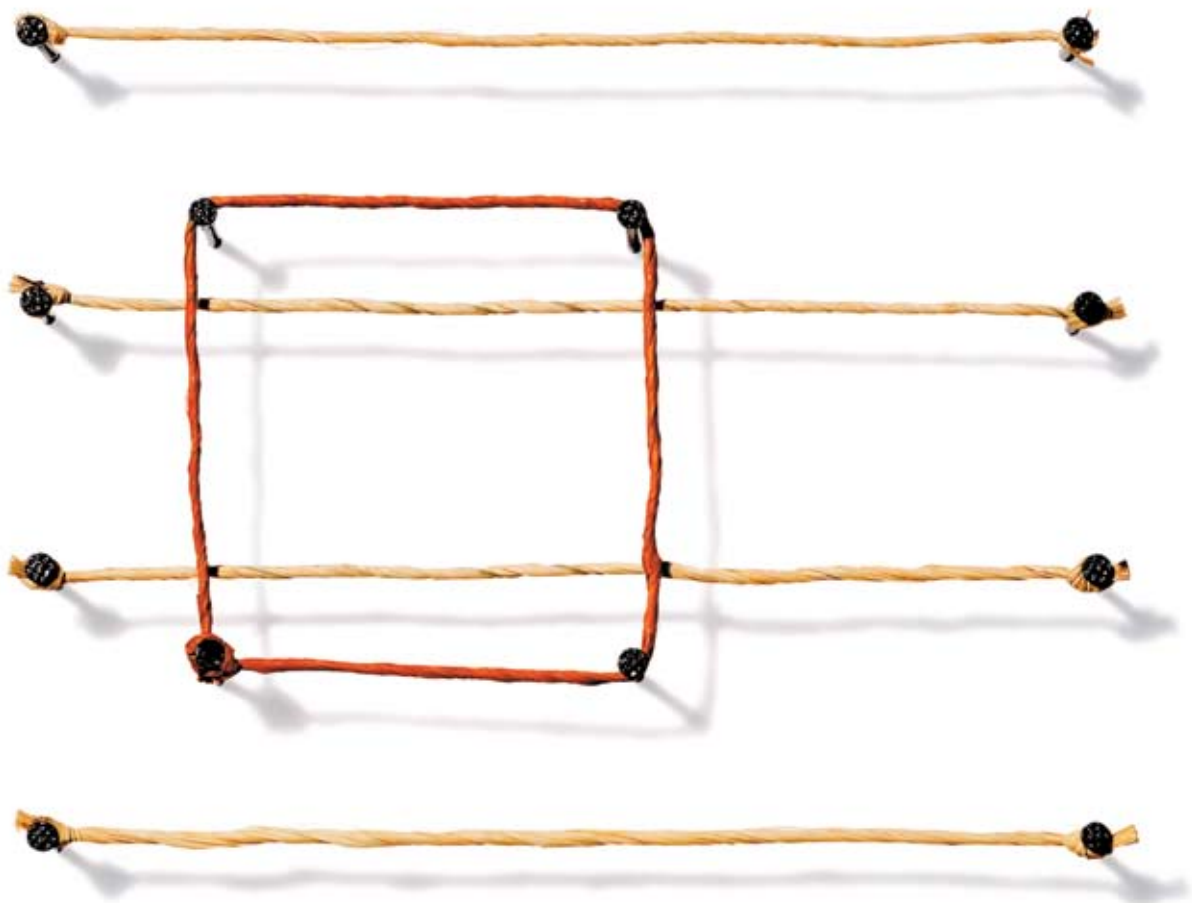




General Insurance

Risk margins industry report

30 June 2007 (issued November 2008)



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Introduction

The valuation of insurance liabilities is an important aspect of the general insurance regulatory framework. The reserves held as a result of these valuations have a direct impact on the financial soundness of the insurer and its ability to protect the interests of policy holders who have put their trust in the industry. It is therefore important that insurance liabilities, including risk margins and diversification benefits, are valued in a realistic and appropriate manner.

The risk margin is intended to allow for the inherent uncertainty of the central estimate (or mean) of the insurance liabilities. It will usually include an allowance for the variability of claims experience within a class of business (stand alone risk margin) and also a deduction for any diversification between classes of business (diversification benefit). Together the central estimate and the risk margin are intended to produce a reasonable valuation of the insurance liabilities at a 75% probability of sufficiency level as required by APRA.

In the previous risk margins industry report, we noted comments from actuaries and other practitioners surrounding the difficulty of setting reasonable risk margins. Over time, this issue has somewhat subsided with actuaries becoming more comfortable and confident with the determination of risk margins. There remains, however, some uncertainty as to what represents a reasonable and justifiable diversification benefit. Diversification benefits continue to be based on fairly subjective correlation assumptions and further research may well be needed in this area.

As per the previous risk margins industry report of 2005, this report provides a detailed summary of the risk margins adopted by insurers for varying lines of business. For this report, we have extended the scope to include trends and analysis on the diversification benefits adopted by different insurers. We have also included some brief comments on the current methodologies used by actuaries in determining stand alone risk margins and diversification benefits.

The role of the report is not to prescribe particular risk margins or diversification benefits, but rather to give some insight into the risk margins and methods currently adopted by industry. It is hoped that the industry average risk margins and diversification benefits outlined here may provide a useful benchmark and check on the final risk margins adopted by individual insurers.

Summary

Key findings

The results suggest that the relativities between risk margins for different classes of business are reasonable. Risk margins adopted tend to be in line with general expectations, with those adopted for short tail classes being lower than those for long tail classes. Also, risk margins for outstanding claims liabilities tended to be lower than those for premium liabilities.

In general, there appears to be greater reliance on methods based on internal data, particularly in determining stand alone risk margins. The methods and assumptions used to determine diversification benefits continue to be based heavily on judgment and general reasoning.

The actual diversification benefits adopted by companies were broadly reasonable and in line with expectations. While there were some exceptions, we found that in general, larger insurers with many lines of business and lower portfolio concentration tended to adopt higher diversification benefits.

Methodology

APRA's statistical analysis of risk margins used June 2007 quarter data extracted from the quarterly data returns *GRF210.0 Outstanding Claims liabilities* and *GRF210.1 Premium Liabilities*, which are submitted to APRA by regulated general insurers.

As more recent data became available, we have also assessed risk margin data from the December 2007 quarter. In general, there was very little difference between the two sets of numbers except for the smaller and less significant classes of business. The numbers in this report are based on our initial analyses of data from the June 2007 quarter.

The data has been checked for consistency and identified anomalies have been removed. In particular, we have excluded points with a zero risk margin but a non-zero central estimate. We have also excluded points with very high risk margins that were associated with extremely small portfolios.

All figures presented below are net of reinsurance and non-reinsurance recoveries. This is different to the previous risk margins report, where, due to data constraints, figures were reported gross of all recoveries. It should also be noted that the summary statistics are based on diversified risk margins and not stand alone risk margins, which would invariably be higher.

As diversified risk margins give no indication of the size of the diversification benefit adopted, we have further supplemented the statistical analysis with information from the risk margin section of various insurance liability valuation reports (ILVRs). The ILVRs were sampled from a wide range of insurers of differing sizes and types. The insurers were chosen such that a significant proportion (generally above 80%) of the net insurance liability for each class of business was covered. The review covered the approaches used for determining risk margins and diversification benefits and the discussion surrounding the adopted risk margins and diversification benefits.

As part of our review, we have also completed some quantitative analysis on the actual diversification benefits adopted by around 60 insurers. In some cases, this was not explicitly provided and had to be estimated from other information provided in the ILVR. The diversification benefits were then assessed for general trends and broad relativities between different types of companies.

Regression techniques (primarily multiple linear regression) were used to explain the variability in the diversification benefits adopted by different insurers. In this case, the dependent variable was taken as the adopted diversification benefit expressed as a percentage of the undiversified net risk margin. Explanatory variables such as insurer size, lines of business and various measures of portfolio concentration were all tested. Based on actual and fitted diversification benefits, we then estimated 'industry average' diversification benefit ranges for insurers of different portfolio concentrations and sizes.

Risk margin analysis

This section provides summaries of the average risk margins and the variability of these risk margins across the lines of business in general insurance. Results are separated into direct and reinsurance business, as well as between outstanding claims and premium liabilities. The risk margins presented below are net of reinsurance and non-reinsurance recoveries and net of diversification benefits.

Direct Business

Class of Business	No. of Insurers	Weighted RM		Average RM	
		Mean (%)	Standard Deviation (%)	Mean (%)	Standard Deviation (%)
Houseowners/Householders	40	5.6%	2.0%	12.0%	15.6%
Domestic motor vehicle	38	5.6%	2.1%	9.1%	6.0%
Commercial motor vehicle	34	7.1%	3.1%	16.7%	19.9%
Travel	15	7.7%	1.9%	16.0%	23.8%
Fire and ISR	44	8.5%	3.7%	17.6%	24.2%
Marine	43	9.5%	9.5%	27.1%	46.1%
Aviation	9	5.8%	4.4%	13.6%	9.4%
Mortgage	10	9.5%	6.2%	30.9%	26.6%
Consumer Credit	17	8.2%	5.9%	16.0%	14.9%
Other Accident	39	8.2%	3.6%	17.0%	20.9%
CTP motor vehicle	13	9.3%	2.0%	9.9%	3.3%
Public and product liability	50	11.2%	6.9%	26.6%	43.3%
Professional indemnity	37	13.7%	7.1%	19.0%	20.4%
Employers liability	25	12.5%	4.6%	25.3%	37.5%
Other	41	12.2%	4.9%	16.1%	11.9%

For Direct Business, the general relativities between risk margins for different lines of business appear to be quite reasonable. In general, the weighted average risk margins are somewhat below the arithmetic average risk margins. This is due to larger insurers in a particular line of business adopting lower risk margins than smaller insurers. The magnitude of the differences gives some indication as to the relativities between risk margins adopted by smaller and larger insurers.

Between lines of business, we note that commercial lines tended to have higher and more dispersed risk margins than personal lines. The same is also generally true between long tail classes and short tail business. For outstanding claims liability, the highest risk margins tended to be associated with the liability classes where there is generally a significant delay between claim incidence and claim payment.

While the tables above give some indication of the dispersion of adopted risk margins, it should be noted that the actual observations are, in some cases, highly skewed. That is, the arithmetic average risk margins have been affected by large risk margins adopted by a handful of insurers. From the tables, the skewness of the observations is best seen in the relativities between the weighted and arithmetic standard deviations. A larger difference would generally imply greater skewness in the observations for that particular line of business.

Table 2 Premium Liabilities for Direct Business

Class of Business	No. of Insurers	Weighted RM		Average RM	
		Mean (%)	Standard Deviation (%)	Mean (%)	Standard Deviation (%)
Houseowners/Householders	35	8.8%	3.1%	12.5%	7.2%
Domestic motor vehicle	32	7.0%	3.7%	11.5%	8.4%
Commercial motor vehicle	26	9.1%	4.4%	14.4%	9.9%
Travel	13	6.8%	4.8%	12.6%	4.5%
Fire and ISR	37	13.0%	8.7%	18.8%	11.1%
Marine	36	12.3%	6.7%	17.9%	12.4%
Aviation	4	5.8%	2.0%	14.2%	11.9%
Mortgage	10	18.5%	8.3%	30.7%	17.2%
Consumer Credit	15	14.5%	12.4%	24.1%	18.6%
Other Accident	30	12.3%	5.3%	20.4%	23.5%
CTP motor vehicle	9	12.3%	3.0%	12.5%	4.2%
Public and product liability	39	12.6%	6.7%	18.0%	8.9%
Professional indemnity	27	17.0%	8.7%	23.4%	18.7%
Employers liability	15	11.7%	5.4%	17.4%	15.5%
Other	31	16.5%	8.2%	18.8%	11.5%

In comparison, the premium liabilities risk margins for direct business tend to be higher than those adopted for outstanding claims liabilities. The differences between OCL and PL (for liabilities of the same size) are generally most pronounced in short tail personal and commercial lines and less pronounced in the longer tailed liability lines, with the exception of Workers' Compensation and Public and Product liability. This exception appears to be due to asbestos exposures within these two portfolios.

Further analysis on the observed relativities between OCL and PL risk margins have shown that they are broadly in line with the Bateup and Reed (Tillinghast) and Collings and White (Trowbridge) reports, with the exception of the two classes mentioned above. This is to be expected as almost all insurers rely on these reports for scale up factors in determining PL risk margins. We have included further analysis on the ratio of OCL to PL risk margins in Appendix C.

While the general relativities of risk margins between lines of business are roughly maintained between PL and OCL, there are some notable exceptions. In particular, risk margins for lenders' mortgage insurance are notably higher for premium liabilities and they have also increased significantly since the previous risk margin industry report. This appears to reflect the increased uncertainty regarding the impact of rising interest rates on future arrears rates and losses.

Comparing the standard deviations of the weighted risk margins, there appears to be greater dispersion in the PL risk margins relative to OCL risk margins. The PL risk margin observations however, tend to be much less skewed than the OCL risk margins. This appears to be due to several factors, one being the different cohort of insurers with outstanding claims and premium liabilities in a particular line of business. Part of this difference in cohorts will be due to runoff insurers who no longer underwrite any business. We have reproduced the same tables with these runoff insurers removed in Appendix B.

Reinsurance business

Table 3 Outstanding Claims Liabilities for Reinsurance Business					
Class of Business	No. of Insurers	Weighted RM		Average RM	
		Mean (%)	Standard Deviation (%)	Mean (%)	Standard Deviation (%)
Casualty					
Facultative excess of loss	13	15.7%	3.5%	18.1%	7.7%
Facultative proportional	11	10.9%	2.7%	15.0%	7.4%
Treaty excess of loss	25	16.2%	6.0%	34.5%	51.5%
Treaty proportional	24	12.2%	5.7%	21.5%	14.3%
Marine and aviation					
Facultative excess of loss	7	18.4%	5.7%	19.3%	8.0%
Facultative proportional	7	10.6%	3.3%	15.5%	6.7%
Treaty excess of loss	13	17.4%	22.5%	36.6%	57.4%
Treaty proportional	18	14.0%	6.9%	15.5%	8.0%
Property					
Facultative excess of loss	8	16.6%	16.1%	19.8%	14.9%
Facultative proportional	11	13.4%	6.0%	21.9%	20.2%
Treaty excess of loss	14	8.8%	6.5%	18.0%	9.8%
Treaty proportional	19	9.3%	16.1%	31.6%	58.1%
Reinsurance non-split	26	7.5%	4.1%	18.8%	13.9%

For proportional reinsurance business, adopted risk margins (while not mapping perfectly) tended to be in line with those adopted for direct business. Risk Margins for non-proportional reinsurance tended to be much higher than their direct counterparts, which is in line with general reasoning.

As expected, higher risk margins were adopted for excess of loss reinsurance than for proportional reinsurance. Risk margins adopted for premium liabilities were generally higher than those adopted for outstanding claims liabilities with some quite large differences particularly in the property classes. It is somewhat unclear as to why this may be the case.

Table 4 Premium Liabilities for Reinsurance Business

Class of Business	No. of Insurers	Weighted RM		Average RM	
		Mean (%)	Standard Deviation (%)	Mean (%)	Standard Deviation (%)
Casualty					
Facultative excess of loss	8	19.3%	7.1%	33.9%	23.5%
Facultative proportional	9	15.8%	4.8%	25.1%	16.8%
Treaty excess of loss	10	22.3%	13.9%	50.5%	71.0%
Treaty proportional	9	14.9%	6.1%	22.3%	12.5%
Marine and aviation					
Facultative excess of loss	2	16.5%	0.5%	16.7%	0.6%
Facultative proportional	4	16.3%	7.5%	17.6%	11.1%
Treaty excess of loss	6	25.6%	12.5%	38.9%	31.9%
Treaty proportional	8	22.7%	9.8%	22.9%	9.4%
Property					
Facultative excess of loss	7	18.6%	10.4%	26.5%	19.1%
Facultative proportional	8	14.7%	9.2%	31.9%	17.7%
Treaty excess of loss	10	15.0%	8.3%	27.5%	16.0%
Treaty proportional	10	28.4%	20.8%	36.6%	24.2%
Reinsurance non-split	14	10.0%	7.2%	25.8%	18.6%

Stand alone risk margins

The approach taken to estimating undiversified risk margins is driven primarily by the quality and volume of an insurer's internal data. For most insurers, there remains a heavy reliance on the Bateup and Reed and Collings and White reports. However, from our review of ILVRs, many actuaries are also analysing internal data and seeking to adopt assumptions that better reflect the nature of the insurer's own experience and portfolio and not merely applying industry benchmarks. This represents a pleasing development.

For medium to large insurers, analysis of internal data is used quite extensively for estimating risk margins for outstanding claims liabilities. From our sample, the most common methodology used was the Stochastic Chain Ladder method. Other common methods used included the Bootstrapping on paid and incurred triangles and the Mack method. In most cases, a number of approaches were used and the results compared by the actuary. The results were generally benchmarked against industry reports. There were also subjective loadings added to allow for sources of error not explicitly considered (e.g. model error and unmodelled sources of uncertainty).

Generally, the PL risk margins were derived using scaling factors on the OCL risk margin or Coefficient of Variation (CoV) as suggested by the two industry reports. A handful of companies estimated PL risk margins using internal analysis of loss ratios or from their DFA model (which would give the diversified risk margin directly).

Diversification benefits

From our review of ILVRs, there appears to be a range of approaches taken in estimating diversification benefits. Even for the larger insurers, the approaches adopted are generally fairly subjective and the correlation assumptions are primarily driven by judgment and general reasoning. In determining diversification benefits, there appears to be widespread reliance on the Bateup and Reed and Collings and White reports throughout the industry. The level of reliance on these reports was higher and more widespread than for the stand-alone risk margin analysis.

The general approach taken by actuaries is to apply a correlation matrix (showing correlations between lines of business) to the total coefficient of variation for each line of business. The lognormal distribution was generally used to estimate the diversified risk margin. In some cases, distinction was made between systematic and independent variability and different correlation matrixes were used for these two portions of the total CoV. Calculated diversification benefits tended to be allocated back to individual lines of business in proportion to the central estimate or in proportion to some measure of its contribution to the total variability of the portfolio.

Selected correlations between lines and between PL and OCL tended to be based on judgment and/or taken directly from either of the two industry reports. As additional input into their selection of correlation assumptions, some actuaries also used internal data to estimate correlations between classes. The techniques used were generally based upon rank correlations or Pearson residuals of loss ratios and changes in incurred estimates. While the results from these approaches were considered, the selected correlations tended to be higher (i.e. more conservative) than those implied by the analysis of internal data. A small number of insurers also stress tested their adopted correlation assumptions.

Excluding monoline insurers, the resulting diversification benefits from our sampled companies generally ranged around 10-50%. The arithmetic and weighted average of our sample of over 50 insurers (with monoline insurers removed) was 26% and 33% respectively. It should be noted however, that our sample generally consists of larger and more diversified entities than the broader industry average insurer.

Our regression analysis suggested that the adopted diversification benefits were generally reasonable and in line with our expectations. As was expected, larger insurers with many lines of business and low portfolio concentration tended to adopt higher diversification benefits. Of the three main factors tested, portfolio concentration appeared to have the strongest explanatory power.

As one would expect, the three factors of portfolio concentration, size and number of lines are all correlated. In particular, insurers with many lines of business tended to have much lower portfolio concentration than insurers with fewer lines of business. Due to the high correlation between factors, our final multiple linear regression model only included two explanatory factors corresponding to the portfolio concentration and size of the insurer.

There were however, notable exceptions to these broad general trends with some insurers with apparently diversified portfolios adopting no diversification benefits at all. There were also instances of insurers adopting benefits that appeared high relative to our industry sample. It should be noted however, that our analysis suffers from the same limitations as of any industry wide benchmarking. In particular, our fitted model could not allow for company specific factors or issues, nor could the measures or proxies used perfectly describe the underlying features of the portfolios.

Using the observed diversification benefits and our fitted model, we then subjectively estimated 'industry average' ranges for diversification benefits. In selecting the 'industry average' we have allowed for the skew in our sample towards larger and more diversified insurers. We stress that the ranges produced below are simply a guide as to what the industry average diversification benefit is (for a given portfolio). We understand that there will be circumstances where the diversification benefits adopted will be justifiably outside these ranges.

As part of our analysis, we tested several measures of portfolio concentration. For simplicity, we have adopted Net Insurance liability for the largest line divided by the Total Net Insurance liability (R_1) as a proxy for portfolio concentration. While there are clearly exceptions, in general, the lower the value of R_1 , the lower the portfolio concentration and the higher the value of R_1 , the higher the portfolio concentration.

Furthermore, we would generally expect (and have observed) that smaller insurers tended to adopt lower diversification benefits even after allowance has been made for portfolio concentration. While this may well be a function of conservatism on the part of smaller insurers, it does also align with general reasoning. Even with the same proportions in the same lines of business, a larger insurer would still underwrite a wider range of risks and enjoy greater heterogeneity in their portfolio (particularly within a line of business).

This is observed particularly in commercial lines where larger insurers underwrite in a sizeable number of segments while smaller insurers tend to target only a small number of particular segments. This within-line heterogeneity will be less pronounced in personal lines; however we would still expect to see larger insurers with much broader geographic and demographic exposures.

		Portfolio Concentration R_1				
		<30%	30-50%	50-70%	70-90%	90%+
Size/ Net IL	0-50	15-30%	10-25%	5-20%	0-15%	0-10%
	50-250	20-35%	15-30%	10-25%	0-15%	0-10%
	250-1000	30-45%	20-35%	15-30%	5-20%	0-15%
	1000+	35-50%	25-40%	20-35%	10-25%	0-15%

Appendix A – Calculation methodologies

Key

- i = line of business $i_1, i_2, i_3 \dots i_m$.
- j = participating insurer $j_1, j_2, j_3 \dots j_n$
- RM = risk margin in absolute dollar amounts
- %RM = risk margin as a percentage of central estimate
- CE = central estimate in absolute dollar amounts
- %WARM = weighted average risk margin
- %AARM = arithmetic average risk margin

For a defined insurance/reinsurance class i :

1. Mean

$$\text{Weighted average risk margin } i = \frac{\sum_{j=1}^n RM_{ij}}{\sum_{j=1}^n CE_{ij}}$$

$$\text{Arithmetic average risk margin } i = \frac{\sum_{j=1}^n \frac{RM_{ij}}{CE_{ij}}}{n}$$

2. Variances

Variance of weighted risk margin i =

$$\frac{1}{(n-1)} \sum_{j=1}^n \frac{CE_{ij}}{\sum_{j=1}^n \frac{CE_{ij}}{n}} (\%RM_{ij} - \%WARM_i)^2$$

Variance of average risk margin i =

$$\frac{1}{n-1} \sum_{j=1}^n (\%RM_{ij} - \%AARM_i)^2$$

Appendix B – Risk margins excluding runoff insurers

The following tables apply to insurers who are licensed to issue new policies. Run-off insurers are excluded from the overall averages to remove the distortion caused by their respective margins.

Table 5 Outstanding Claims Liabilities for Direct Business (excluding Runoff Insurers)					
Class of Business	No. of Insurers	Weighted RM		Average RM	
		Mean (%)	Standard Deviation (%)	Mean (%)	Standard Deviation (%)
Houseowners/Householders	38	5.6%	2.0%	12.1%	15.8%
Domestic motor vehicle	35	5.6%	2.1%	9.2%	6.2%
Commercial motor vehicle	30	7.1%	3.1%	15.0%	19.2%
Travel	14	7.7%	1.9%	17.0%	24.4%
Fire and ISR	38	8.4%	3.1%	13.1%	9.3%
Marine	38	8.8%	4.1%	16.7%	16.8%
Aviation	9	5.8%	4.4%	13.6%	9.4%
Mortgage	10	9.5%	6.2%	30.9%	26.6%
Consumer Credit	16	8.2%	5.9%	15.4%	15.2%
Other Accident	33	8.3%	3.3%	14.9%	16.9%
CTP motor vehicle	12	9.3%	2.0%	10.4%	3.0%
Public and product liability	41	11.1%	5.9%	17.6%	18.8%
Professional indemnity	30	12.5%	4.7%	16.6%	20.3%
Employers liability	20	12.2%	2.9%	14.3%	7.6%
Other	36	11.8%	3.7%	14.4%	9.6%

Table 6 Outstanding Claims Liabilities for Reinsurance Business (excluding Runoff Insurers)

Class of Business	No. of Insurers	Weighted RM		Average RM	
		Mean (%)	Standard Deviation (%)	Mean (%)	Standard Deviation (%)
Casualty					
Facultative excess of loss	11	15.6%	3.2%	17.7%	7.8%
Facultative proportional	10	10.9%	2.7%	15.5%	7.6%
Treaty excess of loss	19	15.6%	6.1%	36.7%	58.6%
Treaty proportional	17	11.6%	3.3%	16.8%	8.2%
Marine and aviation					
Facultative excess of loss	6	14.1%	2.6%	18.4%	8.4%
Facultative proportional	6	11.8%	2.9%	16.9%	6.1%
Treaty excess of loss	11	17.3%	22.7%	36.4%	62.3%
Treaty proportional	15	13.8%	6.0%	14.0%	6.1%
Property					
Facultative excess of loss	7	11.2%	7.7%	15.4%	9.3%
Facultative proportional	10	12.6%	6.0%	22.1%	21.3%
Treaty excess of loss	12	8.8%	6.6%	17.3%	10.5%
Treaty proportional	15	8.7%	16.6%	31.5%	65.3%
Reinsurance non-split	21	7.3%	3.7%	15.8%	11.0%

Appendix C – Ratios between OCL and PL risk margins

This appendix compares the weighted average risk margins adopted for outstanding claims liabilities (excluding runoff insurers) and premium liabilities for a given line of business. The PL scale up factor has been calculated as the weighted percentage risk margin for PL divided by the weighted percentage risk margin for OCL (excluding runoff insurers).

As we have used weighted risk margins and excluded runoff insurers, one would expect that the PL scale up factors summarised here would be broadly in line with those adopted for a large and mature portfolio.

It should be noted that the PL scale up factors summarised here are not directly comparable with either the Bateup and Reed or the Collings and White report. While the scale up factors are presented differently, further analysis based on 'average' portfolios have found that the relativities in the PL scale up factors between classes of business are broadly consistent.

Table 7 Ratios between OCL and PL for Direct Business

Class of Business	PL Scale up Factor	Weighted Risk Margin		Average Net Portfolio Size (mil)	
		OCL (ex RO)	PL	OCL (ex RO)	PL
Houseowners/Householders	1.57	5.6%	8.8%	23.2	29.7
Domestic motor vehicle	1.25	5.6%	7.0%	14.8	55.1
Commercial motor vehicle	1.28	7.1%	9.1%	11.7	22.5
Travel	0.88	7.7%	6.8%	4.1	6.7
Fire and ISR	1.55	8.4%	13.0%	16.4	15.8
Marine	1.40	8.8%	12.3%	5.5	3.7
Aviation	1.00	5.8%	5.8%	4.9	5.8
Mortgage	1.95	9.5%	18.5%	23.0	68.8
Consumer Credit	1.77	8.2%	14.5%	2.5	9.2
Other Accident	1.48	8.3%	12.3%	7.4	8.7
CTP motor vehicle	1.32	9.3%	12.3%	565.9	91.4
Public and product liability	1.14	11.1%	12.6%	81.2	14.1
Professional indemnity	1.36	12.5%	17.0%	56.9	12.1
Employers liability	0.96	12.2%	11.7%	126.5	42.9
Other	1.40	11.8%	16.5%	3.6	8.4

Glossary of terms

Arithmetic average risk margin—provides an arithmetic average of the risk margin percentages adopted by the participating insurers.

Central estimate (CE) band—defines the cut-off rule segmenting each class of business for each insurer. Separating a single class to different bands enables useful comparisons of central estimates levels among smaller or larger insurers. Where no bands are specified the figures reflect the total for the class of business.

Commercial motor vehicle—a type of insurance policy covering motor vehicle insurance (including third party property damage) other than insurance of vehicles defined under domestic motor vehicle below. It includes long and medium haul trucks, cranes and special vehicles and policies covering fleets.

Consumer credit—insurance to protect a consumer's ability to meet the loan repayments on personal loans and credit card finance in the event of death or loss or income due to injury, illness or unemployment.

CTP motor vehicle—all insurance policies providing compulsory third party motor vehicle (CTP) insurance.

Domestic motor vehicle—a type of insurance policy covering motor vehicle insurance (including third-party property damage) covering private-use motor vehicles including utilities and lorries, motor cycles, private caravans, box and boat trailers and other vehicles not normally covered by business or commercial policies.

Employer's liability—a type of insurance policy which includes workers' compensation, seamen's compensation and domestic workers compensation.

Facultative excess of loss—individual, non-treaty arrangements where the reinsurer agrees to pay the part of a reinsured's loss that exceeds an agreed deductible.

Facultative proportional—individual, non-treaty arrangements where the reinsurer shares an identical proportion of the losses of the reinsured.

Fire and ISR—includes all insurance policies normally classified as 'fire' and includes: sprinkler leakage, subsidence, windstorm, hailstone, crop, arson, loss of profits and any extraneous risk normally covered under fire policies e.g. flood. Industrial special risks (ISR) policies are policies which contain a particular standard policy wording or where the wording is substantially similar to that standard wording.

Householders/houseowners—covers the common domestic policies inclusive of contents, personal property, arson, burglary and public liability normally attached to such policies.

Lines of business—the types of insurance products available

'Long tail' business—business written by a general insurer where there is a significant delay between the event giving rise to the claim and the notification of the claim to the insurer.

Marine and aviation—include marine hull (including pleasure craft), marine cargo (including sea and inland transit insurance) and aviation (including aircraft hull and aircraft liability) insurance policies.

Mortgage—covers insurance against losses arising from the failure of debtors to meet financial obligations to creditors.

Other—includes all insurance business not specifically mentioned elsewhere. It includes, for example: trade credit: extended warranty (includes insurance by a third party for a period in excess of the manufacturer's or seller's normal warranty); legal expense; kidnap and ransom; and contingency.

Other accident— includes the following types of insurance: miscellaneous accident (involving cash in transit, theft, loss of money); all risks (baggage, sporting equipment, guns); engineering (when not part of ISR or fire policy); plate glass; guarantee (insurance bonds); live stock; pluvius; construction: fidelity guarantee; and sickness and accident.

Professional indemnity—covers the liability of professional persons to clients through negligence etc. Includes directors' and officers' liability insurance.

Public and product liability—covers legal liability to the public in respect of bodily injury or property damage arising out of the operation of the insured's business. Product liability includes policies that provide compensation for loss or injury caused by, or as a result of, the use of goods. This also include environmental clean-up of pollution spills where not covered by fire and ISR policies.

Risk margin—the component of the value of the insurance liabilities relating to the inherent uncertainty in the central estimate (the mean of the distribution of probable outcomes).

'Short tail' business – business written by a general insurer where there is no significant delay between the event giving rise to the claim and the notification of the claim to the insurer.

Travel—covers insurance against losses associated with travel including loss of baggage and personal effects, losses on flight cancellations and overseas medical costs.

Treaty excess of loss—reinsurance arrangements written under a treaty where the reinsurer shares an identical proportion of the losses of the reinsured.

Treaty proportional—reinsurance arrangements written under a treaty where the reinsurer shares an identical proportion of the losses of the reinsured.

Weighted average risk margin—measures the average risk margins per dollar of aggregate central estimates for each class of business. Insurers with relatively larger central estimate provisions will have a greater influence over the average figures.



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