eligibility data. This was due to major inconsistency issues that could not be resolved at the time, and the significant increase in the numbers of eligible practitioners reported by the industry since 2013-14. As a result, we revised down our eligibility assumptions for future new entrants in last year's review.
- A.5.14 This year, we have performed a detailed analysis of the eligibility data where data was checked against other data sources for information about the doctors' premiums before they became eligible for cover and, if applicable, the doctors' most recent premiums. We have also obtained confirmation from the Department of Health that a doctor can be both eligible for ROCS and contributing to ROCS. An example of this is when a doctor purchases a cover for only Good Samaritan acts after having retired and becoming eligible for ROCS. This analysis gave us more confidence in the credibility of the eligibility data provided by the industry. We have therefore used the data with minimal adjustments. As a result, we have revised up our eligibility assumptions for future new entrants to align with historical experience.

A.5.15 Claim experience in 2016-17 has been close to expected. However, a short period of emerging experience should not necessarily be relied on as a guarantee that underlying assumptions are appropriate for such a long-tail and uncertain line of insurance as medical indemnity. This is especially true in relation to this Scheme, due, for example, to the following factors:

- ROC claims are very long-tail and model projections are particularly sensitive to assumptions; and
- the Scheme is still relatively immature.

A.5.16 This year, for the first time we have had access to the NCPD data. This allowed us to review a range of assumptions, and we have made certain changes in light of the data as described below.

A.5.17 We have updated our assumptions for claim reporting and size.

A.5.18 We have updated our assumptions in respect of the average claim size. The NCPD data indicated that while the average claim against obstetricians is higher than those against non-obstetricians, the difference is not as significant as we previously thought. In addition, there are specialties that have a larger average claim size than obstetricians. Therefore, it does seem reasonable to continue modelling obstetricians separately. In this report, we have set the same assumptions for all specialties in this review. Furthermore, we have revised down our average size assumption from around \$150,000 to around \$140,000 (net of HCCS) in light of the NCPD experience.

A.5.19 We have also updated our assumption for the payment pattern, that is, the delay from claim notification to settlement. The NCPD data showed that a higher proportion of claims were notified within the first five years for all insurers than our previous assumption. We have previously allowed a ten year payment pattern. The NCPD data showed that the industry experience was not too different from our assumption. However, there is evidence that a higher proportion of payments are made in the first two years and around 5 per cent of payments are made after 10 years. Our updated assumptions are more in line with industry experience.

A.5.20 We have not changed our claim frequency assumption as it does not appear to be inconsistent with the NCPD data.

A.5.21 We have not altered any of the financial assumptions in this review. Economic assumptions are set out in Appendix 4 and have been used consistently in both the calculation of the liability at the valuation date and in the projection.

Practitioner population

A.5.22 As noted above, the projection aims to project the expected future ROC indemnity payments for each medical practitioner who was practising as at 30 June 2017. This starts with the population of medical practitioners who were practicing in 2016-17. This data is provided by the MIIIs and maintained by DHS.

A.5.23 Practitioners with total medical indemnity payments (including both medical indemnity premiums net of discounts and loadings plus membership fees) of less than \$1,700 were excluded from the analysis in order to ensure that only genuine 'at-risk' medical practitioners were the focus of the investigation. The excluded group contained interns and trainees that exist in some of the data provided by the MIIIs. A total of 86,300 practising medical practitioners have paid some medical indemnity premium. After excluding those medical practitioners, we were left with 48,650 'at-risk' medical practitioners. This approach is unchanged from our previous reports.

A.5.24 Table 15 summarises the age distribution of the cohort of 'at-risk' practitioners, with the total premium representing a proxy for risk of medical indemnity claims for each age group. Note that age and gender were not available for a small number of medical practitioners.

Table 15: Cohort of 'at-risk' medical practitioners

Age at 30 June 2017	Number 'at-risk'	Total premium (\$'000)	Proportion males (per cent)
<30	68	287	43
30-34	1,303	4,722	50
35-39	4,749	25,978	56
40-44	7,217	53,535	59
45-49	7,426	64,495	62
50-54	7,303	60,376	63
55-59	7,068	58,815	67
60-64	5,851	43,718	71
65-69	4,036	28,827	81
70-74	2,299	15,741	85
75-79	956	5,539	89
80-84	279	1,410	91
>85	95	358	93
Total	48,650	363,801	66

Note: Numbers may not add due to rounding. Total premium includes membership fees. If membership fees are excluded, total premium across both categories is approximately \$330 million.

Demographic assumptions

A.5.25 Demographic assumptions are required to project the number of eligible medical practitioners in future years from the current population of 'at risk' medical practitioners.

- A.5.26 In order to assess the future rate at which liabilities will accrue, we project the expected number of 2017-18 new entrants in the categories that are expected to generate a future liability. Those events that are expected to potentially generating a material liability under the scheme are considered to be retirement at 65 or older, resignation from private practice for three years, death, permanent disability and maternity leave. We have not projected new entrants in the 'other' category. Historically, practitioners in this category have paid very low premiums. Accordingly, we have assumed that medical negligence claims against them are likely to make an immaterial contribution to the Scheme costs.
- A.5.27 This year, we have reviewed the demographic assumptions following analysis of the eligibility data provided by the industry. This has led to the assumptions described below.
- A.5.28 The probabilities of death and disablement are assumed to be an increasing multiple of the probabilities of death in *Australian Life Tables 2010-12* (ALT 2010-12). The probabilities of death are assumed to be 28 per cent of ALT 2010-12 until age 64, 40 per cent from age 65 to 69, and 48 per cent of ALT 2010-12 thereafter. The probabilities of permanent disability are assumed to be 12 per cent of ALT 2010-12 up to age 24, an increasing multiple of ALT 2010-12 from 12.3 to 24 per cent from age 25 to 64, and 0 from 65 onwards. These are unchanged from last year.
- A.5.29 The probabilities of maternity leave were previously assumed for ages between 28 and 43. The analysis of the eligibility data supports a slightly wider age range and higher probabilities for all ages (and especially mid-30s). We have used the eligibility experience since 2004 and the publicly available information from the Australian Bureau of Statistics to derive a set of probability assumptions that produces a reasonable number of doctors taking maternity leave next year and an age distribution that aligns with historical experience. We have retained the assumption that each doctor takes one year of maternity leave for each child.
- A.5.30 The probabilities of resignation were previously assumed for ages between 39 and 64. It was assumed that the probability increases linearly from age 54. The experience since 2004 has shown that resignations also peak in mid-30s. The updated assumptions produce an overall higher number of resignations and an age distribution that aligns with historical experience.
- A.5.31 The probabilities of retirement were previously assumed to be the same for males and females. The experience since 2004 has shown that females tend to retire earlier than males and the difference is significant enough to justify gender specific assumptions. The updated assumptions produce an overall higher number of retirements for both genders and an age distribution that aligns with historical experience.

A.5.32 It is instructive to combine the above assumption and present the probabilities that a practising male medical practitioner will be eligible for the Scheme in future years. The decrement assumptions are summarised in Table 16 in the form of assumed probabilities of being eligible for the Scheme at the end of each of the next 10 financial years for males.

Table 16: Assumed probabilities of eligibility for the Run-Off Cover Scheme over the next 10 financial years for male medical practitioners

Year ending 30-Jun	Age at 30 June 2017						
	20	30	40	50	60	70	80
2018	0.0002	0.0003	0.0006	0.0014	0.0034	0.0930	0.2749
2019	0.0005	0.0007	0.0012	0.0029	0.0070	0.1782	0.4765
2020	0.0007	0.0011	0.0019	0.0045	0.0111	0.2685	0.6239
2021	0.0010	0.0215	0.0077	0.0088	0.0185	0.3497	0.7313
2022	0.0012	0.0366	0.0124	0.0132	0.0263	0.4391	0.8092
2023	0.0015	0.0466	0.0173	0.0178	0.1911	0.5169	0.8655
2024	0.0018	0.0566	0.0221	0.0226	0.2514	0.5848	0.9059
2025	0.0021	0.0646	0.0271	0.0276	0.3076	0.6502	0.9347
2026	0.0024	0.0726	0.0306	0.0327	0.3564	0.7131	0.9551
2027	0.0027	0.0787	0.0342	0.0381	0.4054	0.7739	0.9695

A.5.33 The resulting number of practitioners who are expected to become eligible in 2017-18 is set out in section Table 19.

Population average claim frequency

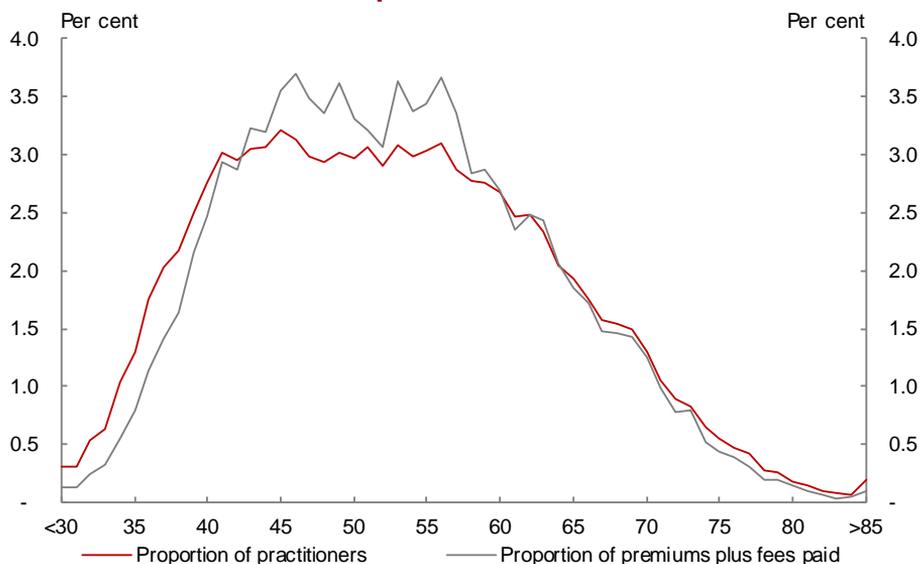
A.5.34 The overall claim frequency for the entire at risk population was assumed to be 4 per cent. That is, on average each 'at-risk' medical practitioner was assumed to have a 4 per cent chance of being involved in a medical incident in the next year which will result in a future medical indemnity claim. This is unchanged from last year.

A.5.35 Individual claim frequencies were then adjusted based on premium as discussed below. This approach has not been changed from our previous reports.

Individual claim frequencies based on premium

- A.5.36 The likelihood of future notifications of ROC claims was projected according to the assumed 'riskiness' of each individual practitioner. The risk of medical indemnity claims posed by each practitioner was determined based on risk categorisation. Practitioners were categorised according to specialisation, age, gender and MII.
- A.5.37 The average premium for each risk group was used as a proxy for the risk of medical indemnity claims. The claim frequency for each group was multiplied by the ratio of the premium for the group to the premium of the entire cohort of 'at-risk' medical practitioners.
- A.5.38 Although insurance premiums are broadly determined in line with claim risk, the premium of a group is at best an imprecise proxy for risk. For example, market and financial considerations affect premiums charged. However, given the data available, relative premiums have been assumed to be a reasonable means of categorising practitioners according to their risk of medical indemnity claims for the purposes of this model.
- A.5.39 Insurance premiums tend to diminish for practitioners towards retirement age. This supports the suggestion that medical practitioners tend to wind down their practice hours and possibly perform fewer risky medical procedures (for example, surgery) as they approach retirement. The possible reduction in risk towards retirement is apparent from the pattern of relative premiums for 'at-risk' medical practitioners shown in Figure 5. Note that age and gender were not available for a small number of medical practitioners.

Figure 5: Relative premiums by age for 'at-risk' medical practitioners



Note: The graph includes all practitioners with total payments (including membership fees) of at least \$1,700 from all MIs.

Individual claim frequencies based on assumed wind down of risky practice

A.5.40 The relative premiums of older medical practitioners appear to indicate a reduction in risky practice as medical practitioners approach retirement. Consistent with this, industry actuaries have also suggested that medical practitioners tend to wind down their risky practice approaching retirement. However, relative premiums may not capture the full extent of the reduction, since premiums are calculated on a claims-made rather than claims-occurring basis.

A.5.41 We have continued the practice of assuming that medical practitioners wind down their risk exposure from age 60, at a rate that is reflected in the premiums shown above. Premium relativities are augmented with a wind down from age 60 according to the formula $0.8^{(\text{age}-59)}$. This is unchanged from last year.

A.5.42 This assumption is very subjective and is not amenable to objective validation. Nonetheless, it does not appear unreasonable in light of observed claim experience.

Claim size

A.5.43 Claim sizes are assumed to increase, the longer the delay from the incident occurring until it is notified to the insurer. This is on the basis that claims which take longer to report tend to be bigger on average. One example is cerebral palsy cases.

A.5.44 The average claim size was assumed to be around \$140,000. This was reduced from the previous assumption of \$150,000. We have altered the assumption in light of NCPD data.

A.5.45 The assumed claim reporting pattern is shown in Table 17 below. Assumed claim sizes presented in the table do not include allowance for inflation or superimposed inflation.

Table 17: Claim reporting and size pattern

Development year	Proportion of number of claims notified (per cent)	Gross average claim size (\$'000)
1	33.0	110
2	25.0	125
3	14.0	140
4	10.0	155
5	6.0	170
6	3.3	185
7	2.5	200
8	2.0	215
9	1.0	230
10	0.7	245
11	0.6	260
12	0.5	275
13	0.4	290
14	0.3	305
15	0.2	320
16	0.1	335
17	0.1	350
18	0.1	365
19	0.1	380
20	0.1	395

(a) Gross average claim sizes presented in the table are intended to be in 2017 dollars and do not include allowance for inflation and superimposed inflation.

A.5.46 The projected ROC claims cost is sensitive to the proportion of claims which are assumed to be reported late. The longer the delay between the incident and the claim, the greater the likelihood that a practitioner will be eligible for the Scheme at the time the claim is notified. Thus, the majority of Scheme cost relates to the small proportion of claims which are notified very late.

Impact of the High Cost Claim Indemnity on claim size

A.5.47 Claims cost net of the HCCS indemnities is calculated assuming that the HCCS threshold will change such that a constant proportion of the gross average claim size will be met by the HCCS. Thus, for simplicity, the HCCS threshold is assumed to increase in line with claims inflation over time.

A.5.48 The model effectively assumes that 17 per cent of the ROC discounted claims cost will be met by the HCCS. This is explained in more detail in Appendix 6.

Payment patterns – notification to settlement

A.5.49 ROC indemnity payments in relation to medical incidents occurring after 30 June 2017 were projected assuming the payment patterns from the point of notification to the point of settlement, as set out in Table 18 below.

A.5.50 This payment pattern has been slightly changed from that adopted in last year's report in light of information provided by insurers and NCPD data.

Table 18: Payment pattern assumed

Delay from notification to payment (year)	Proportion of claim costs paid (per cent)
1	8.20
2	18.54
3	19.21
4	15.87
5	12.86
6	8.56
7	6.07
8	4.72
9	1.83
10	1.32
11	0.92
12	0.76
13	0.27
14	0.21
15	0.16
16	0.13
17	0.11
18	0.10
19	0.09
20	0.07

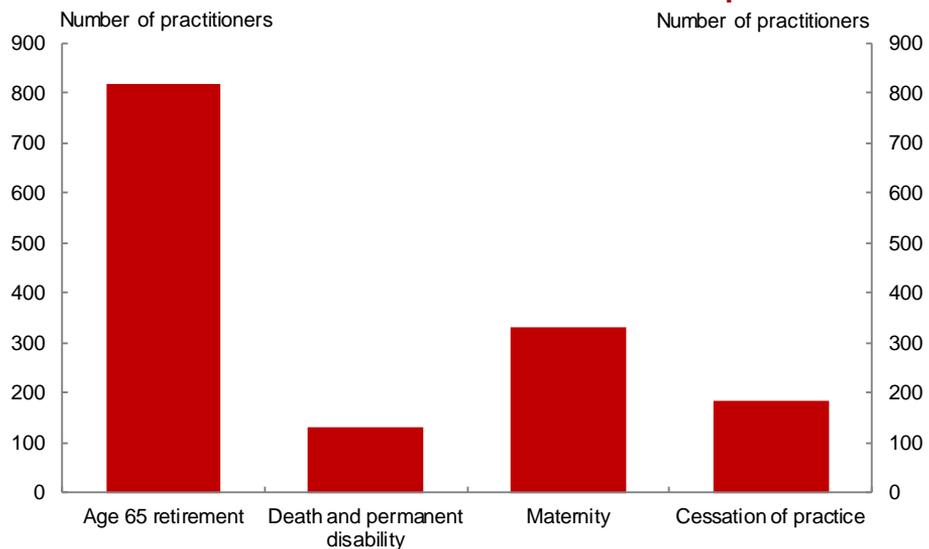
PROJECTION RESULTS

Projection of 'at-risk' medical practitioners

A.5.51 We have applied the demographic assumptions to the at risk population to project the new 'at-risk' medical practitioners expected to join the scheme in future years.

A.5.52 Figure 6 depicts the number of 'at-risk' practitioners projected to become eligible for the Scheme by various means during the 2017-18 financial year. Although medical practitioners will become eligible for the Scheme during 2017-18 by way of cessation of practice (having ceased practice during 2014-15), the number below refers to medical practitioners who will actually become eligible during 2020-21.

Figure 6: Projected entries of 'at-risk' practitioners to the Run-Off Cover Scheme based on decrement assumptions



A.5.53 The numbers of practitioners projected to enter the Scheme are more in line with the long term historical numbers (excluding "Other") provided by the insurers following changes in our assumptions as shown in Table 19.

Table 19: Run-Off Cover Scheme historical and projected new entrants by reason of eligibility

	Industry data										Model
	2004-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Retired	1,108	306	317	477	503	526	658	743	648	787	819
Maternity	729	281	295	312	277	267	294	307	327	309	330
Permanent disability	96	19	20	39	26	21	29	25	30	19	26
Died	372	93	107	111	105	129	105	117	96	102	103
Resigned	263	113	144	167	149	155	213	156	203	159	185
Other(a)	238	127	143	175	228	337	428	348	356	401	-
Total	2,806	939	1,026	1,281	1,288	1,435	1,727	1,696	1,660	1,777	1,463

(a) Overseas trained medical practitioners who had permanently ceased practice in Australia under an appropriate visa.

A.5.54 Where the date of birth or gender was not available for a practitioner, these were assigned randomly according to the age and gender distribution of 'at-risk' medical practitioners.

Projection of future Run-Off Cover Scheme costs

A.5.55 Table 20 summarises the next 10 years' ROC indemnity payments which were aggregated to derive the projected Scheme costs in future years. The payment projected for 2017-18 is a blend of actual payments made by DHS to the end of December 2017 and projected payments for 2017-18 by industry actuaries.

Table 20: Calculation of projected Run-Off Cover indemnity payments

Year ending 30 June	Medical incidents pre 1 July 2017			Medical incidents post 1 July 2017		Grand total (\$m)
	Notified as at 30 June 2017 (\$m)	IBNR as at 30 June 2017 (\$m)	Total (\$m)	Total (\$m)		
2018	5.3	0.5	5.7	0.0	5.7	
2019	3.1	1.6	4.7	0.0	4.8	
2020	2.6	2.8	5.3	0.3	5.6	
2021	1.4	3.7	5.1	0.6	5.7	
2022	0.9	4.5	5.4	1.1	6.5	
2023	0.5	5.0	5.5	1.6	7.2	
2024	0.4	5.3	5.6	2.3	7.9	
2025	0.2	5.4	5.7	3.0	8.6	
2026	0.2	5.3	5.4	3.7	9.1	
2027	0.1	5.1	5.2	4.5	9.7	

Note: numbers may not add up due to rounding.

UNCERTAINTY IN RELATION TO LIABILITY PROJECTIONS

A.5.56 The projected ROC indemnity payments summarised in Table 20 are subject to uncertainty which relates to:

- data in relation to the claiming behaviour of eligible practitioners;
- substantial random variation associated with medical incidents and the notification of claims from year to year;
- calibration of the model claim size and claim frequency assumptions to the underlying claim process (medical indemnity liabilities are characterised by few claims associated with large random variation such that a wide range of results can be obtained with equal statistical validity);
- the extent to which medical practitioners approaching retirement might cut down on their practice hours and possibly engage in less 'risky' practice (for example, less surgery);
- sensitivity of the model to the proportion of late-reported claims;
- sensitivity of the model to the decrement assumptions;
- the possibility that not all Scheme eligible claims have been identified and that recoveries will be more diligently pursued later in the claim process; and
- tort reforms in a number of jurisdictions with the possible effect of 'bringing forward' claims and distorting claim experience.

A.5.57 The information provided by the actuaries of the MIIIs and MDOs relied on broadly similar valuation models. The range of assumptions adopted by industry actuaries reflects the substantial uncertainty involved in estimating liabilities of the Scheme.

A.5.58 It must be emphasised that different results can be obtained from different yet equally plausible models and assumptions. Again, this is a common issue with liabilities of this nature.

APPENDIX 6: HIGH COST CLAIMS

THE HIGH COST CLAIMS SCHEME

A.6.1 The HCCS is part of the broader package of Australian Government measures announced on 23 October 2002 that were designed to address problems with the medical indemnity insurance industry.

A.6.2 The HCCS is governed by Division 2 of Part 2 of the *Medical Indemnity Act 2002*. Under the HCCS, MIs and MDOs are reimbursed for part of the costs of large claims notified to them on or after 1 January 2003.

A.6.3 The HCCS meets 50 per cent of the excess above the threshold (currently \$300,000¹²) of the cost of individual large claims, before the operation of the Scheme.

A.6.4 The HCCS threshold and the percentage used to calculate the amount of indemnity can be changed by way of regulation. The HCCS threshold has been changed by way of regulation as follows:

- \$2 million for claims notified between 1 January 2003 and 21 October 2003;
- \$0.5 million for claims notified between 22 October 2003 and 31 December 2003;
- \$0.3 million for claims notified between 1 January 2004 and 30 June 2018; and
- \$0.5 million for claims notified from 1 July 2018.

A.6.5 For example, for a claim which costs \$1 million notified on 1 April 2012, the HCCS will pick up:

$$50 \text{ per cent} \times (\$1,000,000 - \$300,000) = \$350,000$$

DATA COLLECTION

A.6.6 The Department of Human Services collects data in relation to the HCCS, in addition to the Scheme data described in section 3. They provide some insight into the likely profile of large medical indemnity claims.

¹² As announced by the Government on 19 December 2017 in the Mid-Year Economic and Fiscal Outlook 2016-17, the High Cost Claim Threshold will increase from \$300,000 to \$500,000 from 1 July 2018.

A.6.7 Data collected in relation to the HCCS include:

- details of claims/incidents notified to MIIs and MDOs by 30 June 2017 which might lead to recoveries under the HCCS;
- actuarial estimates of that part of the cost of claims relating to incidents which occurred before 30 June 2017 and are expected to be recoverable under the HCCS; and
- an estimate of that part of the future claims cost of medical incidents notified during the 2017-18 to 2021-22 financial years which is expected to be recoverable under the HCCS.

ANALYSIS OF LARGE CLAIMS

A.6.8 A small proportion of medical indemnity claims are larger than \$300,000. These high-cost claims have a noticeable influence on the total cost of medical indemnity each year.

A.6.9 According to the data collected, as at 30 June 2017, 1,715 claims/incidents had been notified to MIIs and MDOs which were expected to be covered by the HCCS. They all have a case estimate attached to them.

A.6.10 The cost estimates available for HCCS claims/incidents represent total case estimates, including amounts already paid as at 30 June 2017. This figure is around \$1,437 million. Of this, around \$450 million is estimated to be recoverable from the HCCS.

A.6.11 The HCCS data provides a reasonable, but imprecise, measure of the likely profile of large medical indemnity claims.

A.6.12 The distribution of estimated costs of HCCS-eligible claims notified between 1 January 2004 and 30 June 2017 is shown in Table 21. The distribution is presented in terms of the proportion of total estimated claim cost attributable to each claim size band. For example, about 70 per cent of the total estimated cost of HCCS-eligible claims was attributable to claims expected to cost above \$2.0 million.

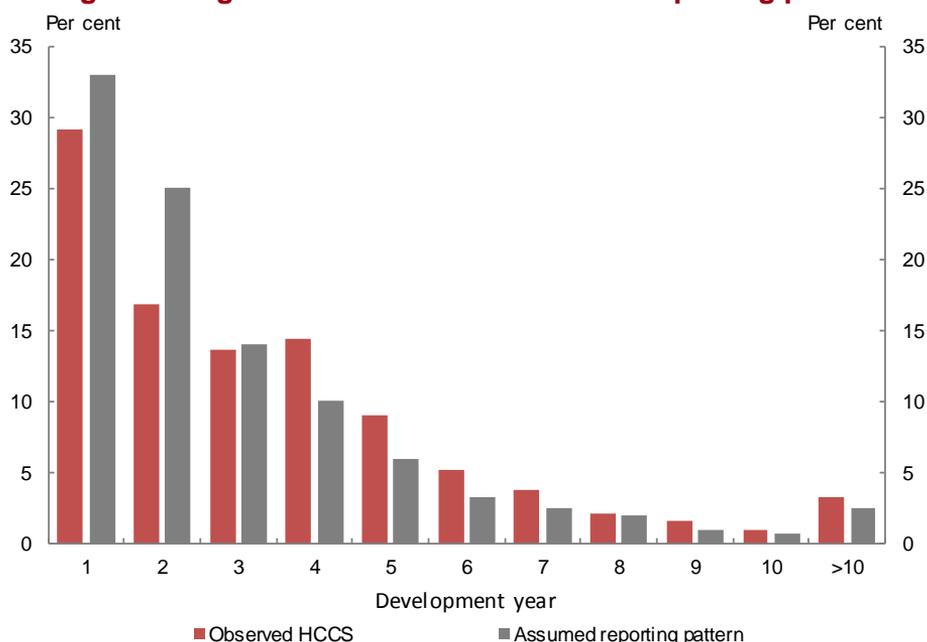
Table 21: Distribution of High Cost Claims Scheme-eligible claims

Claim size (\$'m)	Proportion of claims cost (per cent)
0 to 0.3	N/A
0.3 to 0.5	20
0.5 to 2.0	49
>2.0	31

RELEVANCE OF HIGH COST CLAIMS SCHEME DATA TO THE RUN-OFF COVER SCHEME

A.6.13 The HCCS data illustrates the pattern of delay between a relevant negligent medical incident and the date that a large claim/incident is notified to the MII or MDO. The claim reporting pattern (based on claim numbers) observed in relation to HCCS claims is compared in Figure 7 to the general medical indemnity claim reporting patterns assumed for the purpose of undertaking the Scheme cost analysis. Note that the HCCS eligible claims included were notified between 1 January 2004 and 30 June 2017, with an applicable threshold of \$0.3 million.

Figure 7: High Cost Claims Scheme claim reporting pattern



A.6.14 Claims which take longer to report tend to be bigger on average. In addition, the longer the delay involved in notifying a claim, the more likely the claim will be notified at a time when the practitioner is eligible for the Run-Off Cover Scheme.

A.6.15 Thus, the small proportion of large claims made against retired practitioners will have a marked impact on the total cost of the Scheme.

A.6.16 The proportion of HCCS recoverable for ROC claims will increase with the delay in reporting, and the assumed proportions are listed in Table 22. These have been updated since last review to reflect the change in the average claim size assumption as well as the changes in the notification pattern assumption.

Table 22: Proportion of High Cost Cover Scheme recoverable

Development year	Proportion of HCCS recoverables (per cent)
1	10.0
2	12.0
3	13.0
4	15.0
5	16.0
6	17.0
7	18.5
8	18.7
9	18.9
10	19.0
11	19.1
12	19.2
13	19.3
14	19.4
15	19.5
16	19.6
17	19.7
18	19.8
19	19.9
20	20.0