



Government Actuary's Department

Department for Education Risk Protection Arrangement

Estimated provisions as at 31 August 2015

Summary of key results

Date: 13 July 2016



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1 Executive summary

- 1.1 This report has been prepared by the Government Actuary's Department (GAD) at the request of the Department for Education (DfE).
- 1.2 The purpose of this report is to provide DfE with a summary for publication of the key results of the work undertaken by GAD in order to estimate claim provisions for the RPA as at 31 August 2015. This work was undertaken between September 2015 and March 2016. This report is based on data and the policy environment as at 31 August 2015 and makes no allowance for changes since this time. We draw your attention to the distribution restrictions and limitations described below in paragraphs 1.33 to 1.35.
- 1.3 The scope of this review includes the following estimates of provisions for:
- > The full 2014/15 academic year (to 31 August 2015)
 - > The 2014-15 financial year (to 31 March 2015) and the 2015-16 financial year (to 31 March 2016)
 - > The future academic years 2015/16, 2016/17, 2017/18, 2018/19 and 2019/20
 - > The future financial years 2016-17, 2017-18, 2018-19 and 2019-20
- 1.4 Where a future year or future period is referred to, this is used to mean a year or time period that has yet to start as at 31 August 2015.

Background

- 1.5 The RPA is an alternative to commercial insurance where losses that arise are covered by UK government funds. DfE are running the arrangement, with some areas supported by external advisors.
- 1.6 The arrangement has been operational since 1 September 2014. For those that joined the arrangement in the period to August 2015 £25 per pupil is deducted at source from the academy's general annual grant.
- 1.7 The RPA covers property damage and business interruption, public liability, employers' liability and UK travel. Limits for the RPA are the reinstatement value of the property, £10m per claim for business interruption, £2,000 per person for travel expenses and no limit is applicable for liability claims.
- 1.8 This is the second time that GAD has estimated the RPA outstanding claims provisions. The previous review was as at 31 March 2015. In this report we provide comparisons to the GAD provision estimates as at 31 March 2015, referring to these as 'March 2015 review estimates'. Our estimates as at 31 August 2015 are referred to as 'current estimates'.
- 1.9 We understand that for the financial year to 31 March 2015, DfE recognised in their accounts provision amounts based on benchmarks provided in the Willis report titled 'Self-insurance for Academies', dated May 2014. We refer to the estimates produced by Willis in this report as 'Willis benchmarks'.



- 1.10 Claims are handled by Gallagher Bassett. Gallagher Bassett produce the data on the claims, as detailed in paragraph A.2.
- 1.11 The provisional estimates were analysed split by:
- > Type of academy (primary, secondary, all through and special)
 - > Main class (Property Damage and Business Interruption (PDBI), Public Liability (PL), Employers' Liability (EL) and Travel)
 - > Peril¹ (e.g. for PDBI this includes Fire, Flood and Theft)
- 1.12 All estimates are on an undiscounted basis, which means that the amounts stated are the amounts expected to be paid out at the time they are due, without taking into account the time value of money.
- 1.13 The RPA had only been operational for 12 months at 31 August 2015. The number of academies within the RPA has been increasing since it first became operational, with 1,449 academies and 726,000 pupils covered by the RPA at 31 August 2015. Due to the immature nature of the RPA and the lack of claims activity at this early stage, there is limited statistical credibility in purely using claims experience to date to inform assumptions about future claims² experience. However, where experience to date has been significantly different to the Willis benchmarks, we have moved away from the benchmarks and used experience to date to inform provision estimates.
- 1.14 As more academies join the RPA and the RPA becomes more established, the claims activity to date will be more statistically credible for estimating future claims experience and so it will be reasonable to take more account of actual experience as opposed to using the Willis benchmarks. We expect that this will result in more accurate estimates of claims experience, as the provisions will be based on actual recent experience for academies in the RPA, whereas Willis benchmarks were based on older claims experience and a potentially different subset of academies to those within the RPA (Willis benchmarks were based on data from 1,115 academies).
- 1.15 We believe it is reasonable to use the Willis benchmarks where we have done so. We highlight that the Willis report describes several considerations relevant to the use of these benchmarks, and that Section 4 of this report describes some of GAD's additional considerations.
- 1.16 There are many uncertainties associated with an actuarial analysis of the type documented in the Willis report and within the estimation of provisions documented within this report. As a result the claims experience may differ materially from the estimates made. Our report represents our view of the estimated ultimate claims³ and does not reduce the inherent uncertainty in the outcome of future events.

¹ See Appendix B: Glossary for definition

² See Appendix B: Glossary for definition

³ See Appendix B: Glossary for definition



Academic year 2014/15 results

- 1.17 The chart below shows the expectation of ultimate claims for the 2014/15 academic year, as at 31 August 2015 and as at 31 March 2015 which was the date of our previous review. The 2014/15 academic year covers the 12 month period from 1 September 2014 to 31 August 2015.

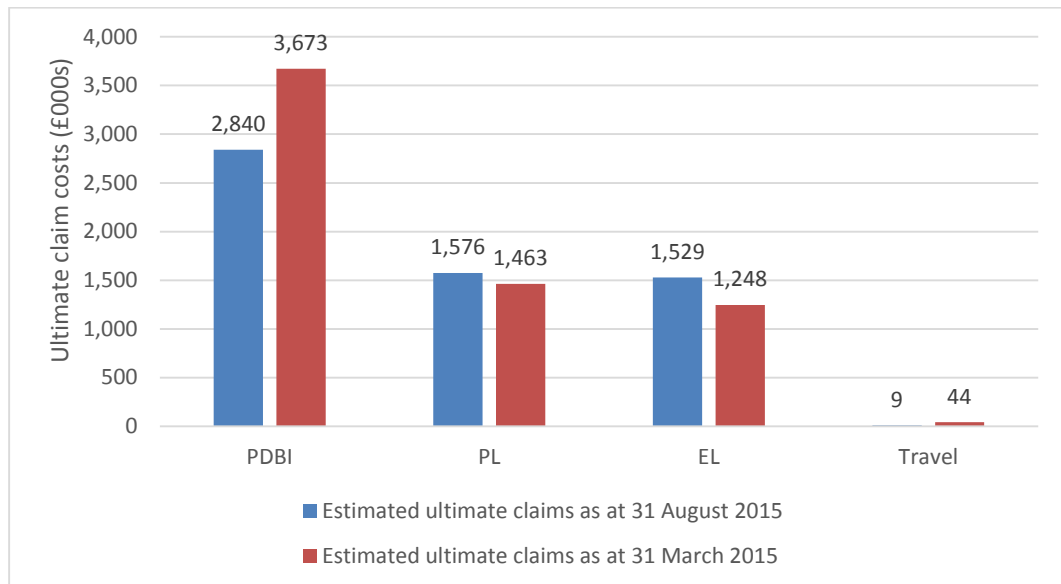


Figure 1: Summary of GAD current and March 2015 review academic year 2014/15 ultimate claim estimates by class (£'000s)

Our current ultimate claims estimate for the 2014/15 academic year is £6.0m. This is £0.5m lower than the March 2015 review estimate, due largely to favourable PDBI Fire experience.

All estimates within this report exclude expenses unless explicitly stated otherwise. We estimate expenses to be 10% of the ultimate claims cost. See section 2 for further details. These expenses are claims expenses related to individual claims such as claims handling and loss adjustor fees. Expense figures within this report do not include any further expenses that DfE incur in the operation of the RPA, such as staff and consultancy costs.

- 1.18 The decrease in the claims estimate is driven by the PDBI class, which has overall had better than expected claims experience.
- 1.19 The decreases in PDBI are driven by Fire claims experience, where despite having almost double the reported number of Fire claims expected, the average cost of these claims has been around 80% smaller than expected. There have been no major large fire claims in this academic year.
- 1.20 This decrease has been partially offset by a worsening in claims experience within the PDBI Flood and Storm classes, where many more claims have been reported than expected in the last 5 months of the academic year. The Flood claims have been much smaller than expected and the Storm claims have been approximately 50% greater than expected. The overall effect has been to increase our claims estimate for these classes.



- 1.21 The reduction in PDBI is partly offset by the PL and EL classes, which have had worse than expected claims experience, with significantly more claims reported than expected.
- 1.22 The increases in EL are driven by experience within the Dispute & Other class, where there have been more claims reported than expected, with 16 reported to date, when we were expecting around 3. The increases in PL are driven by experience within the Injury⁴ class, where there have also been more claims reported than expected, with 50 reported to date, when we were expecting around 18.
- 1.23 Further details on the academic year 2014/15 results can be found in paragraphs 2.33 to 2.46.

⁴ See Appendix B: Glossary for definition



Future academic year results

- 1.24 The following chart shows our current estimate of ultimate claims for the 2015/16 to 2019/20 academic years inclusive alongside our March 2015 review estimates of ultimate claims up to the 2018/19 academic year.

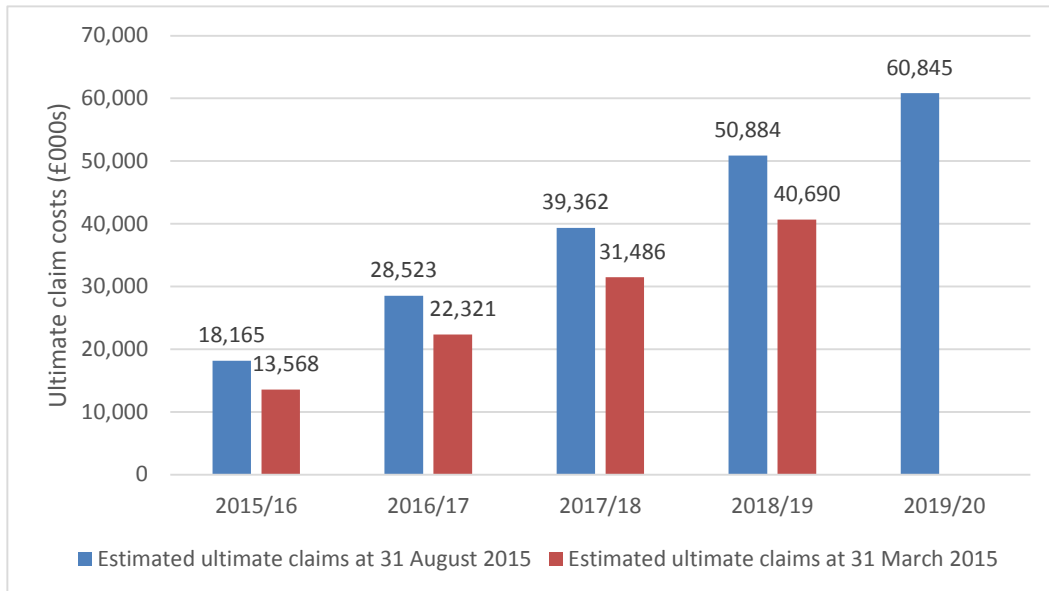


Figure 2: Current and March 2015 review academic years 2015/16 to 2019/20 ultimate claim estimates (£'000s)

Our current ultimate claims estimates for the future academic years are approximately 25-35% higher than the March 2015 review estimate. This is due to a combination of our revised expectation that more academies will join the RPA and strengthening assumptions to reflect where claims experience to date has been significantly different to expectations.

- 1.25 The key driver for this increase in ultimate claims is the higher estimate of pupil numbers for future years. This is due to the higher number of academies joining the RPA over the 5 months since our March 2015 review. This would also have a consequential impact on the level of contribution received.
- 1.26 A further reason is a change in assumptions to assume a higher claims frequency and/or severity than the benchmarks used in the March 2015 report, where experience to date in 2014/15 has led us to estimate an ultimate frequency and/or severity that is significantly higher than the Willis benchmarks.
- 1.27 Further details on the academic year 2015/16 to 2019/20 results can be found in paragraphs 2.47 to 2.56.

Recommendations

- 1.28 We recommend that DfE improve the consistency in the classification of claims within their data to enable more meaningful analysis. We also recommend that the number of missing fields within the data is reduced.



- 1.29 We recommend that DfE carefully monitor Governors' Liability and Professional Indemnity claims that arise since these claims are covered on a claims made basis, i.e. claims can be made for incidents that occur prior to the policy period.
- 1.30 DfE should also continue monitoring claims experience, particularly large claims and liability claims. Large claims could have a significant impact on the provisions, and liability experience has been worse than expected as highlighted in section 2.
- 1.31 We also recommend that DfE explores any potential sources of further data on historical claims from schools. This is particularly important for unusually large claims which do not occur frequently, and so may not be reflected in the data underlying the Willis RPA analysis. Further data is also required to better understand the asbestos liability within academies.

Terms of reference

- 1.32 The actuarial services provided to DfE by GAD in respect of the RPA are covered by the "Letter of Engagement between Department for Education and the Government Actuary's Department", dated 13 June 2014. This report is a summary of the estimates of claim provisions as at 31 August 2015 from advice provided to DfE by GAD between September 2015 and March 2016.

Distribution and limitations

- 1.33 Other than DfE, no person or third party is entitled to place any reliance on the contents of this report, except to any extent explicitly stated herein, and GAD has no liability to any person or third party for any act or omission taken, either in whole or part, on the basis of this report.
- 1.34 The data provided by DfE was used as it was received. GAD has not independently verified the data and we have relied on the general completeness and accuracy of the information supplied. Where possible, we have performed consistency and reasonableness checks using data from our previous review as at March 2015.
- 1.35 This report must be considered in its entirety, as individual sections, if considered in isolation, may be misleading, and conclusions reached by review of some sections on their own may be incorrect.



2 Analysis

Overview

- 2.1 This section describes the analysis we have undertaken and the conclusions drawn based on our analysis of the outstanding claims provisions within the RPA as at 31 August 2015. It covers financial years 2014-15 and 2015-16, academic year 2014/15, future financial years 2016-17 to 2019-20 and future academic years 2015/16 to 2019/20.
- 2.2 There is inherent uncertainty in an analysis of this type. This is highlighted in the disclaimers in the Willis report and we further highlight uncertainties in this report. Our analysis does not remove this uncertainty but will provide DfE with more insight into the assumptions used and judgements made. We show a range of possible estimates in section 3.

Data

- 2.3 The report is supported by the following information and data:
- > Claims data tables as at month ends from 30 September 2014 to 31 August 2015
 - > Indicative estimates of future academy numbers
 - > RPA membership data
 - > The Willis report "Self-insurance for Academies" dated May 2014 and the raw data underlying this
- 2.4 We have not verified the accuracy of the data independently. We have compared the academy projections and RPA membership data to the previous versions of these files, used in our March 2015 review, for consistency. We have also performed high level reasonableness checks on the development of the claims data.
- 2.5 Please see Appendix A for more detail on the data provided.

Overview of projection methodology

- 2.6 To project the expected losses, we first estimated the exposure⁵, by estimating how many pupils will be covered by an RPA policy at each financial and academic year within the scope of our review. We then used this exposure estimate to inform our claims estimates, using various methods as detailed below, and selected a method or an average of methods for each class.

⁵ See Appendix B: Glossary for definition



Projection of exposure

Overview

- 2.7 To estimate the number of pupils within the RPA for future risk periods⁶ we first estimated the number of academies within the RPA and then made assumptions about the average number of pupils within each academy. This method is unchanged since our previous review at March 2015, however there are some changes in the assumptions taking into account experience since March, that are detailed in this section.

Projection of academies within the RPA

- 2.8 Using indicative estimates provided to us of future academy numbers for the purpose of this provisioning exercise, we derived assumptions of the number of new and existing academies joining the RPA per month. We based those assumptions on RPA actual experience to date assuming:
- > 48% of new academies join the RPA each month;
 - > on average approximately 2% of existing academies that have not yet joined the RPA, join each month; and
 - > once an academy has joined the RPA they will not opt out.
- 2.9 We take into account that a higher uptake is expected at the beginning of the academic year.
- 2.10 We also assume that the proportional split between school types within the RPA mirrors the assumed school type split within the DfE academy population projections.

Comparison to March review estimates – academies forecast

- 2.11 The actual number of academies that joined the RPA over the 5 months between March and August of 2015 was greater than expected in our March 2015 review.
- 2.12 As a result, our current projection for the total number of academies within the RPA for the 2015/16 to 2018/19 academic years is on average 5% higher than our March 2015 review forecast, as can be seen in the graph below.

⁶ See Appendix B: Glossary for definition

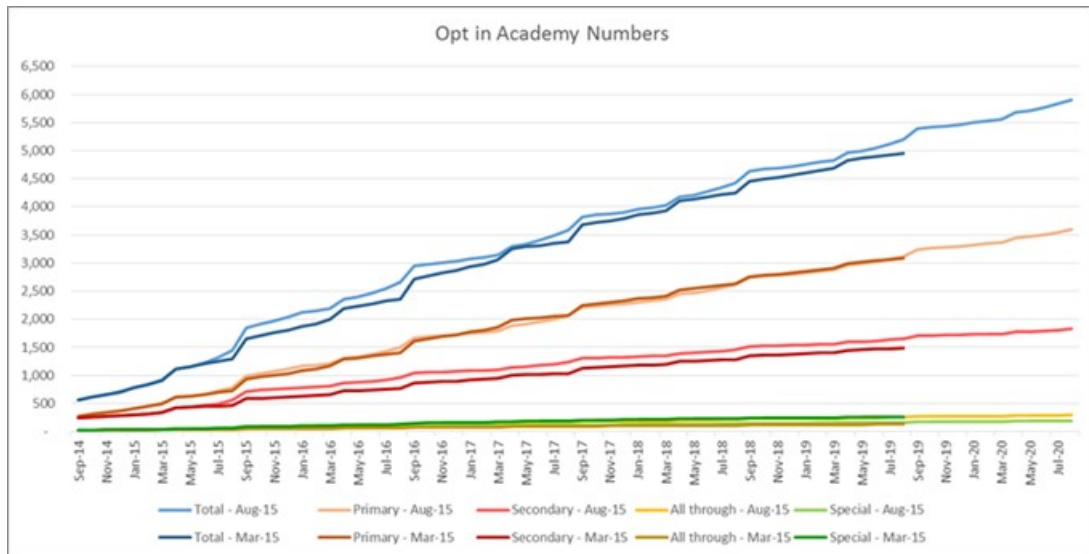


Figure 3: GAD current and March 2015 review forecasts for academies that have opted into the RPA for the 2014/15 to 2019/20 academic years.

- 2.13 There were 1,449 academies within the RPA at the end of the 2014/15 academic year, against the 1,297 estimated in the March 2015 review. This has also led us to assume a slightly higher proportion of the total academy population joining the RPA in the future.

Projection of pupils within the RPA

- 2.14 We multiply the total estimated number of academies within the RPA by the assumed average number of pupils for each school type, to get an expected number of pupils for each school type for each future month until the end of the 2019/20 academic year.
- 2.15 For 2014/15 we assumed that the average numbers of pupils in primary, secondary, all through and special schools were 270, 860, 596 and 102 respectively. We assume that in 2019/20 these numbers will have increased to 306, 1,029, 842 and 109 respectively. The average size of academies in the RPA is expected to increase due to free schools. Free schools often start with fewer classes and expand each academic year. Over time, we expect, as these academies grow and more academies join the RPA, that the average number of pupils within the RPA will increase to be more in line with the general academy population.

Comparison to March review estimates – pupil number forecast

- 2.16 The actual number of pupils between March and August has also been greater than expected, driven by a greater number of academies joining over these 5 months.
- 2.17 As a result, current projections of pupil numbers are on average 13% higher than our March 2015 review forecast. The difference between the current and the March 2015 review projections can be seen in the graph below.

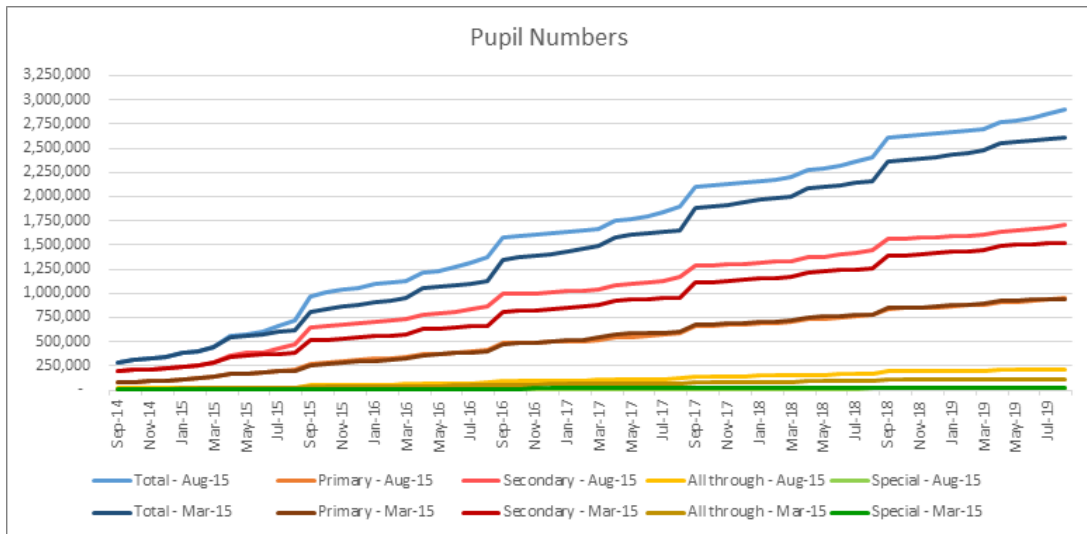


Figure 4: GAD current and March 2015 review forecasts for pupils that are covered by the RPA for the 2014/15 to 2019/20 academic years.

- 2.18 This shows that there were 726,000 pupils at the end of the 2014/15 academic year, against the 615,000 estimated in the March 2015 review.
- 2.19 We convert these pupil numbers into pupil years of exposure for each academic year by cumulating the time on risk for each school within each year. For example, a school that joins the RPA at the end of July will be on risk for that academic year for one month, so will contribute one twelfth of a year of exposure.
- 2.20 The following chart shows the expected ultimate academy and pupil exposure based on data as at 31 August 2015 alongside our March 2015 review estimate of ultimate pupil exposure, for the 2014/15 to 2019/20 academic years.

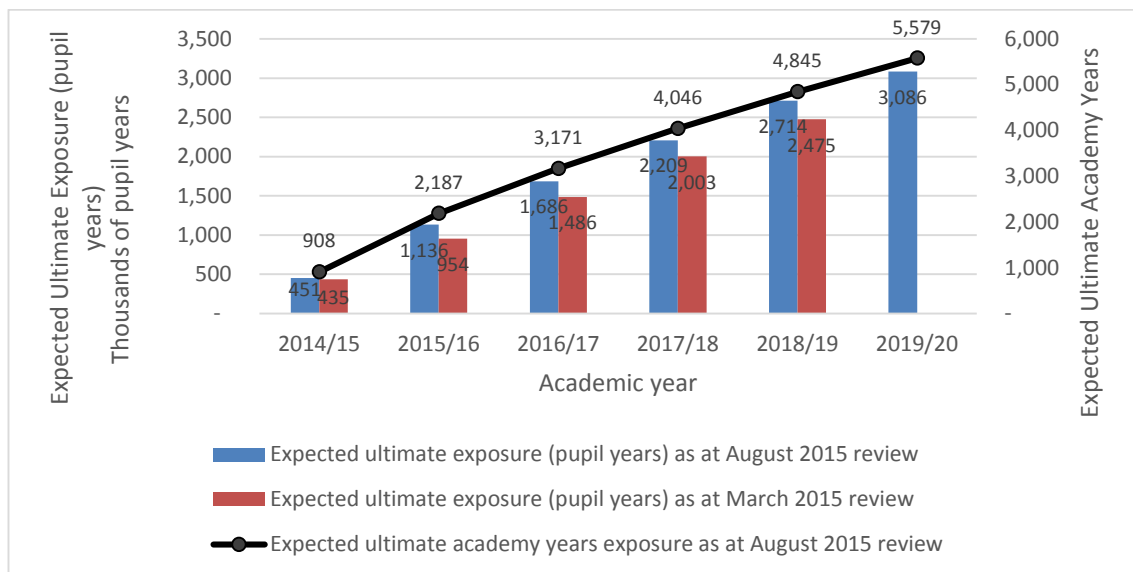


Figure 5: Summary of GAD ultimate exposure in academy and pupil years for each academic year (pupil years in 1,000s)

- 2.21 This chart shows that our 2015/16 exposure estimate has increased by 19% and the following future year estimates have increased by approximately 10%.



Projection of claims

- 2.22 For each claim type, we make an estimate of the ultimate claims, i.e. the total final amount that will be paid for claims originating in a given academic or financial year. As there are often delays before a claim is reported or settled, claims are often paid in the years subsequent to the one in which the claim event occurred.
- 2.23 To estimate the ultimate claims we need to estimate future claims for incidents that occur during the academic year or financial year. The future claims include:
- > claims that have already happened by 31 August 2015 but have yet to be reported (known as 'incurred but not reported' or IBNR⁷). IBNR could occur for example if a child has an accident but the parent delays reporting this to the school (perhaps because they didn't realise that they would have grounds for a claim); and
 - > claims that have happened but not enough has been reported (known as 'incurred but not enough reported' or IBNER⁸) IBNER could occur for example if a fire claim is reported and a standard initial loss estimate is recorded against the claim but then, following a more detailed assessment of the fire damage by a loss adjustor in the future, the expected cost of the claim is increased.
- 2.24 Ultimate claims include future claims and the current value of claims that have been reported as at 31 August 2015 (known as the incurred claims⁹).
- 2.25 To estimate ultimate claims we have taken into account Willis benchmarks and experience to date where it differs significantly from those benchmarks.
- 2.26 We also use industry benchmarks and data from Gallagher Bassett, in order to estimate the following incurred claim amounts and reported claim numbers development patterns.

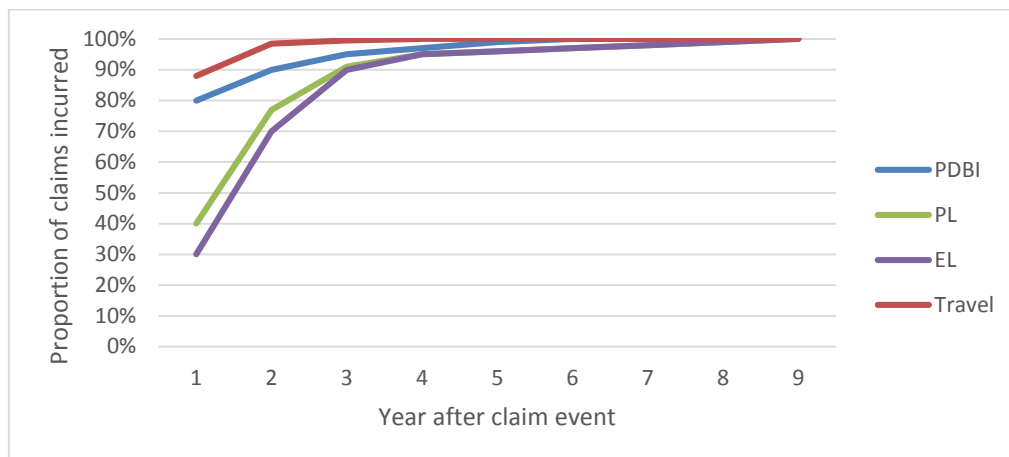


Figure 6: Claims incurred cumulative development patterns for each class

⁷ See Appendix B: Glossary for definition

⁸ See Appendix B: Glossary for definition

⁹ See Appendix B: Glossary for definition

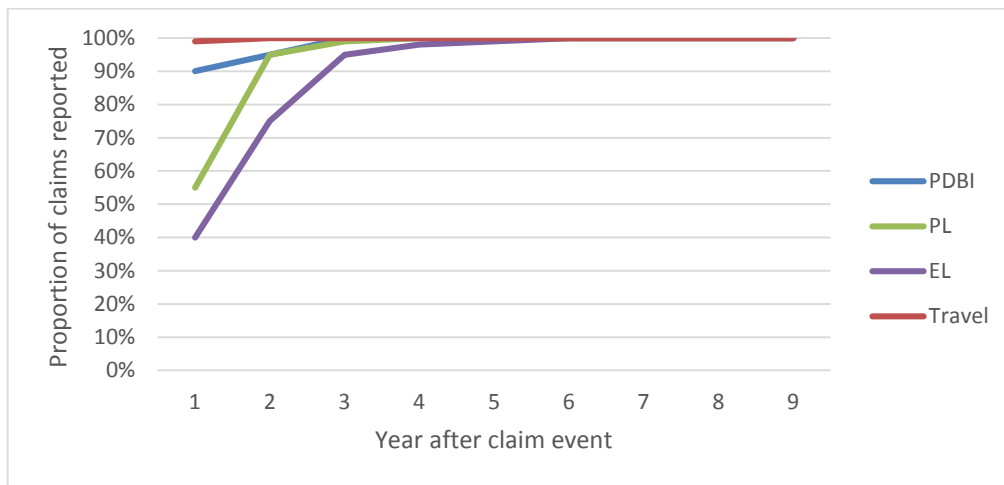


Figure 7: Claim numbers reported cumulative development patterns for each class

- 2.27 The benchmark patterns in Figures 6 and 7 above show the expected incurred claims and reported claim numbers as a proportion of their ultimate position for an average academic year, during each year following the initial academic year policy period. Note that we expect longer delays until claims are paid than for claims to be reported or incurred.
- 2.28 We expect that claims from the Travel class will emerge the fastest (two years to be fully reported and four to be fully incurred), with the least uncertainty in their value. The Property Damage Business Interruption (“PDBI”) class is also expected to develop relatively quickly (three years to be fully reported and six years to be fully incurred).
- 2.29 The liability classes - Employers’ (“EL”) and Public (“PL”) – take longer to emerge as there is a significant component of personal injury claims in these (at least four years to be fully reported and at least nine years to be fully incurred).
- 2.30 Adjustments have been made to take account of the growing number of pupils within the RPA during the academic year.
- 2.31 We considered the results from several methods when picking the selected ultimate number of claims and ultimate claim amount for each class..
- 2.32 We also project the expenses associated with the claims. These expenses are claims expenses related to individual claims such as claims handling and loss adjustor fees. Any expense figures within this report do not include any further expenses that DfE incur in the operation of the RPA, such as staff and consultancy costs, which should be allowed for in costing the scheme, in line with the approach that would be taken commercially.



Projection of claims for academic year 2014/15

- 2.33 The 2014/15 academic year covers the 12 month period from 1 September 2014 to 31 August 2015.
- 2.34 As at 31 August 2015, there have been no large incurred claims that are significantly more than the Willis benchmark average claim size estimates. We have seen in the data an increase in Flood and Storm claim incidents in July compared to other months, which Gallagher Bassett have confirmed was accurately recorded in the data.

Results by class

- 2.35 The chart below shows the 2014/15 academic year ultimate claim and ultimate expenses estimates by class, as at 31 August 2015 (£'000s). This chart includes the breakdown of the ultimates into incurred claims and expenses and estimated future claims and expenses.

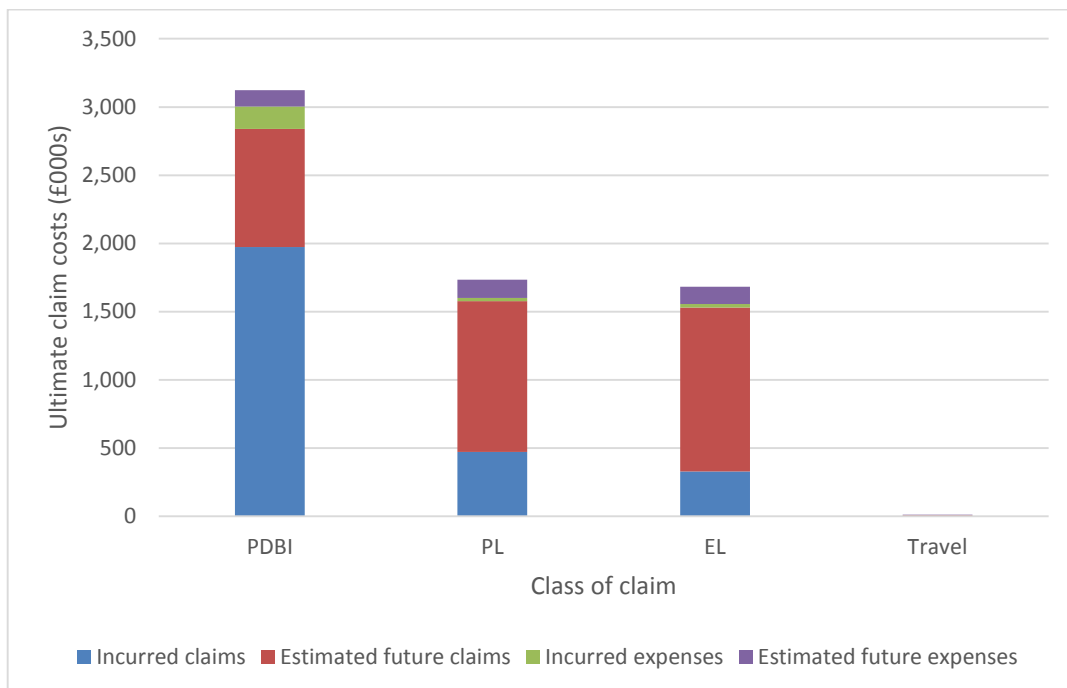


Figure 8: Summary of GAD academic year 2014/15 ultimate claim and ultimate expenses estimates by class, as at 31 August 2015 (£'000s).

- 2.36 The GAD estimate of ultimate claims for the 2014/15 academic year is £6.0m. To date £2.8m has been incurred. The ultimate claims (excluding expenses) can be broken down into:
- > £2.8m for PDBI
 - > £1.6m for PL
 - > £1.5m for EL
 - > £9,000 for Travel



- 2.37 The ultimate estimated claims cost per pupil year is £13. This excludes claims expenses.
- 2.38 We have estimated claims expenses equal to be 10% of the ultimate claims cost. To date the incurred claims expenses are equal to 8% of the incurred claims cost. Over time we will refine the claims expenses calculation as more data becomes available. The ultimate estimated claims cost per pupil year including claims expenses is £15.
- 2.39 We discuss the results split by class in detail below in the comparison to the March 2015 review estimates.

Comparison to March 2015 review estimates by class

- 2.40 The chart below shows our current ultimate claims as at 31 August 2015 and the March 2015 review estimate of ultimate claims, excluding claims expenses, for the full 2014/15 academic year.

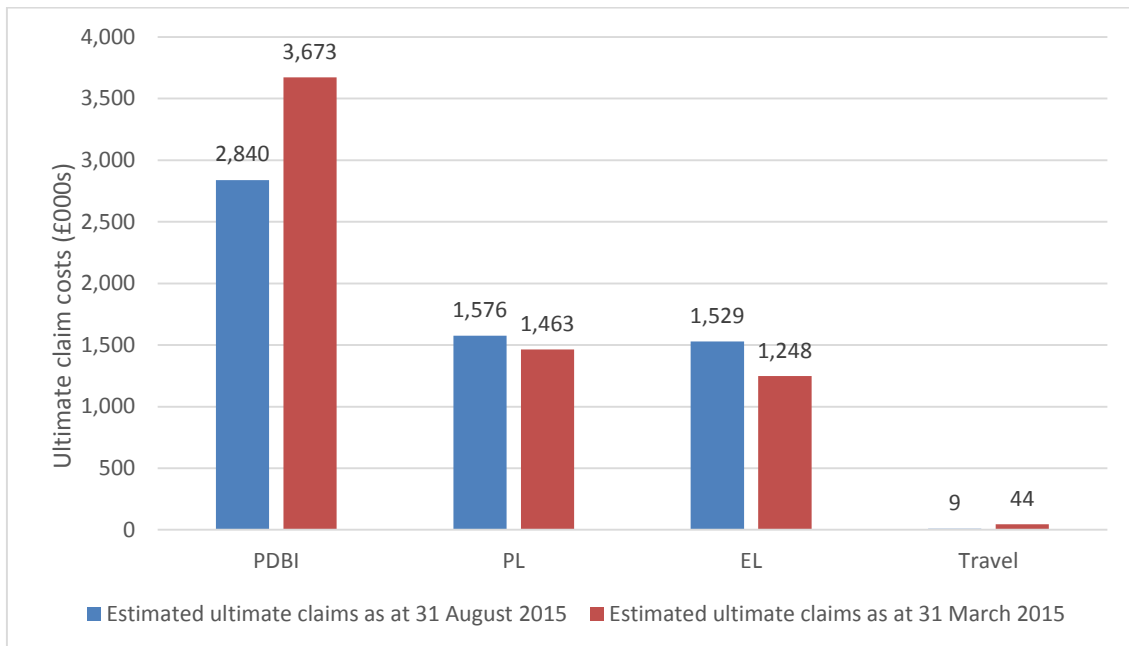


Figure 9: Summary of GAD current and March 2015 review academic year 2014/15 ultimate claim estimates by class (£'000s)

> Total claims

- Overall the current estimated ultimate claims cost of £6.0m for the 2014/15 academic year is 7% lower than the March 2015 review estimate, of £6.4m.
- The decrease in the claims estimate is driven by the PDBI class, which accounts for just under half the expected total claims cost, and which has overall had better than expected claims experience.
- However, this reduction is offset by the PL and EL classes, which have had a worse than expected claims experience, with a significantly higher than expected number of reported claims.



- This decrease was further offset partly by the actual number of pupils within the RPA in the months to August being higher than estimated in the March 2015 review.
- > Property Damage and Business Interruption (PDBI)
 - The current estimated ultimate claims cost for the 2014/15 academic year is 23% lower than the March 2015 review estimate.
 - The decrease in PDBI is driven by Fire claims experience, where despite having almost double the reported number of Fire claims expected (based on Willis benchmarks), the average cost of these claims has been around 80% smaller than expected, partly due to an absence of large losses.
 - The Willis benchmark includes an allowance for large losses, which are expected to occur infrequently, so it is to be expected that for some years the claims experience will be lower than this benchmark, but in other years it will be higher.
 - This has been partially offset by experience in the Flood and Storm classes, where the number of claims reported was significantly higher than expected from the Willis benchmarks.
 - Favourable experience has also been seen in the Theft, Malicious Damage and General Damage & Other classes, due to fewer claims being reported than expected and average claim sizes being lower or similar to expectations, leading to decreases in ultimate claims estimates.
- > Public Liability (PL)
 - The current estimated ultimate claims cost for the 2014/15 academic year is 8% higher than the March 2015 review estimate.
 - This increase is driven by a higher number of reported claims than expected. There have been 50 Injury claims reported to date when we were expecting around 18 to be reported by this time, and 36 at an ultimate level.
 - Liability claims typically have a longer tail¹⁰ than property claims, which means that there can be a significant delay (sometimes many years) until all claims are reported and then settled. Any litigation can further exacerbate this delay. We have made some allowance for the higher claim number experience to continue, due to the long tailed nature of the class and the overall uncertainty in the claims estimate. We have estimated an ultimate of 109 claims in total across both PL classes of Injury and Property & Other. We recommend that experience is monitored over time to see whether the higher claim volumes continue.

¹⁰ See Appendix B: Glossary for definition



- To date, the average incurred claim of both classes has been lower than expected, but there is the potential for claim amounts to change (see discussion of IBNER in Appendix B:) or for larger claims to emerge, due to the potentially long delays. We have therefore relied on Willis benchmarks to a certain extent, but giving some allowance for the smaller claims size seen to date.
- The impact of having a higher claim number estimate is greater than the impact of reducing the average claim size, so the overall ultimate estimate has increased since our March 2015 review.
- > Employers' Liability (EL)
 - The current estimated ultimate claims cost for the 2014/15 academic year is 23% higher than the March 2015 review estimate.
 - This increase is driven by a higher number of reported claims than expected. There have been 44 claims reported during the academic year, compared to the Willis benchmarks for ultimate claims numbers of 27. However as with PL, the claims reporting patterns suggest a much lower proportion of claims (around one third of the ultimate) would be expected to be reported to date.
 - As per PL, the average incurred claim size has been less than expected. We have given some credit to this better experience seen to date.
 - The impact of having a higher claim number estimate is greater than the impact of reducing the average claim size, so the overall ultimate estimate has increased.
- > Travel
 - The current estimated ultimate claims cost for the 2014/15 academic year is 79% lower than the March 2015 review estimate.
 - To date, there have been only 23 claims reported, against the Willis estimate for the full academic year of 39 and the reported claims have also been significantly smaller than the Willis estimated ultimate average claim cost. Furthermore, all claims reported have already been closed so there is no need to allow for IBNER in the estimates. The combination of fewer claims and smaller claims reported to date has been reflected in our ultimate expectation.



Results by school type

2.41 The following chart shows our current ultimate claims as at 31 August 2015 and the March 2015 review estimate of ultimate claims, excluding claims expenses, for the full 2014/15 academic year, split by school type. We estimate that the ultimate claims cost for 2014/15 will be made up from 31% primary, 62% secondary, 4% special and 4% all through.

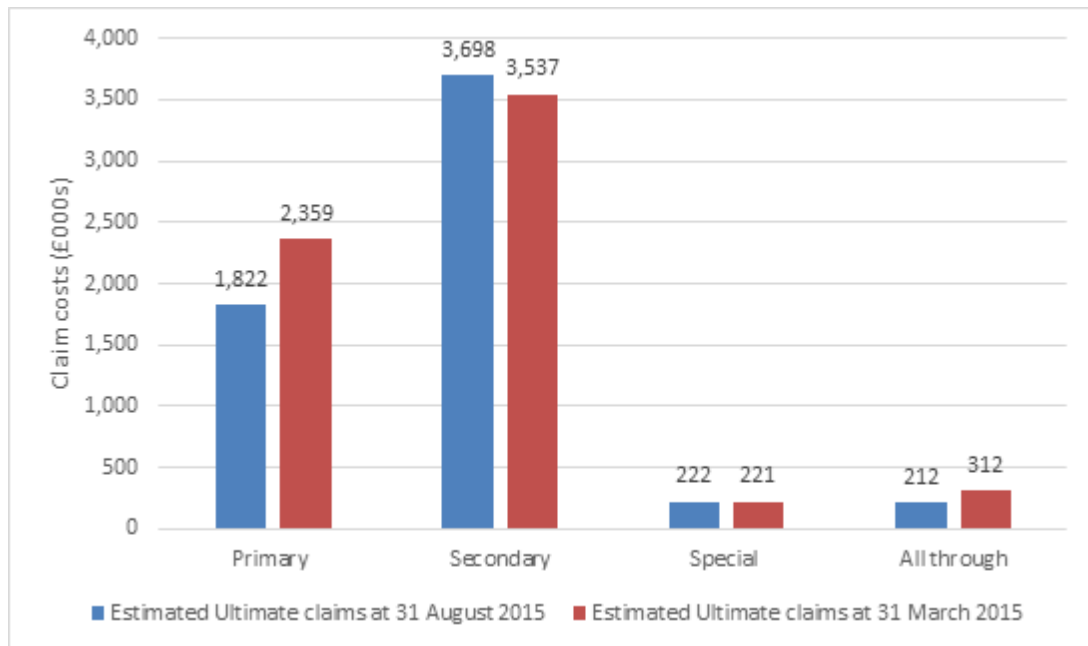


Figure 10: Summary of GAD current and March 2015 review academic year 2014/15 ultimate claim estimates by school type (£'000s)

- 2.42 It can be seen that the decrease in ultimate claims estimate is driven by experience in primary schools, offset partially by a 5% increase in the secondary school estimate.
- 2.43 The primary school decrease is driven by decreases in claims estimates for PDBI and PL. The PDBI decrease is driven by favourable Fire claim experience. The PL decrease is due to the Injury claims that have been reported being significantly lower in value than expected, even though the number of claims that have been reported to date is over double the number expected.
- 2.44 The increase in the secondary school estimate is driven by PL and EL claims. In the PL and EL Injury classes, approximately three times more claims were reported to date than expected and although the claims reported to date have been on average smaller than expected, the overall effect has been to increase the claims cost estimates.
- 2.45 The estimated ultimate claims cost per pupil year is £14 for primary, £13 for secondary, £59 for special and £10 for all through schools, excluding claims expenses.



- 2.46 There were only 39 special and 32 all through academies covered by the RPA within the 2014/15 academic year and therefore the number of claims experienced is low, so the average cost per pupil for these schools is not statistically reliable.

Projection of claims for future academic years 2015/16 to 2019/20

- 2.47 The following table shows our current ultimate claims estimate, as at 31 August 2015 for the 2015/16 to 2019/20 academic years inclusive, alongside our March 2015 review estimate of ultimate claims for the 2015/16 to 2018/19 academic years inclusive. These academic years cover the 12 month period from 1 September in the first year of the academic year to 31 August the following calendar year. Note there was no estimate made for 2019/20 in the March 2015 review.

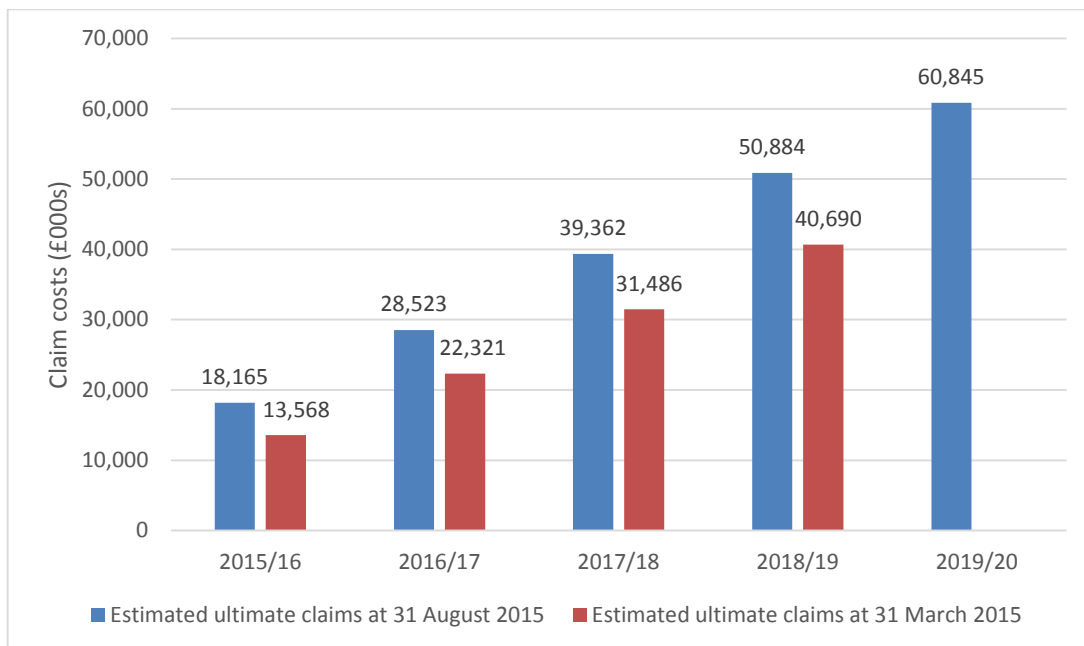


Figure 11: Current and March 2015 review academic years 2015/16 to 2019/20 ultimate claim estimates by (£'000s)

- 2.48 The current estimates each year are higher than the March 2015 review estimates, by approximately 25-35% each year.
- 2.49 The key driver for this increase in ultimate claims is the higher estimate of pupil numbers for future years. This is due to the higher number of academies joining the RPA over the 5 months between March and August of 2015 than expected in our March 2015 review.
- 2.50 A further reason for the increase in claims cost, which accounts for approximately 13% of the increase in cost each year, is a change in assumptions to assume a higher claims frequency and/or severity than the Willis benchmarks, where experience to date in 2014/15 has led us to estimate an ultimate frequency and/or severity that is significantly higher than the Willis benchmarks.



2.51 The GAD estimated ultimate claims per pupil year is £16 in 2015/16, excluding claims expenses, £17 in 2016/17, rising to £20 in 2019/20 due to expected claims cost inflation (as detailed in Appendix A). Inflation of average claim cost per academic year is assumed to be 4% for PDBI and Travel and 5% for PL and EL, within the Willis benchmarks. Including claims expenses, which we estimate to be 10% of the claims cost, the claims cost per pupil year is estimated to be £18 in 2015/16, rising to £22 in 2019/20.

2.52 The table below shows:

- > Our estimate of the ultimate claims frequency (this is our estimate of the ultimate number of claims divided by exposure). Our current estimate is shown in the column entitled 'Current Ult', and our previous estimate from the March 2015 review is shown in the column entitled 'Previous Ult'.
- > Our estimate of the ultimate severity (this is our estimate of ultimate claims divided by our estimate of the ultimate number of claims).

2014/15 Academic Year		FREQUENCY (number of claims per 1,000 pupils)			SEVERITY (average claim size in £s)		
Main class	Peril	Current ult	Previous ult	% Difference	Current ult	Previous ult	% Difference
PDBI	Flood	11%	4%	200%	11,552	23,664	-51%
EL	Dispute & other	8%	3%	182%	12,551	17,396	-28%
PDBI	Storm	11%	7%	57%	17,915	10,424	72%
PL	Injury	21%	14%	56%	15,414	22,697	-32%
EL	Injury	13%	9%	39%	18,213	25,192	-28%
PL	Property & other	3%	3%	0%	7,394	9,187	-20%
PDBI	Fire	4%	4%	-1%	22,293	86,318	-74%
Travel	Property injury & other	2%	2%	-17%	361	1,725	-79%
PDBI	Gen damage & other	25%	30%	-19%	6,047	7,655	-21%
PDBI	Mal damage	6%	7%	-24%	2,817	3,181	-11%
Travel	Cancellation	4%	7%	-37%	339	988	-66%
PDBI	Theft	11%	20%	-48%	5,514	5,052	9%

Table 1: Summary of current and March 2015 review academic year 2014/15 ultimate frequency and severity estimates by class (£s for severity)

2.53 It can be seen that for PDBI Flood and Storm, PL Injury and EL Injury and Dispute & Other the frequency estimate has increased since March. Hence, for the future years we have chosen to move away from just using the Willis benchmarks in our estimates and we now incorporate this emerging experience.

2.54 We have chosen to adjust the future assumptions when one or both of these frequency or severity metrics is higher than the previous estimate, as the combined effect is that our ultimate increases in these cases.

After discussion with DfE, for future years we are giving 25% credit to frequency and severity experience to date in the PDBI Flood and Storm, PL Injury and EL Injury and Dispute & Other classes.

2.55 We have not given credit for other classes, where both the frequency and severity estimates are better than expected. The reason for this is that these are classes predominantly for property claims, where the Willis benchmarks include an allowance for large claims. It is to be expected that in some years, such as has so far been the case for 2014/15, no large claims will be reported, however there is still the potential for large claims activity in the future (high claims frequency and or severity), so we will continue to allow for this possibility for large claims in the future by holding to the Willis benchmarks in these classes.



- 2.56 We believe that it is appropriate to give some allowance to experience in the classes that have been chosen since it has been significantly different than expected and was not due to any large claim events which we would expect to be a one-off or irregular event.

Projection of claims for financial years 2014-15 to 2019-20

- 2.57 Financial year estimates are estimated by first estimating the academic year estimates. The 2014-15 financial year future claims estimate is then estimated by using the same method as used to derive the academic year estimate. The future financial year estimates of future claims are then estimated from the academic year estimates, in proportion to the exposure that falls within the academic year.
- 2.58 The table below summarises the estimated ultimate claims for financial years 2014-15 to 2019-20.

Financial year	Estimated Ultimate claim amounts (£'000s)
2014-15	2,854
2015-16	15,161
2016-17	24,419
2017-18	34,933
2018-19	46,212
2019-20	56,849

Table 2: Summary of current review financial year estimates for 2014-15 to 2019-20. (£000s)

- 2.59 The financial year ultimate claim amount for 2014-15 has reduced by 1% since the March 2015 estimate, from £2.87m to £2.85m. The decrease is less than the 7% decrease in the 2014/15 academic year estimate, due to better than expected experience in the period from April to August 2015.



3 Uncertainty in outcomes

Range of losses

- 3.1 The provisioning exercise considers the total cost of claims as a point estimate. This is an estimate of an uncertain future outcome. By nature, as a statistical expectation, it is modelled to be exceeded around 50% of the time. It therefore does not provide an estimate with a high level of confidence that it would always be sufficient to meet claims.
- 3.2 The return periods¹¹ in the table below represent the frequency with which the estimate is expected to be exceeded. For example a 1 in 5 return period level is expected to be insufficient in the worst of five years.
- 3.3 The table below shows the estimated ultimate claims (excluding claims expenses) for the 2014/15 to 2019/20 academic years, corresponding to each return period.

Return period	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
1 in 2	5.3	16.7	26.6	37.0	48.1	57.7
1 in 5	7.1	21.0	32.2	43.9	56.2	66.8
1 in 10	8.6	24.4	36.7	49.3	62.6	73.9
1 in 50	13.0	34.9	50.3	66.0	82.4	95.9
1 in 100	17.2	45.0	63.5	82.1	101.3	117.0
Expected cost	6.0	18.2	28.5	39.4	50.9	60.8

Table 3: Summary of the GAD academic year ultimate claims for each return period (£m)

- 3.4 We estimated these ranges by adjusting the ranges in the Willis report for the number of academies within the RPA that we are now expecting. Over time, as more academies join the RPA, we would expect less volatility around the expected cost.
- 3.5 Important points to note regarding these range estimates:
- > We would suggest that DfE should understand the level of risk that they are willing to accept in any one year.
 - > The uncertainties discussed within this report should be borne in mind. Uncertainties arise in particular because the RPA is currently early in its operation, so there is uncertainty over the risks and expected claims costs.
 - > These estimates are based on data as at 31 August 2015. These do not include any allowance for claims experience after this date. Any new analysis based on more claims experience data could reasonably produce estimates that are significantly different to those within this report.

¹¹ See Appendix B: Glossary for definition



- > We also considered the range of estimates on varying assumptions within our provisioning work. We varied assumptions such as the frequency and claims costs inflations estimates to values that we deemed to be within a plausible range of possible values, with a focus on the upper limits on the possible values. On varying one assumption at a time we estimated ultimate claims values between 13% less and 48% more than the current best estimate. This gives some indication of the uncertainty within these estimates.



4 Further considerations

- 4.1 This section outlines further considerations the DfE should bear in mind when examining the results in this report.
- 4.2 At a high-level, we believe it is reasonable to use the Willis estimates where we have done so.
- 4.3 There is a potential that academies currently paying high insurance premiums are more likely to join the RPA, due to the cost savings that can be made. As these academies are more likely to make claims, this may lead to the claim experience of the risk pool being worse than expected (a situation known as anti-selection).
- 4.4 The results do not include an explicit consideration of latent claims¹². These are claims of a type that was not anticipated at the time that cover was provided. This represents a source of uncertainty in the level of claims to the arrangement, for instance claims related to asbestos.
- 4.5 There is no explicit allowance for Periodical Payment Orders (“PPOs”), i.e. claims that, rather than settling as a lump sum amount, require regular payments to be made in order to compensate the claimant.
- 4.6 In DfE’s accounts provisions, contingent assets and contingent liabilities are considered in accordance with International Accounting Standard 37 (IAS 37). Under IAS 37 future payments for claims made to the RPA will require a provision to be held by DfE. These are funded on a pay-as-you-go basis. DfE will have to ensure that funds are available when needed.
- 4.7 Further uncertainty on the reliability of the data as being representative of the future population relates to the growing number of academies.
- 4.8 The uncertainty associated with the relatively low number of claims in the data is mitigated, to an extent, in the Willis report through the use of relevant benchmarks. It is appropriate that the data is supplemented in this way. If possible further relevant sources of data should be considered by DfE, for example any historical information available relating to losses in other (non-academy) schools. This is particularly important for unusually large claims which do not occur frequently, and so may not be reflected in the data underlying the Willis RPA analysis.

¹² See Appendix B: Glossary for definition



Appendix A: Data

Exposure

- A.1 We were provided with the following data from DfE concerning the exposure of the RPA:
- > Actual number of academies and pupils in the RPA as at 31 August 2015, split by type of academy (primary, secondary, all through and special);
 - > Academies where there is information to suggest they may join the RPA in the future, alongside an expected opt-in date;
 - > Projected number of academies in the UK up to 31 March 2025.

Claims data

- A.2 We were provided with the following data, as at the month ends from inception of the RPA in September 2014 to 31 August 2015 inclusive for each claim that had been reported by that date:
- > Paid loss amount (excluding claims expenses)
 - > Outstanding loss amount (which represents the Gallagher Bassett loss estimate (excluding claims expenses) that has yet to be paid)
 - > Paid claim expense amount
 - > Outstanding claim expense amount (which represents the Gallagher Bassett expense estimate that has yet to be paid)
 - > Accident date
 - > Date first reported
 - > Date closed (if the claim has closed)
- A.3 We understand the claims expense amounts to include costs including claims handling and loss adjustor fees. Any expense figures within this report do not include any further expenses that DfE incur in the operation of the RPA, such as staff and consultancy costs.
- A.4 A nil claim is defined as a claim that has closed, but where the paid loss and outstanding loss are zero. These claims are excluded from the claim number triangle¹³ only from the point at which they close as a nil claim.
- A.5 All through academies are included within secondary, and we split these out by assuming a proportion of all through academies based on experience within the RPA to date.

¹³ See Appendix B: Glossary for definition



Data detail

A.6 We have grouped the data into the following divisions for our claims reporting and claims modelling:

- > Type of academy
 - Primary
 - Secondary
 - All through
 - Special
- > Main class
 - Property Damage and Business Interruption (PDBI)
 - Public Liability (PL)
 - Employers' Liability (EL)
 - Travel
- > Peril
 - Property Damage and Business Interruption (PDBI)
 - Fire
 - Flood
 - Theft
 - Storm
 - Malicious Damage
 - General Damage
 - Public Liability (PL)
 - Injury
 - Property & Other
 - Employers' Liability (EL)
 - Injury
 - Dispute & Other
 - Travel
 - Cancellation
 - Property, Injury & Other

A.7 The number of groups used must be balanced against the volume of data available, as each group must have sufficient data to achieve a robust statistical measure. This consideration, along with the requirements of DfE, led to the choice of the segmentation outlined above.

A.8 As the RPA has been operating for only a short period of time, there is limited data in some of these segments, making assumptions statistically less credible. In particular, there are very few academies in the RPA that are all through and special schools (47 all through and 58 special schools). The data will gain statistical credibility over time as more academies join the risk pool and more claims are made within it.

Patterns

A.9 Gallagher Bassett provided us with academies claims data which we supplemented with benchmarks to derive incurred claims development and reported claim numbers patterns. More detail on these patterns can be found in paragraphs 2.26 to 2.32.



Willis frequencies and average claims costs

- A.10 Willis provided estimates of claims frequencies, which are the expected number of non-nil claims per pupil year (where one pupil year represents one pupil being in the RPA for one year). These are provided for primary and secondary academies, and for each claim type and peril. The estimates for primary and secondary academies only differ for Travel (where secondary academies have a higher frequency) and PDBI (where primary academies have a higher frequency).
- A.11 For special and all through schools (where Willis have not provided benchmarks), we have applied the most prudent Willis benchmarks for the claim and peril types, where these differ by school type, as described in the above paragraph (i.e. we have used secondary academy assumptions for Travel and primary academy assumptions for PDBI).
- A.12 For each claim type and peril, Willis estimated the same average claim cost for each academy type.
- A.13 Willis provided frequency and average claim cost estimates for the 2014/15 academic year and also for the future academic year 2015/16. Where we have used the Willis 2014/15 estimates, we used these as presented within the Willis report (i.e. frequencies based on pupil years and average costs per claim) although we have combined (but made no adjustments to) some peril estimates to match the peril split that we are modelling to. For future academic years, where we have used Willis benchmarks, we have assumed the following:
- > No change in the frequency of claims year on year
 - Willis benchmarks for 2015/16 had different changes in frequency from the previous year for each claim type.
 - We do not think that there is a clear reason for the frequency to change into the future so we have assumed no change in the frequency of claims year on year.
 - > Inflation of average claim cost per academic year of 4% for PDBI and Travel and 5% for PL and EL
 - These inflation rates are based on inflation values in the Willis report, which we deem to be reasonable.



Appendix B: Glossary

- B.1 Expired risk period – the risk period for which, up to a certain date, RPA policies have been in force.
- B.2 Expired exposure – the exposure corresponding to the expired risk period.
- B.3 Exposure – A measure that represents the risk. Possibilities for the RPA are the number of academies and number of pupils. We have chosen to use 'pupil years' for the provisioning, such that the duration that pupils have been covered by the RPA is taken into account.
- B.4 Future claim amounts – This is all claims estimated to be incurred and ultimately paid in the future relating to exposure within a given academic or financial year. For a given year this estimate is the sum of the IBNER, IBNR and estimated ultimate claims for the unexpired risk period.
- B.5 Future claim numbers – All claims estimated to be reported and ultimately settled in the future relating to exposure within a given academic or financial year. For a given year this estimate is the sum of the IBNR numbers and estimated ultimate claim numbers for the unexpired risk period.
- B.6 Government Actuary's Department (GAD) - A non-ministerial government department providing actuarial advice to public sector clients. For more information see www.gov.uk/gad.
- B.7 IBNR - At the end of each exposure year there will still be claims that have not yet been received, relating to that period. These amounts that are expected to arise in future are referred to as incurred but not reported ("IBNR") claims. IBNR numbers are the number of claims that have incurred but have yet to be reported.
- B.8 IBNER - At the end of each exposure year there will still be outstanding claim amounts that have not yet been received, relating to that period. These amounts that are expected to arise in future are referred to as incurred but not enough reported ("IBNER") claims.
- B.9 Incurred claims – For a given academic year, the incurred claims at a certain point in time is the total amount that the claim handlers estimate the claims that have been reported to date to ultimately cost, where these claims originate in the given academic year.
- B.10 Latent claims – These are claims of a type that was not anticipated at the time that cover was provided.
- B.11 Long tail – A claim type is referred to as 'long-tailed' where claims reporting and/or claims payments may occur many years after the risk period has expired. Long tail risk is the risk that claims may be made many years after the risk period has expired. (See also short tail).
- B.12 Personal injury - Legal term for injury to body, mind or emotions.



- B.13 Peril - The specific source of loss to the risk pool. Examples include fire, theft and injury.
- B.14 Return period - An expression of the expected frequency of occurrence of an event. It represents the frequency on a 1 in 'x' basis, where x is the return period. A common event may have a return period of 1, implying an expected occurrence rate of once per year. More remote events will have much higher return periods.
- B.15 Risk period – The time for which the expectation is to have RPA policies in force.
- B.16 Short tail - A claim type is referred to as 'short-tailed' where claims reporting and/or claims payments occur within the space of a few years after the risk period has expired.
- B.17 Triangle or Claims triangle – Manipulating data into a triangle format is a way of presenting the data to aid analysis of the development of the data over time. Triangles are made of incurred claims, paid claims, claim numbers and average claim cost. Going across in the triangle is the development period, for example claims reported month. Going down is the origin period, for example the academic month that the incident occurred. Each row then shows all claims where the incident occurred during the same time period, and going right in the row shows how the claim amount or number changes over time since the incident period.
- B.18 Ultimate claim – The total final amount that will be paid for claims originating from a given academic or financial year. This is the aggregate of claims that have been incurred and estimated future claim amounts.
- B.19 Unexpired risk period - the remaining risk period for an academic/financial year for which, as at a certain date, RPA policies are expected to be in force.
- B.20 Unexpired exposure – the exposure corresponding to the unexpired risk period.