

**General Insurance Study Group**

**GENERAL INSURANCE  
CONVENTION**

**Llandrindod Wells 1991**

**Volume 1**



CLAIMS RUN-OFF PATTERNS

UPDATE

presented to

General Insurance Study Group

October 1991

## CLAIMS RUN-OFF PATTERNS - October 1991 update

The attached tables update those presented to the General Insurance Study Group (GISG) in October 1990, by including data from the 1989 returns in their calculation. The methodology derives from the report of the working party on claims run-off patterns presented to GISG in October 1989.

Following comments at GISG in 1990, two changes have been made. For the inflation adjusted chain ladder (IACL) and average claim (AVC) methods we have reverted to our previous assumption that future inflation at 8% (10% was assumed for the 1990 tables) is implicit in companies' estimates of outstandings. The run-off patterns for comprehensive and non-comprehensive motor are now distinct for the first 6 years (5 years in 1990) of the run-off (years 0-5). For later years (except for five companies which distinguished comp and non-comp prior to 1981), a common run-off pattern has been used.

### Data

All the data came from Forms 33 of the returns which have to be made to the Department of Trade and Industry (DTI) by companies authorised to write business in the UK. Forms 33 (and for 3 year business Forms 35) constitute the most comprehensive set of claims run-off data available for UK companies. We are grateful to the DTI for allowing us to use this data. An example of Form 33 appears on page 8.

Subject to certain de minimis exceptions, the direct (and facultative reinsurance) business carried on by UK authorised insurance companies must be analysed into risk groups and for each risk group the run-off of the claims must be presented in Forms 33 (or 35). A risk group comprises risks constituting part of the business carried on in any one country within any one of the 8 non-treaty DTI accounting classes, "which, in the opinion of the directors, are not significantly dissimilar

Claims run-off patterns

either by reference to the nature of the objects exposed to such risks or by reference to the nature of the cover against such risks given by the company".

The intention was that risk groups should be relatively homogeneous so that the run-off could be expected to be reasonably stable, but the definition is broad enough to permit considerable heterogeneity. Thus run-off patterns might be expected to vary considerably between different companies and within companies from year to year.

It should be noted that from 1981 UK "home foreign" business has been treated as written in a different country from other UK business for the purpose of risk group definition. Thus for UK business currency movements should not distort the statistics. From 1981 also, private motor has had to be distinguished from other motor business and comprehensive private motor distinguished from non-comprehensive.

All the data analysed relates to UK business. The risk groups examined are Employers Liability (EL), Comprehensive Private Motor (Comp), Non-comprehensive Private Motor (Non-comp), and Fire. Most companies did not distinguish between Comp and Non-comp for years of origin prior to 1981, and Comp/Non-comp data were supplemented by Private Motor data for these years of origin. Although the data suggests that, from the fourth year of the run-off (ie omitting years 0-2), the claims run-off patterns are very similar, the run-off patterns for years 0-5 have been separately analysed.

Most of the data came from the DTI computer database rather than directly from the returns. Full data relating to payments before 1981 were not readily available; the total payments for each year of origin was available but not the split by year of payment.

The Form 33 data are gross in that they make no allowance for reinsurance recoveries (but subrogation recoveries and salvage are treated as negative claim payments). The run-off patterns shown in the tables are therefore not immediately applicable to a net (of reinsurance) run-off. In general we would expect a net run-off to be shorter than a gross run-off, partly because reinsurance recoveries relate mainly to the larger claims which may by their nature take longer to settle, and partly because of the time taken to make reinsurance recoveries.

### Data discrepancies and distortions

Comparisons for a year of origin between box 19.3 of Form 33 (payments in previous years of the run-off) and the sum of boxes 19.3 and 19.2 (payments in the year) in the previous year's returns revealed a number of discrepancies. These were investigated and the data adjusted as appropriate. (See section A5 of the 1989 report.) In cases where no explanation for the discrepancy was available the incremental payments figures (19.2) were used in preference to the cumulative payments (19.3).

The existence of data discrepancies should be considered before drawing conclusions about individual companies from the run-off patterns shown. The possibility of errors not signalled by data discrepancies also needs to be borne in mind.

The employers liability statistics include latent disease claims, both in the payments and outstanding (notified and IBNR) figures. There is normally no uniquely correct way of allocating such claims to a year of origin and thus some distortion of the statistics is inevitable.

It is known that a number of companies discount at least some employer liability claims. No allowance is made for this feature when calculating tail factors.

The later years of run-off for the fire risk group show negative payments, believed to be mainly subrogation recoveries from liability insurers. For the most part such recoveries would appear not to be anticipated in the estimates of outstandings (presumably as the result of applying prudent accounting principles), which leads to an inconsistency. Where large risks are reinsured facultatively, there can be double-counting and this can lead to distortions.

### Tail factors

Tail factors were obtained by averaging from company estimates for the three earliest years (75-77 or, for fire, 81-83). They assume that the company estimates are correct, are not discounted (explicitly or implicitly), and make full allowance for future inflation. To the extent that these assumptions are incorrect, the tail factors are wrong.

The procedure adopted can give somewhat peculiar results when payments in the last two years of the run-off are compared with assumed payments thereafter. (Note this does not affect the motor tables.) This particularly affects the fire risk group because, as noted above, recoveries tend not to be anticipated in company estimates of outstandings.

### Mean terms

Mean terms are presented as a simple means of indicating the length of a run-off pattern into a single figure and facilitating inter-company comparisons. Knowledge of mean terms enables the approximate impact of discounting, for instance, to be estimated (though choice of run-off pattern given the mean term can sometimes materially affect the result

of discounting).

In calculating mean terms we assumed that all payments were evenly spread throughout the year of payment. This is of course an oversimplification, and individual companies, whose own data is likely to be more detailed, can and do use other assumptions internally. For the specific purpose of inter-company comparisons we do not consider that our assumption is likely to cause serious distortion.

Arbitrary assumptions were made regarding the mean terms of the tails of the run-off patterns. While curve fitting techniques could have been used, we considered that the results would have been of limited accuracy and likely to introduce spurious differences between companies.

The mean term of outstanding claims was assumed to be four years for employers liability at the end of the fifteenth year, two years for motor at the end of the thirteenth year, and two years for fire at the end of the ninth year. The effect of alternative assumptions on the weighted mean term of the aggregate data is shown.

The weighted mean term is shown as a particular indicator of the overall mean term of a company's claims liabilities. The weights used were the proportions outstanding based on the run-off pattern, rather than the amounts outstanding at each duration. While the latter is a more usual statistic, it reflects changes in the size of the account and so such changes would have been reflected in inter-company comparisons of this statistic.

#### Estimation of run-off patterns

The problem of estimating run-off patterns from a set of run-off data mostly arises in the context of the estimation of outstanding claims or the validation of an outstanding claims

provision. Most statistical methods of estimating outstanding claims generate, implicitly or explicitly, an assumed run-off pattern.

We have used four estimation methods. Three are familiar in the context of outstanding claims estimation/verification: basic chain ladder, inflation adjusted chain ladder and an average claim method. The fourth (company incurred) is an ad hoc method based, inter alia, on the assumption that a company's outstanding claims estimate is correct and undiscounted.

The negative payments in the tail of the Fire risk group, together with the fact that estimates of outstandings are generally positive, makes the company incurred method unstable in the tail. The run-off patterns for the CI method for Fire therefore do not distinguish individual years at durations 5 and over (except for the aggregate). Mean terms have not been calculated since they would not be comparable with those calculated using the other methods.

Those interested in the detailed methodology should refer to the 1989 working party report.

### Inflation

The index of average earnings (Department of Employment index, all employees, June value) was used in the inflation adjusted chain ladder and average claim methods for EL and motor. For the Fire risk group, the construction output index of producer prices, published in the CSO Monthly Digest of Statistics, was used. The run-off patterns shown for the IACL and AVC methods assume inflation of 8% throughout in line with our working assumption about future inflation.



For the IACL and AVC methods it was necessary to make an assumption about the assumptions made by companies for future inflation when setting claims reserves. We have reverted to the 8% assumption used in the 1989 report, which we believe to be a not unreasonable estimate to have made in the early part of 1990, when the 1989 returns were being finalised. Thus the 8% assumption is thought to be reasonably consistent with most companies' claims estimates.

Pete P. Hill

P H Hinton  
A J Macnair  
C A Buchanan

Andrew Macnair  
Card Buchanan

## General business: Analysis of claims by number and cost

Name of Company CO-OPERATIVE INSURANCE SOCIETY LIMITED

Financial year ended 31ST DECEMBER 1990

Country UNITED KINGDOM

Currency STERLING

Accounting class MOTOR VEHICLE

Risk group PRIVATE CAR  
(COMPREHENSIVE)Company  
registration  
numberPeriod ended  
day month yearMonetary  
unitsCountry Accounting  
classFor  
official  
use

		F33	3615R	31	12	19 90	000	AA	2			
For direct insurance and facultative reinsurance business			Number of claims		Amounts of payments made in the financial year		Amounts of payments made in previous financial years relating to claims in column 1		Estimates of payments remaining to be made		Total gross amount paid and outstanding (2+3+4)	
Claims attributable to year of origin ended			month year									
			10	12	19 89	1	2	3	4		5	
Claims closed in the financial year	at no cost (other than reopened claims)	11	8,884		(1,184)		1,184		-		-	
	at some cost (other than reopened claims)	12	40,058		17,268		20,256		-		37,524	
	reopened claims	13	975		231		972		-		1,203	
Claims outstanding at the end of the financial year	reported (other than reopened claims)	14	14,301		7,142		8,634		24,068		39,844	
	incurred but not reported (IBNR)	15	165						417		417	
	reopened claims	16	226		58		258		899		1,215	
Claims closed in previous financial years (excluding those reopened claims shown at lines 13 and 16)		17	67,470				31,344		-		31,344	
Total claims attributable to the year of origin (11 to 17)		19	132,079		23,515		62,648		25,384		111,547	
Line 19 expressed in sterling (£000)		29			23,515				25,384			

month year										
year of origin ended		10	12	1990						
Claims closed in the financial year	at no cost (other than reopened claims)	11	6,503		-		-		-	
	at some cost (other than reopened claims)	12	65,011		39,534		-		-	
	reopened claims	13	-		-		-		-	
Claims outstanding at the end of the financial year	reported (other than reopened claims)	14	53,852		35,711		-		52,032	
	incurred but not reported (IBNR)	15	9,573						8,674	
	reopened claims	16	-		-		-		-	
Claims closed in previous financial years (excluding those reopened claims shown at lines 13 and 16)		17	-				-		-	
Total claims attributable to the year of origin (11 to 17)		19	134,939		75,245		-		60,706	
Line 19 expressed in sterling (£000)		29			75,245				60,706	

## Index to Tables

### RUN-OFF PATTERNS & MEAN TERMS

In the following tables "size" is the total of the claims payments included in the analyses, excluding payments relating to years of origin 1975-80 for the motor risk groups.

11.	Fire	IACL	Run-off patterns
12.			Mean terms
13.		BCL	Run-off patterns
14.			Mean terms
15.		AV CLAIM	Run-off patterns
16.			Mean terms
17.		CO INC	Run-off patterns
18.			Aggregate data
19.	EL	IACL	Run-off patterns
20.			Mean terms
21.		BCL	Run-off patterns
22.			Mean terms
23.		AV CLAIM	Run-off patterns
24.			Mean terms
25.		CO INC	Run-off patterns
26.			Mean terms
27.	COMP	IACL	Run-off patterns
28.			Mean terms
29.		BCL	Run-off patterns
30.			Mean terms
31.		AV CLAIM	Run-off patterns
32.			Mean terms
33.		CO INC	Run-off patterns
34.			Mean terms
35.	NON-COMP	IACL	Run-off patterns
36.			Mean terms
37.		BCL	Run-off patterns
38.			Mean terms
39.		AV CLAIM	Run-off patterns

40.	NON-COMP	AV CLAIM	Mean terms
41.		CO INC	Run-off patterns
42.			Mean terms

WEIGHTED MEAN TERMS

43.	FIRE
44.	EL
45.	COMP
46.	NON-COMP

Risk Group : FIRE

Method : INFLATION ADJUSTED CHAIN LADDER

Future Inflation 8.00%

RUN-OFF PATTERN PER MILLE

Name	Size	0	1	2	3	4	5	6	7	8	9+
Avon	37,829	451	385	83	29	16	9	5	5	5	12
Britannic	3,364	571	371	54	2	4	0	-1	-2	0	1
Commercial Union	663,502	467	389	92	30	15	2	1	0	2	2
Co-operative	54,845	555	343	67	23	1	5	1	2	0	3
Cornhill	50,430	510	390	66	18	17	-3	0	4	-2	1
Eagle Star	958,607	519	362	65	26	15	3	2	1	1	6
Ecclesiastical	135,280	270	531	112	33	5	4	3	2	7	32
Economic	17,631	501	390	60	23	6	8	2	0	0	11
General Accident	436,147	478	408	73	25	12	2	0	0	0	2
Guardian Royal	760,536	528	364	66	24	5	7	2	0	1	2
Ins. Co. of North America	47,004	325	427	118	54	39	13	9	6	5	5
Iron Trades Mutual	32,188	570	388	40	5	-3	2	0	-4	0	2
Legal & General	82,581	413	415	120	24	9	2	2	-2	0	18
Minster	14,683	386	409	120	47	11	18	0	1	2	6
Municipal General	76,145	596	342	31	23	12	4	-7	0	0	0
Municipal Mutual	430,038	281	328	194	95	48	24	15	11	1	3
National Farmers Union Mutual	119,917	617	360	24	2	0	-2	-1	0	0	0
Norwich Union	191,541	437	447	88	20	5	2	-3	-2	1	4
Provincial	63,733	514	387	60	26	-4	2	0	-10	0	25
Prudential	156,309	500	406	68	16	5	1	1	-1	1	4
Refuge	21,326	749	229	19	2	2	2	1	-5	0	3
Royal	396,310	486	421	85	15	-6	-1	0	-3	3	0
Sun Alliance & London	1,567,631	503	366	77	28	12	8	2	0	1	4
Wesleyan & General	21,635	650	271	39	15	5	5	6	0	4	6
TOTAL	6,339,212	479	379	84	30	13	6	3	1	1	4
TOTAL based on 1988 data	5,465,711	480	378	83	30	12	5	2	0	10(8+)	

Risk Group : FIRE

Method : INFLATION ADJUSTED CHAIN LADDER

Future Inflation 8.00%

MEAN TERMS

Name	0	1	2	3	4	5	6	7	8	9+
Avon	1.49	1.29	2.15	2.82	3.07	3.20	3.02	2.60	2.23	2.00
Britannic	.99	.64	.54	.10	-1.24	1.16	.16	-1.25	3.00	2.00
Commercial Union	1.28	.96	1.21	1.46	1.73	3.29	3.25	2.87	1.88	2.00
Co-operative	1.13	.91	1.30	1.85	3.39	2.53	3.28	2.66	3.00	2.00
Cornhill	1.15	.82	1.07	1.14	.83	-8.29	1.80	.89	-1.31	2.00
Eagle Star	1.23	1.03	1.63	2.00	2.39	3.48	3.45	3.23	2.53	2.00
Ecclesiastical	1.82	1.31	2.48	4.04	5.22	4.71	4.09	3.39	2.55	2.00
Economic	1.27	1.03	1.94	2.71	3.58	3.51	4.36	4.00	3.00	2.00
General Accident	1.21	.86	1.16	1.33	1.62	3.72	4.87	4.46	2.80	2.00
Guardian Royal	1.17	.91	1.31	1.61	2.17	1.88	2.54	3.08	2.40	2.00
Ins. Co. of North America	1.73	1.32	1.73	1.85	1.80	2.15	2.00	1.90	1.75	2.00
Iron Trades Mutual	.97	.60	.50	-.55	.26	5.63	-.79	-1.68	3.00	2.00
Legal & General	1.46	1.13	1.65	3.27	4.57	5.47	4.90	4.37	3.03	2.00
Minster	1.51	1.15	1.45	1.77	2.32	2.07	4.06	3.06	2.39	2.00
Municipal General	1.00	.73	.97	.44	-.74	2.50	.50	--	--	--
Municipal Mutual	2.02	1.62	1.56	1.59	1.61	1.59	1.45	1.34	2.25	2.00
National Farmers Union Mutual	.90	.53	.04	6.90	2.42	1.63	1.99	2.76	3.00	2.00
Norwich Union	1.23	.80	.99	1.55	3.39	9.41	57.43	5.93	2.66	2.00
Provincial	1.27	1.09	2.38	4.28	10.54	7.16	7.14	6.25	2.96	2.00
Prudential	1.16	.82	1.20	2.00	3.30	4.52	4.16	4.48	2.49	2.00
Refuge	.78	.63	.93	2.54	3.81	-143.30	-3.12	-3.09	3.00	2.00
Royal	1.11	.68	.52	-.29	.35	-1.25	-40.67	-11.72	.47	2.00
Sun Alliance & London	1.26	1.02	1.46	1.80	2.14	2.36	3.30	3.60	2.70	2.00
Wesleyan & General	1.07	1.14	2.29	2.97	3.34	3.03	2.75	3.01	2.02	2.00
TOTAL	1.29	1.02	1.42	1.78	2.20	2.67	3.06	3.13	2.47	2.00
TOTAL based on 1988 data	1.31	1.07	1.57	2.06	2.69	3.29	3.50	3.12	2.00(8+)	

## Risk Group : FIRE

Method : BASIC CHAIN LADDER

## RUN-OFF PATTERN PER MILLE

Name	Size	0	1	2	3	4	5	6	7	8	9+
Avon	37,829	450	388	84	28	16	8	5	5	5	12
Britannic	3,364	574	370	51	2	5	0	-1	-1	0	0
Commercial Union	663,502	468	390	91	29	15	2	1	0	2	2
Co-operative	54,845	556	343	68	22	1	5	1	2	0	3
Cornhill	50,430	511	390	66	18	16	-3	0	3	-2	1
Eagle Star	958,607	521	363	65	25	14	3	2	1	1	6
Ecclesiastical	135,280	270	530	114	33	5	4	4	2	6	32
Economic	17,631	499	392	62	20	6	8	2	0	0	11
General Accident	436,147	482	405	73	25	11	2	0	0	0	2
Guardian Royal	760,536	530	365	65	23	5	6	2	0	1	2
Ins. Co. of North America	47,004	335	423	114	52	40	12	9	5	4	5
Iron Trades Mutual	32,188	572	385	42	6	-4	2	0	-4	0	1
Legal & General	82,581	408	416	125	23	9	1	2	-1	0	17
Minster	14,683	388	406	117	48	12	19	0	1	2	6
Municipal General	76,145	597	346	28	20	11	3	-6	0	0	0
Municipal Mutual	430,038	288	329	192	93	46	23	14	10	1	4
National Farmers Union Mutual	119,917	608	365	27	2	0	-1	-1	0	0	0
Norwich Union	191,541	435	450	89	18	5	2	-2	-2	1	4
Provincial	63,733	509	389	61	25	-3	2	1	-8	0	24
Prudential	156,309	504	404	67	15	4	1	1	-1	1	4
Refuge	21,326	752	225	20	1	2	2	1	-4	0	2
Royal	396,310	486	420	86	15	-6	-1	0	-3	2	0
Sun Alliance & London	1,567,631	506	366	76	27	11	8	2	0	1	4
Wesleyan & General	21,635	652	269	39	14	5	6	6	0	4	6
TOTAL	6,339,212	482	379	84	29	12	6	2	1	1	4
TOTAL based on 1988 data	5,465,711	486	379	80	29	11	5	2	0	9(8+)	

## Risk Group : FIRE

Method : BASIC CHAIN LADDER

## MEAN TERMS

Name	0	1	2	3	4	5	6	7	8	9+
Avon	1.47	1.27	2.11	2.84	3.12	3.30	3.13	2.69	2.30	2.00
Britannic	.99	.64	.57	.36	-.74	1.15	.15	-1.25	3.00	2.00
Commercial Union	1.27	.96	1.21	1.46	1.69	3.13	3.25	2.95	1.95	2.00
Co-operative	1.13	.91	1.28	1.81	3.30	2.57	3.34	2.77	3.00	2.00
Cornhill	1.14	.81	1.04	1.13	.86	-11.83	1.87	1.02	-1.71	2.00
Eagle Star	1.22	1.01	1.59	1.98	2.43	3.63	3.52	3.28	2.57	2.00
Ecclesiastical	1.82	1.31	2.47	4.05	5.22	4.67	4.06	3.42	2.59	2.00
Economic	1.26	1.03	1.93	2.80	3.54	3.49	4.35	4.00	3.00	2.00
General Accident	1.20	.86	1.14	1.29	1.62	3.72	4.68	4.40	2.81	2.00
Guardian Royal	1.16	.90	1.29	1.60	2.21	1.90	2.62	3.20	2.46	2.00
Ins. Co. of North America	1.71	1.32	1.74	1.85	1.78	2.19	2.09	2.04	1.87	2.00
Iron Trades Mutual	.97	.60	.47	-1.41	.28	3.97	-.83	-1.71	3.00	2.00
Legal & General	1.46	1.12	1.59	3.22	4.49	5.40	4.78	4.31	3.03	2.00
Minster	1.52	1.16	1.47	1.76	2.28	2.02	4.14	3.14	2.46	2.00
Municipal General	.99	.71	.98	.46	-.63	2.52	.50	--	--	--
Municipal Mutual	2.00	1.60	1.55	1.59	1.62	1.60	1.49	1.41	2.32	2.00
National Farmers Union Mutual	.91	.55	.20	10.25	2.33	1.58	1.96	2.57	3.00	2.00
Norwich Union	1.23	.80	.97	1.61	3.38	8.04	23.35	5.72	2.68	2.00
Provincial	1.29	1.10	2.38	4.20	8.82	6.69	6.55	5.76	2.97	2.00
Prudential	1.15	.81	1.19	2.05	3.33	4.55	4.10	4.46	2.54	2.00
Refuge	.78	.64	.97	2.57	3.07	10.36	-3.82	-3.60	3.00	2.00
Royal	1.11	.69	.53	-.13	.23	-2.72	12.80	-37.45	.50	2.00
Sun Alliance & London	1.24	1.00	1.44	1.79	2.13	2.35	3.32	3.54	2.72	2.00
Wesleyan & General	1.07	1.13	2.26	2.96	3.30	2.89	2.76	3.10	2.10	2.00
TOTAL	1.28	1.01	1.40	1.77	2.22	2.68	3.10	3.16	2.51	2.00
TOTAL based on 1988 data	1.29	1.03	1.53	2.04	2.70	3.30	3.52	3.11	2.00(8+)	



## Risk Group : FIRE

Method : AVERAGE CLAIM

Future Inflation 8.00%

RUN-OFF PATTERN PER MILLE

Name	Size	0	1	2	3	4	5	6	7	8	9+
Avon	37,829	452	373	84	31	18	10	6	6	5	14
Britannic	3,364	571	369	58	2	2	0	-1	-2	0	1
Commercial Union	663,502	470	387	92	30	15	0	1	0	2	2
Co-operative	54,845	544	353	70	21	0	6	1	2	0	4
Cornhill	50,430	517	382	66	18	18	-4	0	3	-2	1
Eagle Star	958,607	522	361	65	25	14	3	2	1	1	5
Ecclesiastical	135,280	273	539	110	31	5	4	2	2	5	28
Economic	17,631	518	385	57	21	5	6	1	0	0	7
General Accident	436,147	471	413	73	26	12	2	0	-1	0	3
Guardian Royal	760,536	529	364	67	24	5	6	2	0	1	2
Ins. Co. of North America	47,004	359	438	115	41	21	8	6	5	3	2
Iron Trades Mutual	32,188	542	404	52	6	-3	2	0	-4	0	2
Legal & General	82,581	429	425	106	20	8	1	1	-1	0	12
Minster	14,683	379	407	116	56	15	20	0	1	1	6
Municipal General	76,145	563	342	59	28	10	5	-7	0	0	0
Municipal Mutual	430,038	273	330	201	94	49	22	15	11	2	3
National Farmers Union Mutual	119,917	622	357	22	2	0	-2	-1	0	0	0
Norwich Union	191,541	441	444	87	21	6	2	-2	-2	1	4
Provincial	63,733	513	389	59	26	-4	2	0	-13	0	27
Prudential	156,309	502	406	68	16	4	1	1	-1	1	3
Refuge	21,326	750	230	18	1	1	1	1	-5	0	2
Royal	396,310	490	417	85	14	-4	-2	0	-3	2	0
Sun Alliance & London	1,567,631	507	362	78	28	11	7	2	0	1	4
Wesleyan & General	21,635	659	272	37	13	5	3	5	0	4	4
TOTAL	6,339,212	481	378	85	30	13	5	2	1	1	4
TOTAL based on 1988 data	5,465,711	481	379	82	30	12	5	2	0	0	10(8+)

Risk Group : FIRE

Future Inflation 8.00%

Method : AVERAGE CLAIM

MEAN TERMS

Name	0	1	2	3	4	5	6	7	8	9+
Avon	1.53	1.37	2.24	2.86	3.07	3.16	3.03	2.61	2.33	2.00
Britannic	.99	.64	.48	-1.12	-17.33	1.13	.13	-1.25	3.00	2.00
Commercial Union	1.27	.95	1.19	1.42	1.73	3.98	3.14	2.70	1.75	2.00
Co-operative	1.15	.91	1.33	2.04	3.76	2.71	3.49	2.84	3.00	2.00
Cornhill	1.14	.83	1.08	1.15	.86	-7.44	2.00	1.21	-2.68	2.00
Eagle Star	1.22	1.01	1.58	1.96	2.35	3.37	3.45	3.22	2.52	2.00
Ecclesiastical	1.76	1.23	2.34	3.91	5.17	4.77	4.18	3.43	2.63	2.00
Economic	1.19	.94	1.69	2.38	3.36	3.25	4.30	4.00	3.00	2.00
General Accident	1.22	.86	1.16	1.30	1.60	3.95	5.39	4.58	2.80	2.00
Guardian Royal	1.16	.91	1.28	1.59	2.13	1.88	2.51	2.94	2.36	2.00
Ins. Co. of North America	1.54	1.12	1.47	1.75	1.87	2.03	1.79	1.48	1.42	2.00
Iron Trades Mutual	1.01	.62	.49	-.73	.42	-1.47	-.70	-1.67	3.00	2.00
Legal & General	1.36	1.00	1.44	2.92	4.31	5.69	5.11	4.46	3.03	2.00
Minster	1.54	1.18	1.47	1.60	2.06	1.88	4.19	3.19	2.50	2.00
Municipal General	1.07	.80	.86	.45	-.72	3.36	.50	--	--	--
Municipal Mutual	2.03	1.61	1.54	1.60	1.61	1.63	1.45	1.34	2.23	2.00
National Farmers Union Mutual	.89	.53	-.01	7.41	2.47	1.50	1.78	2.87	3.00	2.00
Norwich Union	1.23	.80	.97	1.43	3.05	9.79	328.44	6.22	2.65	2.00
Provincial	1.28	1.10	2.48	4.46	11.56	8.08	8.04	6.91	2.97	2.00
Prudential	1.15	.80	1.12	1.85	3.14	4.49	4.23	4.57	2.52	2.00
Refuge	.78	.61	.87	2.71	4.21	-19.36	-3.14	-3.03	3.00	2.00
Royal	1.11	.69	.53	-.13	.39	-.85	-11.06	-8.81	.68	2.00
Sun Alliance & London	1.24	1.01	1.41	1.74	2.10	2.42	3.42	3.88	2.70	2.00
Wesleyan & General	1.02	1.02	2.04	2.79	3.25	3.09	2.62	2.84	1.87	2.00
TOTAL	1.29	1.02	1.39	1.74	2.19	2.74	3.14	3.20	2.46	2.00
TOTAL based on 1988 data	1.31	1.05	1.55	2.04	2.70	3.34	3.54	3.12	2.00(8+)	

## Risk Group : FIRE

Method: COMPANY INCURRED

Name	Size	RUN-OFF PATTERN PER MILLE					
		0	1	2	3	4	5+
Avon	37,829	450	372	82	29	17	50
Britannic	3,364	564	359	48	3	26	0
Commercial Union	663,502	454	379	99	33	18	17
Co-operative	54,845	500	360	78	31	-2	33
Cornhill	50,430	480	385	68	20	17	30
Eagle Star	958,607	513	358	68	26	15	19
Ecclesiastical	135,280	272	527	119	36	7	39
Economic	17,631	496	398	61	23	5	18
General Accident	436,147	445	399	80	30	17	29
Guardian Royal	760,536	519	362	71	25	6	16
Ins. Co. of North Americ	47,004	293	448	115	53	33	57
Iron Trades Mutual	32,188	473	413	92	17	32	-28
Legal & General	82,581	408	411	115	27	11	28
Minster	14,683	390	385	113	42	13	58
Municipal General	76,145	573	346	54	21	7	0
Municipal Mutual	430,038	265	323	196	95	51	70
National Farmers Union M	119,917	637	336	21	12	-1	-6
Norwich Union	191,541	414	417	97	24	9	39
Provincial	63,733	498	388	61	31	-3	24
Prudential	156,309	494	387	74	19	6	21
Refuge	21,326	706	250	27	3	4	9
Royal	396,310	475	414	90	22	-2	0
Sun Alliance & London	1,567,631	488	365	85	31	13	19
Wesleyan & General	21,635	647	280	40	14	5	15

Risk Group : FIRE

Name	Size	RUN-OFF PATTERN PER MILLE								Method: COMPANY INCURRED
		0	1	2	3	4	5	6	7	
TOTAL	6,339,212	465	375	90	33	14	8	4	2	3
TOTAL based on 1988 data	5,465,711	472	373	84	32	15	7	4	-1	14 (8+)

Risk Group : FIRE

Name	Size	MEAN TERMS								Method: COMPANY INCURRED
		0	1	2	3	4	5	6	7	
TOTAL	6,339,212	1.38	1.15	1.66	2.13	2.52	2.77	2.93	2.90	2.29
TOTAL based on 1988 data	5,465,711	1.38	1.17	1.79	2.31	2.78	3.23	3.36	3.20	2.00 (8+)

## Risk Group : EMPLOYERS LIABILITY

Method : INFLATION ADJUSTED CHAIN LADDER

## RUN-OFF PATTERN PER MILLE

Name	Size	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Avon	4,543	20	127	172	234	139	211	57	30	9	1	0	0	0	0	0	0
Commercial Union	123,655	54	187	215	189	143	96	53	28	16	11	5	2	1	0	0	1
Co-operative	16,472	36	143	184	175	152	109	68	43	21	11	9	8	10	0	0	32
Cornhill	22,879	23	151	223	203	134	97	52	27	41	16	18	0	0	1	1	12
Eagle Star	427,510	22	160	194	168	125	87	55	39	23	17	12	12	12	12	13	48
General Accident	118,810	29	168	225	178	144	88	52	36	21	14	15	4	4	2	3	18
Guardian Royal	194,788	45	200	204	161	138	92	52	37	24	11	9	4	6	2	2	14
Iron Trades Mutual	35,294	19	138	177	153	135	98	85	80	82	16	5	0	1	1	3	7
Iron Trades Employers	285,554	52	206	195	166	121	77	54	37	27	18	13	13	4	2	4	10
Legal & General	23,105	18	119	198	179	153	87	76	48	15	12	9	10	-5	8	20	53
Norwich Union	43,002	19	131	199	201	139	94	66	45	31	7	11	1	2	5	3	46
Orion	6,880	12	114	195	188	149	98	86	112	26	5	1	4	2	0	0	8
Pearl	6,716	17	99	219	183	178	121	44	39	38	20	10	0	1	14	16	2
Provincial	17,536	19	157	240	195	128	97	53	29	24	23	11	3	3	2	0	17
Prudential	35,344	43	140	205	207	146	87	72	39	33	4	19	1	2	7	0	-6
Royal	60,618	30	157	173	151	114	79	56	30	19	20	11	4	4	15	24	113
Sun Alliance & London	125,541	16	118	165	169	132	98	65	41	28	18	6	7	9	4	4	121
Wesleyan & General	136	44	195	168	94	360	0	140	0	0	0	0	0	0	0	0	0
TOTAL	1,548,383	32	168	198	172	131	89	57	38	25	16	11	9	6	6	7	36
TOTAL of 1988	1,366,985	33	174	205	177	132	88	56	36	24	15	10	6	6	5	33(14+)	

## Risk Group : EMPLOYERS LIABILITY

Method : INFLATION ADJUSTED CHAIN LADDER

## MEAN TERMS

Name	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Avon	3.92	2.99	2.36	1.83	1.52	.98	1.03	.78	.60	.50	--	--	--	--	--	--
Comm. Union	3.57	2.75	2.30	2.01	1.82	1.71	1.70	1.71	1.66	1.55	1.87	2.78	3.61	4.06	5.00	4.00
Co-operative	4.55	3.70	3.26	3.05	3.02	3.25	3.73	4.35	5.19	5.56	5.52	5.47	5.44	6.00	5.00	4.00
Cornhill	4.13	3.22	2.72	2.54	2.58	2.63	2.86	2.90	2.63	3.41	3.88	7.21	6.29	5.40	4.71	4.00
Eagle Star	5.06	4.16	3.87	3.92	4.18	4.57	5.02	5.35	5.63	5.56	5.37	4.96	4.60	4.29	4.05	4.00
Gen. Accident	4.17	3.28	2.86	2.77	2.78	3.06	3.40	3.70	4.13	4.40	4.58	5.48	5.18	4.96	4.31	4.00
Guardian Royal	3.98	3.14	2.84	2.70	2.61	2.76	3.05	3.26	3.68	4.29	4.46	4.69	4.47	4.93	4.50	4.00
Iron Trades Mut.	4.60	3.68	3.20	2.92	2.64	2.40	2.06	1.75	1.61	3.39	5.06	6.00	5.00	4.22	3.56	4.00
Iron Trades Emp.	4.02	3.21	2.97	2.85	2.87	2.98	3.02	3.08	3.13	3.23	3.29	3.41	4.39	4.41	3.84	4.00
Legal & General	5.13	4.21	3.73	3.69	3.85	4.39	4.77	5.69	6.71	6.57	6.34	5.93	5.64	4.35	3.75	4.00
Norwich Union	4.78	3.86	3.38	3.26	3.50	3.84	4.29	4.93	5.81	6.98	6.68	6.85	6.00	5.22	4.75	4.00
Orion	4.42	3.47	2.86	2.54	2.33	2.13	1.78	1.48	2.93	5.20	5.84	5.09	5.97	6.00	5.00	4.00
Pearl	4.47	3.54	2.87	2.66	2.48	2.63	3.05	2.86	2.77	3.14	3.37	3.22	2.22	1.26	.88	4.00
Provincial	4.16	3.23	2.75	2.67	2.75	2.85	3.22	3.53	3.58	3.81	4.96	5.99	5.65	5.46	5.00	4.00
Prudential	3.90	3.06	2.50	2.17	2.02	1.88	1.57	1.35	.90	.36	-.66	-7.53	-13.46	-53.98	5.00	4.00
Royal	6.01	5.18	5.08	5.32	5.81	6.43	7.01	7.54	7.54	7.23	7.01	6.48	5.63	4.75	4.22	4.00
Sun Alliance	6.12	5.21	4.85	4.87	5.27	5.84	6.57	7.24	7.64	7.83	7.70	7.00	6.31	5.69	4.87	4.00
Wesleyan & Gen.	3.59	2.73	2.30	1.81	1.06	1.50	.50	--	--	--	--	--	--	--	--	--
TOTAL	4.60	3.74	3.42	3.38	3.54	3.88	4.31	4.73	5.14	5.43	5.49	5.36	5.13	4.74	4.30	4.00
1988 TOTAL	4.39	3.52	3.18	3.11	3.23	3.53	3.92	4.32	4.72	5.04	5.12	5.06	4.67	4.38	4.00(14+)	

## Risk Group : EMPLOYERS LIABILITY

Method: BASIC CHAIN LADDER

## RUN-OFF PATTERN PER MILLE

Name	Size	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Avon	4,543	18	123	172	245	148	198	50	33	12	1	0	0	0	0	0	0
Commercial Union	123,655	47	178	210	190	145	102	58	31	17	13	6	2	1	1	0	1
Co-operative	16,472	34	136	182	172	153	106	69	47	22	13	10	9	12	0	0	35
Cornhill	22,879	21	140	214	196	137	102	57	30	44	20	22	0	0	1	1	15
Eagle Star	427,510	20	151	185	163	124	90	59	41	25	18	13	14	14	14	15	54
General Accident	118,810	29	163	220	175	142	90	54	39	23	15	15	4	4	2	4	21
Guardian Royal	194,788	44	194	198	158	139	94	54	40	26	12	10	5	7	2	2	15
Iron Trades Mutual	35,294	17	128	164	144	134	100	91	93	93	17	6	0	1	1	4	8
Iron Trades Employers	285,554	52	194	185	162	121	81	59	40	30	21	15	17	5	2	5	12
Legal & General	23,105	17	119	196	171	149	88	75	51	15	13	10	10	-5	8	24	59
Norwich Union	43,002	18	125	191	194	133	95	75	49	33	8	12	1	2	6	3	53
Orion	6,880	12	116	198	197	159	103	79	92	23	5	1	4	2	0	0	9
Pearl	6,716	16	97	216	174	179	121	48	38	40	22	10	0	1	16	20	1
Provincial	17,536	17	148	228	195	133	101	54	32	25	26	13	3	4	2	0	20
Prudential	35,344	40	134	202	205	146	90	79	41	33	5	23	1	2	8	0	-7
Royal	60,618	29	147	163	145	113	78	58	30	20	22	13	4	4	17	28	128
Sun Alliance & London	125,541	15	108	154	162	128	100	68	43	30	20	7	7	10	5	4	138
Wesleyan & General	136	48	193	184	98	337	0	140	0	0	0	0	0	0	0	0	0
TOTAL	1,548,383	31	159	189	168	131	91	60	41	27	17	12	10	7	7	8	41
TOTAL of 1988 data	1,366,985	31	166	197	173	132	91	59	39	26	16	12	7	8	6	37(14+)	

## Risk Group : EMPLOYERS LIABILITY

Method: BASIC CHAIN LADDER

## MEAN TERMS

Name	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Avon	3.92	2.98	2.34	1.80	1.52	1.03	1.11	.78	.49	-.60	9.00	8.00	7.00	6.00	5.00	4.00
Comm. Union	3.68	2.84	2.38	2.07	1.87	1.73	1.72	1.72	1.68	1.56	1.95	2.88	3.66	4.06	5.00	4.00
Co-operative	4.68	3.83	3.38	3.19	3.15	3.41	3.84	4.38	5.18	5.48	5.45	5.37	5.31	6.00	5.00	4.00
Cornhill	4.32	3.41	2.89	2.71	2.71	2.75	2.95	3.00	2.74	3.39	3.84	7.22	6.30	5.40	4.70	4.00
Eagle Star	5.30	4.40	4.11	4.15	4.39	4.74	5.17	5.49	5.72	5.63	5.40	4.97	4.60	4.26	4.02	4.00
Gen. Accident	4.28	3.39	2.98	2.90	2.92	3.18	3.51	3.78	4.22	4.49	4.65	5.43	5.13	4.89	4.25	4.00
Guardian Royal	4.08	3.24	2.94	2.80	2.69	2.84	3.12	3.31	3.72	4.28	4.38	4.58	4.34	4.82	4.43	4.00
Iron Trades Mut	4.80	3.88	3.38	3.07	2.75	2.47	2.10	1.75	1.65	3.58	5.15	6.03	5.03	4.23	3.56	4.00
Iron Trades Emp	4.20	3.40	3.15	3.02	3.02	3.09	3.10	3.15	3.17	3.22	3.24	3.28	4.26	4.30	3.75	4.00
Legal & General	5.28	4.36	3.89	3.89	4.06	4.58	4.96	5.78	6.81	6.60	6.35	5.95	5.61	4.33	3.71	4.00
Norwich Union	5.00	4.08	3.60	3.50	3.73	4.00	4.37	5.09	6.00	7.10	6.77	6.86	6.00	5.20	4.74	4.00
Orion	4.34	3.39	2.78	2.45	2.25	2.13	1.90	1.71	3.23	5.30	5.93	5.17	6.05	6.00	5.00	4.00
Pearl	4.57	3.63	2.98	2.78	2.58	2.75	3.13	2.98	2.85	3.19	3.39	3.18	2.18	1.22	.75	4.00
Provincial	4.31	3.38	2.89	2.78	2.86	2.98	3.38	3.63	3.69	3.88	4.95	6.03	5.65	5.46	5.00	4.00
Prudential	3.98	3.12	2.55	2.21	2.04	1.87	1.54	1.32	.85	.23	-.82	-10.14	-18.27	-23.71	5.00	4.00
Royal	6.38	5.55	5.45	5.68	6.13	6.70	7.20	7.67	7.60	7.25	7.00	6.46	5.61	4.73	4.20	4.00
Sun Alliance	6.49	5.58	5.21	5.21	5.58	6.08	6.76	7.38	7.72	7.86	7.71	7.00	6.31	5.68	4.86	4.00
Wesleyan & Gen.	3.54	2.70	2.25	1.82	1.09	1.50	.50	--	--	--	--	--	--	--	--	--
TOTAL	4.81	3.95	3.63	3.58	3.73	4.04	4.45	4.85	5.23	5.47	5.49	5.33	5.10	4.70	4.26	4.00
1988 TOTAL	4.56	3.69	3.35	3.28	3.39	3.66	4.03	4.42	4.77	5.05	5.10	5.02	4.63	4.35	4.00(14+)	



## Risk Group : EMPLOYERS LIABILITY

Method : AVERAGE CLAIM

## RUN-OFF PATTERN PER MILLE

Name	Size	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Avon	4,543	24	128	172	226	127	234	61	23	5	1	0	0	0	0	0	0
Commercial Union	123,655	45	157	205	193	155	109	62	33	18	14	6	2	1	1	0	1
Co-operative	16,472	32	132	183	168	148	118	72	41	21	11	11	10	12	0	0	42
Cornhill	22,879	23	151	224	204	134	97	54	28	36	18	19	0	0	1	1	10
Eagle Star	427,510	20	151	188	168	127	91	59	42	25	18	12	12	13	13	14	49
General Accident	118,810	28	166	226	186	154	90	52	33	19	12	12	3	3	1	3	14
Guardian Royal	194,788	43	200	209	169	138	93	52	36	22	10	7	3	5	2	1	11
Iron Trades Mutual	35,294	17	130	176	152	131	102	89	78	86	19	5	0	1	1	4	8
Iron Trades Employers	285,554	49	197	191	164	123	81	58	39	29	20	14	15	4	2	4	10
Legal & General	23,105	17	125	200	175	153	87	75	48	15	13	9	10	-4	7	19	51
Norwich Union	43,002	18	132	200	204	138	91	66	48	31	7	11	1	2	5	3	43
Orion	6,880	12	108	167	151	114	76	72	251	40	2	0	1	1	0	0	6
Pearl	6,716	17	117	221	181	183	119	41	34	33	18	9	0	1	12	11	3
Provincial	17,536	17	148	230	197	135	103	54	31	26	22	10	3	3	2	0	17
Prudential	35,344	53	146	213	205	141	81	69	36	34	4	15	1	2	6	0	-5
Royal	60,618	31	159	175	149	112	80	56	30	19	20	11	4	4	15	23	112
Sun Alliance & London	125,541	19	135	183	181	137	98	61	36	21	13	4	5	7	3	3	93
Wesleyan & General	136	30	162	173	94	429	0	112	0	0	0	0	0	0	0	0	0
TOTAL	1,548,383	31	163	196	173	134	91	59	39	25	16	11	8	6	6	7	35
TOTAL of 1988 data	1,366,985	31	170	204	179	134	90	57	37	24	14	10	6	6	6	33(14+)	

## Risk Group : EMPLOYERS LIABILITY

Method : AVERAGE CLAIM

## MEAN TERMS

Name	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Avon	3.90	2.98	2.36	1.83	1.50	.89	.89	.74	.67	.50	--	--	--	--	--	--
Comm. Union	3.79	2.95	2.43	2.09	1.86	1.73	1.71	1.71	1.66	1.53	2.02	3.05	3.73	4.07	5.00	4.00
Co-operative	4.80	3.94	3.49	3.32	3.30	3.53	4.17	4.95	5.69	5.97	5.77	5.66	5.59	6.00	5.00	4.00
Cornhill	4.10	3.19	2.68	2.49	2.52	2.54	2.72	2.78	2.51	3.02	3.50	7.20	6.26	5.38	4.70	4.00
Eagle Star	5.17	4.26	3.94	3.95	4.18	4.52	4.96	5.29	5.59	5.55	5.36	4.92	4.53	4.24	4.00	4.00
Gen. Accident	4.04	3.14	2.68	2.53	2.49	2.76	3.10	3.44	3.92	4.27	4.49	5.40	5.10	4.88	4.23	4.00
Guardian Royal	3.88	3.03	2.70	2.54	2.44	2.55	2.81	3.05	3.51	4.22	4.47	4.76	4.53	4.94	4.49	4.00
Iron Trades Mut	4.70	3.77	3.27	2.99	2.71	2.45	2.13	1.85	1.69	3.32	5.13	5.89	4.87	4.16	3.55	4.00
Iron Trades Emp	4.12	3.31	3.04	2.91	2.89	2.96	2.98	3.03	3.05	3.11	3.19	3.28	4.35	4.34	3.76	4.00
Legal & General	5.07	4.15	3.69	3.66	3.80	4.33	4.71	5.60	6.63	6.49	6.32	5.91	5.67	4.38	3.78	4.00
Norwich Union	4.74	3.82	3.34	3.21	3.46	3.78	4.15	4.74	5.69	6.92	6.61	6.86	6.02	5.24	4.75	4.00
Orion	4.89	3.95	3.37	3.04	2.72	2.29	1.65	.92	2.01	6.69	7.10	6.29	6.28	6.00	5.00	4.00
Pearl	4.30	3.37	2.76	2.53	2.33	2.51	2.99	2.84	2.77	3.14	3.47	3.48	2.48	1.53	1.43	4.00
Provincial	4.22	3.29	2.79	2.66	2.70	2.79	3.19	3.45	3.54	3.90	5.02	5.90	5.59	5.41	5.00	4.00
Prudential	3.79	2.98	2.43	2.12	1.99	1.87	1.55	1.34	.87	.43	-.59	-5.70	-10.43	-30.72	5.00	4.00
Royal	5.97	5.15	5.06	5.32	5.79	6.38	6.98	7.50	7.50	7.19	6.99	6.46	5.62	4.74	4.22	4.00
Sun Alliance	5.47	4.56	4.21	4.24	4.66	5.31	6.21	7.09	7.70	7.89	7.73	7.02	6.31	5.69	4.86	4.00
Wesleyan & Gen.	3.68	2.78	2.23	1.71	.92	1.50	.50	--	--	--	--	--	--	--	--	--
TOTAL	4.62	3.75	3.41	3.35	3.48	3.80	4.23	4.67	5.11	5.41	5.49	5.34	5.11	4.71	4.27	4.00
1988 TOTAL	4.40	3.53	3.17	3.09	3.20	3.48	3.87	4.30	4.70	5.04	5.12	5.04	4.64	4.35	4.00(14+)	

## Risk Group : EMPLOYERS LIABILITY

Method : COMPANY INCURRED

## RUN-OFF PATTERN PER MILLE

Name	Size	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Avon	4,543	24	134	179	185	116	166	83	46	29	10	4	4	4	4	4	4
Commercial Union	123,655	46	162	195	182	148	110	65	39	21	17	7	2	2	2	0	4
Co-operative	16,472	31	128	170	164	148	125	78	48	29	14	14	10	9	0	0	32
Cornhill	22,879	21	135	195	183	123	98	54	27	47	18	19	1	2	3	6	69
Eagle Star	427,510	20	149	183	164	126	93	62	46	27	20	13	13	13	11	10	52
General Accident	118,810	25	152	207	176	154	98	62	38	24	16	17	4	4	2	4	17
Guardian Royal	194,788	43	194	203	162	133	93	55	39	26	13	10	6	7	4	-5	19
Iron Trades Mutual	35,294	15	110	143	127	107	81	67	48	82	25	10	-1	11	11	17	147
Iron Trades Employers	285,554	47	184	176	152	119	83	62	43	33	23	16	15	9	5	12	19
Legal & General	23,105	16	112	188	170	150	93	89	58	19	15	10	11	-4	6	13	53
Norwich Union	43,002	18	122	190	192	136	95	67	52	39	9	13	1	2	5	3	54
Orion	6,880	13	119	188	177	129	91	115	120	26	4	1	3	2	4	4	4
Pearl	6,716	16	95	211	182	164	116	49	52	53	25	10	0	1	10	7	11
Provincial	17,536	16	136	209	182	130	110	62	43	36	25	15	5	4	2	0	26
Prudential	35,344	45	124	178	181	135	83	75	40	43	7	77	92	-54	-114	0	89
Royal	60,618	26	139	166	147	114	82	59	32	20	23	12	5	4	17	24	130
Sun Alliance & London	125,541	16	113	161	165	133	103	70	44	29	19	6	7	8	4	3	120
Wesleyan & General	136	56	242	204	85	283	0	99	0	0	0	0	6	6	6	5	6
TOTAL	1,548,383	29	153	184	164	130	93	63	43	29	19	13	10	8	7	8	47
TOTAL of 1988 data	1,366,985	30	159	191	170	133	94	53	44	29	18	13	8	8	6	43(14+)	

## Risk Group : EMPLOYERS LIABILITY

Method : COMPANY INCURRED

## MEAN TERMS

Name	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Avon	4.33	3.43	2.90	2.55	2.34	1.94	2.17	2.41	2.73	3.45	3.58	3.20	2.88	2.67	2.75	4.00
Comm. Union	3.93	3.09	2.62	2.31	2.10	1.99	2.02	2.08	2.19	2.26	3.07	4.04	3.97	4.39	5.00	4.00
Co-operative	4.78	3.92	3.44	3.18	3.05	3.11	3.50	4.00	4.58	5.08	5.10	5.44	5.62	6.00	5.00	4.00
Cornhill	5.22	4.32	3.93	3.96	4.32	4.70	5.37	5.76	5.62	6.67	6.78	7.22	6.30	5.42	4.65	4.00
Eagle Star	5.23	4.32	4.01	4.00	4.18	4.47	4.87	5.20	5.55	5.58	5.48	5.13	4.81	4.56	4.26	4.00
Gen. Accident	4.33	3.43	2.97	2.80	2.72	2.91	3.17	3.48	3.80	4.01	4.21	5.30	5.05	4.82	4.22	4.00
Guardian Royal	4.08	3.24	2.93	2.82	2.76	2.89	3.18	3.43	3.87	4.52	4.83	5.19	5.25	6.00	6.80	4.00
Iron Trades Mut	7.05	6.15	5.86	5.91	6.04	6.23	6.34	6.45	6.41	7.60	7.51	6.90	5.86	5.21	4.53	4.00
Iron Trades Emp	4.56	3.76	3.54	3.44	3.46	3.55	3.61	3.71	3.74	3.83	3.84	3.75	3.86	3.71	3.22	4.00
Legal & General	5.21	4.29	3.77	3.67	3.72	4.05	4.28	5.15	6.33	6.39	6.40	6.16	6.04	4.74	4.12	4.00
Norwich Union	5.04	4.12	3.64	3.53	3.75	4.04	4.41	4.86	5.64	6.95	6.71	6.98	6.13	5.35	4.79	4.00
Orion	4.51	3.57	2.99	2.68	2.45	2.12	1.64	1.42	2.75	4.56	4.44	3.62	3.31	2.67	2.75	4.00
Pearl	4.63	3.69	3.04	2.83	2.68	2.76	2.97	2.69	2.66	3.47	4.38	4.78	3.78	2.89	3.27	4.00
Provincial	4.61	3.68	3.19	3.07	3.09	3.12	3.44	3.60	3.78	4.29	5.13	5.94	5.73	5.55	5.00	4.00
Prudential	4.90	4.10	3.64	3.50	3.65	3.91	4.02	4.50	4.66	5.55	4.94	33.39	-5.26	-18.36	5.00	4.00
Royal	6.40	5.56	5.41	5.63	6.07	6.63	7.16	7.63	7.62	7.29	7.10	6.56	5.71	4.84	4.31	4.00
Sun Alliance	6.15	5.24	4.86	4.84	5.16	5.65	6.36	7.08	7.56	7.78	7.70	7.02	6.34	5.73	4.89	4.00
Wesleyan & Gen.	3.56	2.74	2.52	2.34	1.72	3.36	2.36	7.20	6.20	5.20	4.20	3.20	2.88	2.67	2.75	4.00
TOTAL	5.00	4.13	3.81	3.77	3.91	4.21	4.59	4.98	5.34	5.59	5.62	5.46	5.19	4.80	4.35	4.00
1988 TOTAL	4.72	3.85	3.51	3.44	3.55	3.84	4.26	4.45	4.83	5.16	5.23	5.15	4.76	4.44	4.00(14+)	

Risk Group : MOTOR - COMPREHENSIVE

Method : INFLATION ADJUSTED CHAIN LADDER

Future Inflation 8.00%

RUN-OFF PATTERN PER MILLE

NAME	SIZE	0	1	2	3	4	5	6	7	8	9	10	11	12	13+
Avon	54,767	620	239	38	32	24	18	11	6	4	2	2	1	1	1
Britannic	16,841	624	234	39	37	25	5	10	7	6	4	7	2	0	0
Commercial Union	378,138	647	226	36	27	26	19	10	5	2	1	0	0	0	0
Co-operative	414,231	609	219	36	36	27	21	16	10	9	4	3	1	6	3
Cornhill	310,151	614	228	40	35	24	24	10	6	5	3	6	0	0	3
Eagle Star *	527,395	626	238	39	32	23	16	10	7	4	2	2	0	0	0
General Accident	850,645	622	238	35	30	22	18	12	8	6	4	2	2	1	1
Guardian Royal	698,661	634	238	42	34	21	16	8	4	2	1	1	0	0	0
Iron Trades Mutual *	229,958	637	228	34	30	20	17	7	10	6	1	5	6	0	0
Legal & General	101,594	588	250	36	31	22	35	15	11	4	2	5	0	0	1
London & Edinburgh	138,749	590	250	43	47	19	21	13	8	2	3	3	0	0	0
Nat. Farmers Union Mut.	174,612	601	219	36	42	32	26	20	12	8	5	0	1	0	0
Nat. Ins. and Guarantee	229,879	616	254	38	33	22	19	8	5	3	1	0	0	0	0
Norman *	36,086	621	229	45	38	28	18	8	3	7	2	0	0	0	0
Norwich Union *	593,384	586	279	38	35	26	13	9	7	5	1	0	0	0	0
Pearl	63,435	559	238	53	42	55	35	11	4	1	1	0	1	0	0
Provincial	226,910	627	236	39	34	24	12	11	6	6	1	3	0	0	0
Prudential	345,982	627	233	37	28	25	17	10	7	4	3	3	3	0	4
Royal *	565,899	620	236	40	33	27	15	14	6	4	1	0	1	1	1
Sun Alliance & London	818,264	631	245	40	33	21	14	8	4	3	1	1	0	0	1
Wesleyan & General	10,348	550	193	35	32	49	74	28	20	0	4	0	15	0	0
TOTAL	6,785,929	620	239	38	32	24	18	11	6	4	2	2	1	1	1
TOTAL of 1988 data	5,672,884	623	240	39	33	24	16	10	6	4	2	1	1	2(12+)	

\* For these companies separate Non-comp data were available

## Risk Group : MOTOR - COMPREHENSIVE

Method : INFLATION ADJUSTED CHAIN LADDER

## Future Inflation 8.00%

## MEAN TERMS

NAME	0	1	2	3	4	5	6	7	8	9	10	11	12	13+
Avon	1.32	1.65	2.61	2.40	2.26	2.16	2.20	2.26	2.28	2.37	2.23	2.27	2.11	2.00
Britannic	1.33	1.70	2.70	2.54	2.72	3.08	2.42	2.19	1.81	1.38	.76	.50	--	--
Commercial Union	1.21	1.51	2.29	2.00	1.65	1.44	1.33	1.27	1.25	1.31	1.28	1.33	.50	--
Co-operative	1.54	2.17	3.29	3.04	2.95	2.87	2.84	2.89	2.79	2.92	2.61	2.19	1.43	2.00
Cornhill	1.41	1.85	2.81	2.61	2.52	2.38	2.75	2.74	2.58	2.35	1.88	3.54	2.87	2.00
Eagle Star *	1.27	1.57	2.44	2.23	2.09	1.96	1.89	1.73	1.61	1.44	1.08	2.08	1.84	2.00
General Accident	1.35	1.75	2.87	2.66	2.54	2.37	2.32	2.30	2.19	2.14	2.11	1.76	2.06	2.00
Guardian Royal	1.20	1.40	2.07	1.83	1.69	1.48	1.52	1.54	1.47	1.88	2.11	3.74	2.83	2.00
Iron Trades Mutual *	1.33	1.79	2.95	2.76	2.71	2.59	2.68	2.22	2.15	2.00	1.08	.54	3.00	2.00
Legal & General	1.47	1.85	2.92	2.61	2.28	1.82	2.01	1.98	2.17	2.00	1.39	3.67	3.00	2.00
London & Edinburgh	1.37	1.62	2.38	2.07	2.15	1.79	1.69	1.66	1.84	1.29	1.08	3.08	3.00	2.00
Nat. Farmers Union Mut.	1.49	1.99	2.79	2.35	2.11	1.83	1.57	1.38	1.17	1.03	1.94	1.61	3.00	2.00
Nat. Ins. and Guarantee	1.23	1.40	2.18	1.88	1.65	1.37	1.35	1.11	.84	1.07	.84	.18	.50	--
Norman *	1.28	1.56	2.19	1.93	1.77	1.68	1.70	1.40	.73	.50	--	--	--	--
Norwich Union *	1.28	1.39	2.26	1.96	1.79	1.74	1.45	1.11	.74	.55	.50	--	--	--
Pearl	1.49	1.74	2.19	1.79	1.28	1.11	1.27	1.60	2.06	1.53	1.56	1.02	3.00	2.00
Provincial	1.27	1.57	2.42	2.19	2.09	2.08	1.78	1.64	1.26	1.44	.74	1.30	1.88	2.00
Prudential	1.36	1.82	3.01	2.89	2.77	2.86	3.08	3.11	3.19	3.08	2.81	2.67	2.91	2.00
Royal *	1.30	1.60	2.43	2.18	1.96	1.90	1.67	1.90	2.05	2.87	2.58	1.80	1.41	2.00
Sun Alliance & London	1.20	1.39	2.13	1.91	1.81	1.71	1.70	1.78	1.87	2.53	2.51	3.18	3.07	2.00
Wesleyan & General	1.94	2.69	3.34	2.78	2.16	1.73	2.07	2.22	3.01	2.07	1.48	.50	--	--
TOTAL	1.32	1.65	2.61	2.39	2.26	2.16	2.20	2.26	2.28	2.37	2.23	2.27	2.11	2.00
TOTAL of 1988 data	1.28	1.58	2.48	2.27	2.17	2.12	2.11	2.16	2.15	2.26	2.18	2.16	2.00(12+)	

\* For these companies separate Non-comp data were available

## Risk Group : MOTOR - COMPREHENSIVE

Method : BASIC CHAIN LADDER

NAME	SIZE	RUN-OFF PATTERN PER MILLE												
		0	1	2	3	4	5	6	7	8	9	10	11	12 13+
Avon	54,767	622	233	35	31	23	23	12	15	5	2	1	0	0
Britannic	16,841	622	235	40	37	23	23	11	8	6	4	7	2	0
Commercial Union	378,138	645	226	36	27	26	19	11	5	3	1	0	0	0
Co-operative	414,231	607	220	36	35	27	21	16	10	9	4	3	2	3
Cornhill	310,151	613	227	40	35	24	24	11	7	4	3	7	0	3
Eagle Star *	527,395	620	239	39	32	24	18	10	7	4	2	3	0	0
General Accident	850,645	619	239	35	30	22	18	13	8	6	4	2	2	2
Guardian Royal	698,661	634	238	41	34	21	16	8	4	2	1	1	0	0
Iron Trades Mutual *	229,958	641	220	32	30	20	18	7	10	7	1	7	8	0
Legal & General	101,594	592	250	35	30	22	32	14	10	4	2	6	0	1
London & Edinburgh	138,749	590	248	43	47	20	20	14	9	2	4	3	0	0
Nat. Farmers Union Mut.	174,612	600	218	35	42	32	25	20	13	8	5	0	1	0
Nat. Ins. and Guarantee	229,879	616	256	37	33	22	19	8	5	4	1	0	0	0
Norman *	36,086	621	227	46	37	29	17	9	4	8	3	0	0	0
Norwich Union *	593,384	584	279	38	35	26	13	10	7	6	2	0	0	0
Pearl	63,435	555	239	51	42	60	33	13	4	1	1	0	1	0
Provincial	226,910	628	236	38	34	24	12	12	6	7	1	3	0	0
Prudential	345,982	627	232	36	27	24	17	10	8	5	3	3	3	5
Royal *	565,899	614	237	40	32	28	16	16	7	5	1	0	1	1
Sun Alliance & London	818,264	633	244	40	32	21	13	8	4	3	1	1	0	1
Wesleyan & General	10,348	539	189	36	32	48	74	35	23	1	5	0	19	0
TOTAL	6,785,929	619	239	38	32	24	18	11	7	4	2	2	1	1
TOTAL of 1988 data	5,672,884	622	240	38	32	23	16	11	6	4	2	2	1	2(12+)

\* For these companies separate Non-comp data were available

## Risk Group : MOTOR - COMPREHENSIVE

Method : BASIC CHAIN LADDER

## MEAN TERMS

NAME	0	1	2	3	4	5	6	7	8	9	10	11	12	13+
Avon	1.34	1.72	2.66	2.34	2.05	1.68	1.47	.97	.96	.76	.50	--	--	--
Britannic	1.35	1.74	2.75	2.62	2.82	3.05	2.37	2.13	1.77	1.39	.77	.50	--	--
Commercial Union	1.22	1.53	2.33	2.05	1.70	1.48	1.34	1.28	1.25	1.31	1.26	1.29	.50	--
Co-operative	1.56	2.21	3.38	3.13	3.04	2.95	2.89	2.89	2.76	2.85	2.54	2.12	1.37	2.00
Cornhill	1.43	1.90	2.88	2.69	2.61	2.47	2.80	2.82	2.70	2.43	1.95	3.59	2.88	2.00
Eagle Star *	1.31	1.63	2.55	2.34	2.16	2.02	1.99	1.82	1.72	1.50	1.05	2.00	1.76	2.00
General Accident	1.37	1.79	2.94	2.74	2.60	2.43	2.36	2.35	2.24	2.16	2.19	1.80	2.05	2.00
Guardian Royal	1.20	1.41	2.11	1.87	1.74	1.55	1.55	1.61	1.62	2.05	2.18	3.77	2.86	2.00
Iron Trades Mutual *	1.38	1.94	3.21	3.02	2.98	2.85	2.90	2.39	2.26	2.02	1.09	.54	3.00	2.00
Legal & General	1.44	1.81	2.91	2.61	2.31	1.89	2.09	2.08	2.23	2.07	1.45	3.72	3.00	2.00
London & Edinburgh	1.38	1.66	2.43	2.13	2.21	1.85	1.73	1.70	1.86	1.26	1.04	3.07	3.00	2.00
Nat. Farmers Union Mut.	1.50	2.00	2.81	2.37	2.13	1.85	1.58	1.39	1.19	1.06	1.89	1.51	3.00	2.00
Nat. Ins. and Guarantee	1.23	1.40	2.20	1.90	1.69	1.41	1.37	1.16	.84	1.05	.81	.16	.50	--
Norman *	1.30	1.61	2.26	2.03	1.84	1.79	1.72	1.41	.74	.50	--	--	--	--
Norwich Union *	1.30	1.43	2.33	2.04	1.87	1.82	1.51	1.15	.76	.55	.50	--	--	--
Pearl	1.51	1.76	2.24	1.81	1.29	1.19	1.32	1.71	2.06	1.50	1.65	1.02	3.00	2.00
Provincial	1.28	1.59	2.47	2.24	2.14	2.10	1.78	1.66	1.27	1.45	.76	1.40	1.98	2.00
Prudential	1.38	1.87	3.12	3.02	2.90	3.00	3.20	3.20	3.29	3.25	2.92	2.80	2.91	2.00
Royal *	1.34	1.67	2.54	2.30	2.06	1.98	1.73	1.95	2.13	2.90	2.56	1.77	1.38	2.00
Sun Alliance & London	1.19	1.39	2.15	1.93	1.84	1.74	1.72	1.78	1.86	2.59	2.59	3.22	3.08	2.00
Wesleyan & General	2.04	2.85	3.49	2.95	2.32	1.89	2.13	2.33	3.02	2.10	1.48	.50	--	--
TOTAL	1.33	1.68	2.67	2.46	2.33	2.23	2.25	2.31	2.33	2.42	2.28	2.30	2.12	2.00
TOTAL of 1988 data	1.30	1.62	2.56	2.35	2.25	2.18	2.17	2.21	2.20	2.28	2.19	2.15	2.00(12+)	

\* For these companies separate Non-comp data were available



Risk Group : MOTOR - COMPREHENSIVE

Method : AVERAGE CLAIM

Future Inflation 8.00%

RUN-OFF PATTERN PER MILLE

NAME	SIZE	0	1	2	3	4	5	6	7	8	9	10	11	12	13+
Avon	54,767	616	239	39	33	24	19	11	7	4	2	2	1	1	1
Britannic	16,841	625	233	39	37	25	5	10	7	6	4	7	2	0	0
Commercial Union	378,138	642	226	37	28	27	20	11	5	2	1	0	0	0	0
Co-operative	414,231	611	216	37	36	27	22	16	10	9	4	3	1	6	3
Cornhill	310,151	610	230	41	36	25	25	10	6	5	3	6	0	0	3
Eagle Star *	527,395	619	235	41	33	25	18	12	7	4	3	2	0	0	0
General Accident	850,645	617	237	36	31	23	19	13	8	6	4	2	2	1	1
Guardian Royal	698,661	630	240	42	34	21	17	8	4	2	1	1	0	0	0
Iron Trades Mutual *	229,958	623	233	39	33	23	18	8	8	5	1	5	5	0	0
Legal & General	101,594	573	248	37	32	24	42	17	12	5	2	6	0	0	2
London & Edinburgh	138,749	591	252	42	47	19	20	13	8	2	3	2	0	0	0
Nat. Farmers Union Mut.	174,612	587	218	37	45	34	29	22	13	8	5	0	1	0	0
Nat. Ins. and Guarantee	229,879	615	253	39	32	23	20	8	5	3	1	0	0	0	0
Norman *	36,086	614	233	43	44	25	20	8	3	7	2	0	0	0	0
Norwich Union *	593,384	583	279	40	37	27	13	9	7	4	1	0	0	0	0
Pearl	63,435	555	239	55	43	54	36	11	4	1	1	0	1	0	0
Provincial	226,910	620	236	40	37	25	13	11	6	7	1	3	0	0	0
Prudential	345,982	618	234	38	29	26	18	10	8	5	3	3	3	0	5
Royal *	565,899	614	234	42	36	29	16	15	6	4	1	0	1	1	1
Sun Alliance & London	818,264	624	245	41	35	22	15	9	4	3	1	1	0	0	1
Wesleyan & General	10,348	552	194	34	32	49	73	28	20	0	4	0	14	0	0
TOTAL	6,785,929	616	239	39	33	24	19	11	7	4	2	2	1	1	1
TOTAL of 1988 data	5,672,884	619	240	39	34	24	16	10	6	4	2	1	1	2	2(12+)

\* For these companies separate Non-comp data were available

Risk Group : MOTOR -- COMPREHENSIVE

Method : AVERAGE CLAIM

Future Inflation 8.00%

MEAN TERMS

NAME	0	1	2	3	4	5	6	7	8	9	10	11	12	13+
Avon	1.34	1.68	2.63	2.40	2.27	2.15	2.20	2.26	2.28	2.37	2.23	2.27	2.11	2.00
Britannic	1.33	1.72	2.72	2.56	2.72	3.08	2.42	2.19	1.81	1.38	.76	.50	--	--
Commercial Union	1.23	1.54	2.31	2.01	1.65	1.43	1.33	1.27	1.25	1.31	1.28	1.33	.50	--
Co-operative	1.55	2.19	3.30	3.04	2.95	2.86	2.84	2.89	2.79	2.92	2.61	2.19	1.43	2.00
Cornhill	1.42	1.86	2.82	2.61	2.53	2.38	2.75	2.74	2.58	2.35	1.88	3.54	2.87	2.00
Eagle Star *	1.32	1.65	2.49	2.26	2.08	1.94	1.83	1.71	1.53	1.31	1.12	2.22	1.93	2.00
General Accident	1.38	1.80	2.91	2.69	2.54	2.37	2.32	2.30	2.19	2.14	2.11	1.76	2.06	2.00
Guardian Royal	1.21	1.41	2.09	1.84	1.70	1.47	1.52	1.54	1.47	1.88	2.11	3.74	2.83	2.00
Iron Trades Mutual *	1.34	1.74	2.75	2.58	2.53	2.48	2.62	2.30	2.18	1.97	1.08	.55	3.00	2.00
Legal & General	1.56	1.98	3.01	2.66	2.30	1.79	2.01	1.98	2.17	2.00	1.39	3.67	3.00	2.00
London & Edinburgh	1.36	1.60	2.37	2.06	2.15	1.78	1.69	1.66	1.84	1.29	1.08	3.08	3.00	2.00
Nat. Farmers Union Mut.	1.56	2.07	2.82	2.37	2.12	1.81	1.57	1.38	1.17	1.03	1.94	1.61	3.00	2.00
Nat. Ins. and Guarantee	1.24	1.42	2.19	1.91	1.66	1.36	1.35	1.11	.84	1.07	.84	.18	.50	--
Norman *	1.30	1.57	2.20	1.86	1.78	1.58	1.64	1.41	.72	.50	--	--	--	--
Norwich Union *	1.29	1.39	2.19	1.87	1.70	1.66	1.38	1.05	.72	.57	.50	--	--	--
Pearl	1.50	1.74	2.18	1.78	1.29	1.09	1.27	1.60	2.06	1.53	1.56	1.02	3.00	2.00
Provincial	1.30	1.61	2.43	2.17	2.09	2.08	1.78	1.64	1.26	1.44	.74	1.30	1.88	2.00
Prudential	1.40	1.86	3.02	2.90	2.77	2.86	3.08	3.11	3.19	3.08	2.81	2.67	2.91	2.00
Royal *	1.33	1.65	2.41	2.14	1.94	1.86	1.64	1.88	2.01	2.87	2.59	1.81	1.37	2.00
Sun Alliance & London	1.22	1.43	2.16	1.92	1.81	1.71	1.70	1.78	1.87	2.53	2.51	3.18	3.07	2.00
Wesleyan & General	1.92	2.68	3.34	2.77	2.16	1.73	2.07	2.22	3.01	2.07	1.48	.50	--	--
TOTAL	1.34	1.68	2.62	2.40	2.27	2.15	2.20	2.26	2.28	2.37	2.23	2.27	2.11	2.00
TOTAL of 1988 data	1.30	1.60	2.49	2.27	2.17	2.12	2.11	2.16	2.15	2.26	2.18	2.16	2.00(12+)	

\* For these companies separate Non-comp data were available

Risk Group : MOTOR - COMPREHENSIVE

Method : COMPANY INCURRED

NAME	SIZE	RUN-OFF PATTERN PER MILLE												
		0	1	2	3	4	5	6	7	8	9	10	11	12 13+
Avon	54,767	605	237	39	33	27	20	14	9	6	3	3	1	2
Britannic	16,841	621	233	37	33	22	9	16	10	11	3	5	1	0
Commercial Union	378,138	629	227	39	30	30	19	14	7	3	1	1	0	0
Co-operative	414,231	580	211	36	36	30	25	23	15	14	6	5	2	6
Cornhill	310,151	606	231	42	35	26	23	11	7	6	3	7	0	3
Eagle Star *	527,395	616	236	41	33	25	18	12	7	5	3	3	0	0
General Accident	850,645	615	238	35	29	23	18	15	9	7	4	2	2	1
Guardian Royal	698,661	620	239	41	34	24	18	10	5	4	2	1	0	2
Iron Trades Mutual *	229,958	618	231	39	33	24	19	9	9	6	1	5	5	3
Legal & General	101,594	576	247	37	33	28	32	15	14	7	3	8	0	2
London & Edinburgh	138,749	582	256	44	46	21	17	21	8	2	1	1	0	0
Nat. Farmers Union Mut.	174,612	593	216	36	42	34	25	21	14	8	5	1	2	2
Nat. Ins. and Guarantee	229,879	597	252	39	31	27	22	12	11	6	2	1	2	0
Norman *	36,086	601	235	44	45	29	24	10	3	8	2	0	0	0
Norwich Union *	593,384	570	275	40	38	30	16	13	9	5	1	4	0	1
Pearl	63,435	559	246	54	41	45	29	9	2	1	3	3	7	1
Provincial	226,910	611	235	40	35	25	17	15	7	9	1	4	0	1
Prudential	345,982	623	235	37	27	25	16	9	9	5	4	3	3	3
Royal *	565,899	607	231	42	36	31	17	17	8	7	1	0	1	1
Sun Alliance & London	818,264	606	238	39	33	26	19	15	9	7	2	2	1	1
Wesleyan & General	10,348	609	207	33	26	31	40	35	13	0	2	0	4	0
TOTAL	6,785,929	605	237	39	33	27	20	14	9	6	3	3	1	2
TOTAL of 1988 data	5,672,884	610	238	39	33	26	19	14	8	5	3	2	1	2(12+)

\* For these companies separate Non-comp data were available

## Risk Group : MOTOR -- COMPREHENSIVE

Method : COMPANY INCURRED

## MEAN TERMS

NAME	0	1	2	3	4	5	6	7	8	9	10	11	12	13+
Avon	1.43	1.84	2.87	2.65	2.47	2.36	2.29	2.30	2.27	2.37	2.17	2.26	2.12	2.00
Britannic	1.38	1.82	2.91	2.74	2.70	2.59	1.98	1.76	1.35	1.30	.71	.50	--	--
Commercial Union	1.29	1.63	2.41	2.11	1.76	1.62	1.43	1.53	1.79	1.97	1.77	1.40	.50	--
Co-operative	1.83	2.68	3.88	3.58	3.38	3.20	3.01	2.99	2.82	2.94	2.60	2.19	1.38	2.00
Cornhill	1.45	1.91	2.91	2.74	2.64	2.54	2.81	2.76	2.61	2.45	1.99	3.52	2.88	2.00
Eagle Star *	1.34	1.68	2.56	2.35	2.17	2.03	1.95	1.88	1.71	1.54	1.27	2.20	1.95	2.00
General Accident	1.40	1.83	3.00	2.78	2.58	2.40	2.21	2.21	2.08	2.06	1.93	1.68	2.16	2.00
Guardian Royal	1.29	1.58	2.40	2.18	2.06	1.99	2.16	2.33	2.25	2.99	3.26	3.82	2.86	2.00
Iron Trades Mutual *	1.41	1.88	2.99	2.84	2.80	2.80	3.01	2.83	2.91	2.93	2.06	1.98	3.00	2.00
Legal & General	1.57	2.02	3.12	2.80	2.51	2.20	2.31	2.08	2.17	2.08	1.47	3.68	3.00	2.00
London & Edinburgh	1.38	1.60	2.35	2.03	2.00	1.63	1.20	1.36	1.70	1.41	1.16	3.07	3.00	2.00
Nat. Farmers Union Mut.	1.58	2.15	3.02	2.61	2.38	2.19	1.98	1.95	2.02	2.20	2.78	2.20	3.00	2.00
Nat. Ins. and Guarantee	1.38	1.67	2.62	2.36	2.06	1.83	1.72	1.38	1.26	1.43	1.03	.29	.50	--
Norman *	1.35	1.64	2.26	1.91	1.74	1.51	1.56	1.38	.69	.50	--	--	--	--
Norwich Union *	1.40	1.60	2.53	2.24	2.09	2.08	1.86	1.73	1.76	1.81	1.10	3.38	2.38	2.00
Pearl	1.52	1.83	2.50	2.26	1.98	2.19	3.09	3.44	2.92	2.14	1.51	.96	3.00	2.00
Provincial	1.38	1.75	2.67	2.44	2.32	2.17	1.94	1.94	1.56	2.05	1.40	2.42	2.02	2.00
Prudential	1.38	1.83	3.03	2.92	2.75	2.83	2.85	2.63	2.74	2.58	2.42	2.36	2.91	2.00
Royal *	1.40	1.80	2.63	2.37	2.15	2.08	1.80	1.85	1.76	2.70	2.55	1.81	1.34	2.00
Sun Alliance & London	1.40	1.79	2.76	2.52	2.32	2.14	1.98	1.90	1.83	2.19	2.07	2.89	3.04	2.00
Wesleyan & General	1.54	2.15	3.02	2.57	2.00	1.49	1.22	1.58	2.98	1.93	1.47	.50	--	--
TOTAL	1.43	1.84	2.87	2.65	2.47	2.36	2.29	2.30	2.27	2.37	2.17	2.26	2.12	2.00
TOTAL of 1988 data	1.38	1.76	2.73	2.49	2.31	2.18	2.11	2.14	2.17	2.27	2.16	2.17	2.00(12+)	

\* For these companies separate Non-comp data were available

Risk Group : MOTOR - NON COMPREHENSIVE

Method : INFLATION ADJUSTED CHAIN LADDER

Future Inflation 8.00%

RUN-OFF PATTERN PER MILLE

NAME	SIZE	0	1	2	3	4	5	6	7	8	9	10	11	12	13+
Avon	12,750	270	250	127	108	84	61	38	23	15	8	6	3	2	5
Britannic	4,568	197	190	83	131	113	69	62	42	35	24	41	14	0	0
Commercial Union	30,208	285	255	141	118	85	55	32	16	7	3	1	0	1	0
Co-operative	73,728	231	225	117	103	81	76	51	31	28	12	9	4	19	11
Cornhill	36,134	284	262	149	103	79	40	25	16	11	7	16	1	0	7
Eagle Star *	72,825	241	239	135	128	81	68	49	21	8	10	7	3	7	5
General Accident	116,735	260	226	112	102	96	62	50	30	22	15	7	9	3	5
Guardian Royal	152,843	250	263	152	119	96	57	32	15	10	3	2	0	0	1
Iron Trades Mutual *	33,754	372	252	91	101	80	50	26	15	6	1	3	1	0	0
Legal & General	7,680	255	238	117	156	67	71	37	26	11	4	13	0	0	3
London & Edinburgh	99,416	304	268	109	106	76	46	41	25	6	9	8	0	0	1
Nat. Farmers Union Mut.	26,451	275	198	101	125	81	87	58	36	23	14	1	2	0	1
Nat. Ins. and Guarantee	75,342	301	277	115	100	83	64	29	17	11	2	1	1	0	0
Norman *	1,042	355	289	75	62	23	12	26	61	37	0	61	0	0	0
Norwich Union *	125,524	282	241	123	111	85	65	38	28	14	7	6	2	0	0
Pearl	10,041	208	227	188	115	174	43	28	9	2	3	1	2	0	0
Provincial	27,600	243	214	128	116	65	108	50	27	30	5	13	1	0	0
Prudential	40,807	306	252	118	102	70	53	28	21	12	8	8	8	1	13
Royal *	54,858	227	286	157	110	85	58	31	19	16	7	4	0	0	0
Sun Alliance & London	146,766	281	271	149	107	89	40	30	15	10	3	2	1	0	2
Wesleyan & General	1,433	348	226	126	96	113	17	31	22	0	4	0	16	0	0
TOTAL	1,150,505	270	250	127	108	84	61	38	23	15	8	6	3	2	5
TOTAL of 1988 data	908,179	279	251	130	112	84	54	35	20	13	7	5	3	6(12+)	

\* For these companies separate Comp data were available

## Risk Group : MOTOR - NON COMPREHENSIVE

Method : INFLATION ADJUSTED CHAIN LADDER

Future Inflation 8.00%

## MEAN TERMS

NAME	0	1	2	3	4	5	6	7	8	9	10	11	12	13+
Avon	2.74	2.57	2.64	2.41	2.26	2.18	2.20	2.26	2.28	2.37	2.23	2.27	2.11	2.00
Britannic	3.77	3.57	3.52	2.99	2.80	2.72	2.42	2.19	1.81	1.38	.76	.50	--	--
Commercial Union	2.42	2.19	2.13	1.84	1.63	1.46	1.33	1.27	1.25	1.31	1.28	1.33	.50	--
Co-operative	3.36	3.22	3.34	3.13	2.97	2.80	2.84	2.89	2.79	2.92	2.61	2.19	1.43	2.00
Cornhill	2.57	2.39	2.48	2.45	2.44	2.69	2.75	2.74	2.58	2.35	1.88	3.54	2.87	2.00
Eagle Star *	2.90	2.66	2.64	2.39	2.34	2.18	2.22	2.64	2.80	2.39	2.30	2.15	1.56	2.00
General Accident	3.06	2.96	3.05	2.75	2.51	2.46	2.32	2.30	2.19	2.14	2.11	1.76	2.06	2.00
Guardian Royal	2.54	2.22	2.14	1.89	1.65	1.56	1.52	1.54	1.47	1.88	2.11	3.74	2.83	2.00
Iron Trades Mutual *	2.17	2.17	2.29	1.86	1.61	1.48	1.41	1.32	1.46	1.55	.82	.50	--	--
Legal & General	2.78	2.56	2.53	2.14	2.23	1.93	2.01	1.98	2.17	2.00	1.39	3.67	3.00	2.00
London & Edinburgh	2.50	2.37	2.53	2.22	2.08	1.95	1.69	1.66	1.84	1.29	1.08	3.08	3.00	2.00
Nat. Farmers Union Mut.	2.97	2.91	2.82	2.37	2.15	1.75	1.57	1.38	1.17	1.03	1.94	1.61	3.00	2.00
Nat. Ins. and Guarantee	2.37	2.18	2.28	1.94	1.64	1.39	1.35	1.11	.84	1.07	.84	.18	.50	--
Norman *	2.76	3.00	4.03	3.98	3.96	3.37	2.55	1.88	1.74	1.50	.50	--	--	--
Norwich Union *	2.65	2.50	2.51	2.20	1.97	1.76	1.64	1.43	1.36	1.18	.76	.50	--	--
Pearl	2.66	2.23	1.92	1.63	1.13	1.40	1.27	1.60	2.06	1.53	1.56	1.02	3.00	2.00
Provincial	3.04	2.85	2.78	2.48	2.25	1.73	1.78	1.64	1.26	1.44	.74	1.30	1.88	2.00
Prudential	2.69	2.65	2.88	2.75	2.78	2.83	3.08	3.11	3.19	3.08	2.81	2.67	2.91	2.00
Royal *	2.61	2.23	2.25	2.09	1.87	1.74	1.67	1.43	1.10	.90	.53	2.79	.50	--
Sun Alliance & London	2.40	2.14	2.14	1.95	1.76	1.84	1.70	1.78	1.87	2.53	2.51	3.18	3.07	2.00
Wesleyan & General	2.37	2.36	2.35	2.12	1.88	2.59	2.07	2.22	3.01	2.07	1.48	.50	--	--
TOTAL	2.74	2.57	2.64	2.41	2.26	2.18	2.20	2.26	2.28	2.37	2.23	2.27	2.11	2.00
TOTAL of 1988 data	2.63	2.46	2.51	2.27	2.15	2.12	2.11	2.16	2.15	2.26	2.18	2.16	2.00(12+)	

\* For these companies separate Comp data were available

## Risk Group : MOTOR - NON COMPREHENSIVE

Method : BASIC CHAIN LADDER

NAME	SIZE	RUN-OFF PATTERN PER MILLE													
		0	1	2	3	4	5	6	7	8	9	10	11	12	13+
Avon	12,750	402	227	82	89	56	59	29	38	12	5	2	0	0	0
Britannic	4,568	190	185	80	115	112	70	71	50	42	26	44	16	0	0
Commercial Union	30,208	282	256	138	118	84	56	35	17	8	3	2	0	1	0
Co-operative	73,728	227	225	115	100	80	75	52	33	30	14	11	5	21	11
Cornhill	36,134	276	262	152	103	78	41	27	17	11	7	17	1	0	8
Eagle Star *	72,825	234	238	131	126	82	71	53	22	8	11	8	3	8	6
General Accident	116,735	258	227	111	100	96	61	51	31	23	16	7	9	4	6
Guardian Royal	152,843	249	262	151	118	96	57	34	16	10	3	3	0	0	2
Iron Trades Mutual *	33,754	383	247	91	98	77	49	28	15	6	1	4	1	0	0
Legal & General	7,680	254	243	118	153	67	70	36	24	11	4	14	0	0	4
London & Edinburgh	99,416	298	267	108	106	77	46	43	27	6	11	9	0	0	1
Nat. Farmers Union Mut.	26,451	275	195	100	121	80	90	60	37	23	14	1	2	0	1
Nat. Ins. and Guarantee	75,342	297	276	113	99	83	67	31	17	13	2	1	1	0	0
Norman *	1,042	329	281	80	64	27	13	27	53	48	0	78	0	0	0
Norwich Union *	125,524	277	242	121	109	83	66	41	32	14	7	5	2	0	0
Pearl	10,041	207	229	184	115	177	40	30	9	2	3	1	2	0	0
Provincial	27,600	239	209	124	112	63	113	57	29	33	5	14	1	0	0
Prudential	40,807	304	251	116	100	70	53	29	22	14	8	9	8	1	16
Royal *	54,858	206	279	154	114	90	65	34	23	19	9	6	0	0	0
Sun Alliance & London	146,766	278	274	147	106	90	40	30	16	11	3	2	1	0	2
Wesleyan & General	1,433	350	230	123	94	106	15	35	23	1	5	0	19	0	0
TOTAL	1,150,505	267	250	125	107	84	61	40	24	16	8	7	4	3	5
TOTAL of 1988 data	908,179	276	250	128	110	83	56	37	22	15	8	5	3	6(12+)	

\* For these companies separate Comp data were available

## Risk Group : MOTOR - NON COMPREHENSIVE

Method : BASIC CHAIN LADDER

## MEAN TERMS

NAME	0	1	2	3	4	5	6	7	8	9	10	11	12	13+
Avon	2.27	2.46	2.66	2.27	2.06	1.66	1.47	.97	.96	.76	.50	--	--	--
Britannic	3.94	3.75	3.72	3.19	2.90	2.75	2.37	2.13	1.77	1.39	.77	.50	--	--
Commercial Union	2.45	2.22	2.17	1.89	1.69	1.50	1.34	1.28	1.25	1.31	1.26	1.29	.50	--
Co-operative	3.44	3.30	3.45	3.24	3.06	2.88	2.89	2.89	2.76	2.85	2.54	2.12	1.37	2.00
Cornhill	2.62	2.43	2.53	2.52	2.52	2.75	2.80	2.82	2.70	2.43	1.95	3.59	2.88	2.00
Eagle Star *	2.99	2.75	2.76	2.50	2.43	2.27	2.32	2.80	2.93	2.50	2.38	2.22	1.59	2.00
General Accident	3.10	3.00	3.10	2.82	2.57	2.52	2.36	2.35	2.24	2.16	2.19	1.80	2.05	2.00
Guardian Royal	2.56	2.25	2.18	1.93	1.70	1.62	1.55	1.61	1.62	2.05	2.18	3.77	2.86	2.00
Iron Trades Mutual *	2.16	2.19	2.31	1.90	1.66	1.53	1.45	1.42	1.54	1.55	.79	.50	--	--
Legal & General	2.77	2.55	2.54	2.16	2.26	1.98	2.09	2.08	2.23	2.07	1.45	3.72	3.00	2.00
London & Edinburgh	2.54	2.41	2.59	2.27	2.13	2.01	1.73	1.70	1.86	1.26	1.04	3.07	3.00	2.00
Nat. Farmers Union Mut.	3.01	2.96	2.87	2.42	2.18	1.76	1.58	1.39	1.19	1.06	1.89	1.51	3.00	2.00
Nat. Ins. and Guarantee	2.41	2.22	2.33	1.99	1.68	1.42	1.37	1.16	.84	1.05	.81	.16	.50	--
Norman *	3.01	3.23	4.20	4.16	4.11	3.56	2.74	2.08	1.74	1.50	.50	--	--	--
Norwich Union *	2.69	2.54	2.56	2.26	2.02	1.78	1.61	1.37	1.33	1.18	.78	.50	--	--
Pearl	2.67	2.24	1.95	1.65	1.16	1.48	1.32	1.71	2.06	1.50	1.65	1.02	3.00	2.00
Provincial	3.13	2.96	2.88	2.57	2.31	1.76	1.78	1.66	1.27	1.45	.76	1.40	1.98	2.00
Prudential	2.75	2.74	3.00	2.88	2.91	2.97	3.20	3.20	3.29	3.25	2.92	2.80	2.91	2.00
Royal *	2.77	2.37	2.38	2.18	1.96	1.80	1.71	1.44	1.10	.90	.53	3.15	.50	--
Sun Alliance & London	2.42	2.15	2.16	1.97	1.78	1.88	1.72	1.78	1.86	2.59	2.59	3.22	3.08	2.00
Wesleyan & General	2.38	2.40	2.44	2.24	2.04	2.72	2.13	2.33	3.02	2.10	1.48	.50	--	--
TOTAL	2.78	2.61	2.70	2.48	2.33	2.25	2.25	2.31	2.33	2.42	2.28	2.30	2.12	2.00
TOTAL of 1988 data	2.69	2.52	2.59	2.36	2.23	2.18	2.17	2.21	2.20	2.28	2.19	2.15	2.00(12+)	

\* For these companies separate Comp data were available



## Risk Group : MOTOR - NON COMPREHENSIVE

Method : AVERAGE CLAIM

## Future Inflation 8.00%

## RUN-OFF PATTERN PER MILLE

NAME	SIZE	0	1	2	3	4	5	6	7	8	9	10	11	12	13+
Avon	12,750	273	249	127	108	83	61	38	22	15	8	6	3	2	4
Britannic	4,568	202	189	81	124	113	71	62	42	35	24	41	15	0	0
Commercial Union	30,208	291	259	138	117	82	54	32	16	7	3	1	0	1	0
Co-operative	73,728	239	225	116	100	80	76	51	31	27	12	9	4	19	11
Cornhill	36,134	285	261	148	100	82	40	26	16	12	7	16	1	0	7
Eagle Star *	72,825	248	235	133	124	80	69	50	22	8	10	7	3	6	5
General Accident	116,735	257	225	110	100	99	63	51	31	23	15	7	9	3	6
Guardian Royal	152,843	248	263	152	119	96	57	32	15	10	3	2	0	0	1
Iron Trades Mutual *	33,754	363	245	92	98	90	59	20	21	7	1	3	1	0	0
Legal & General	7,680	250	244	118	155	67	72	37	26	11	4	13	0	0	3
London & Edinburgh	99,416	309	264	110	105	75	46	41	25	6	9	8	0	0	1
Nat. Farmers Union Mut.	26,451	248	199	102	141	86	87	59	37	23	14	1	2	0	1
Nat. Ins. and Guarantee	75,342	307	276	116	98	82	62	28	17	11	2	1	1	0	0
Norman *	1,042	325	298	81	71	33	17	25	71	32	0	46	0	0	0
Norwich Union *	125,524	294	246	124	111	83	61	34	25	11	6	5	2	0	0
Pearl	10,041	205	224	190	118	177	41	28	9	2	3	1	2	0	0
Provincial	27,600	253	218	130	119	68	94	47	25	28	4	12	1	0	0
Prudential	40,807	308	248	117	103	70	54	28	21	13	8	8	8	1	13
Royal *	54,858	227	271	153	111	89	65	32	21	19	8	4	0	0	0
Sun Alliance & London	146,766	280	267	149	108	91	41	31	16	10	3	3	1	0	2
Wesleyan & General	1,433	346	221	125	99	115	18	32	22	0	4	0	16	0	0
TOTAL	1,150,505	273	249	127	108	83	61	38	22	15	8	6	3	2	4
TOTAL of 1988 data	908,179	279	251	130	112	84	54	35	20	13	7	5	3	6(12+)	

\* For these companies separate Comp data were available

Risk Group : MOTOR - NON COMPREHENSIVE

Method : AVERAGE CLAIM

Future Inflation 8.00%

MEAN TERMS

NAME	0	1	2	3	4	5	6	7	8	9	10	11	12	13+
Avon	2.73	2.57	2.64	2.41	2.26	2.17	2.20	2.26	2.28	2.37	2.23	2.27	2.11	2.00
Britannic	3.76	3.59	3.55	3.03	2.80	2.71	2.42	2.19	1.81	1.38	.76	.50	--	--
Commercial Union	2.39	2.16	2.12	1.84	1.63	1.46	1.33	1.27	1.25	1.31	1.28	1.33	.50	--
Co-operative	3.33	3.22	3.36	3.15	2.97	2.79	2.84	2.89	2.79	2.92	2.61	2.19	1.43	2.00
Cornhill	2.58	2.41	2.51	2.48	2.43	2.71	2.75	2.74	2.58	2.35	1.88	3.54	2.87	2.00
Eagle Star *	2.90	2.69	2.68	2.44	2.37	2.19	2.23	2.65	2.86	2.44	2.32	2.16	1.67	2.00
General Accident	3.10	2.99	3.08	2.77	2.51	2.46	2.32	2.30	2.19	2.14	2.11	1.76	2.06	2.00
Guardian Royal	2.54	2.22	2.14	1.89	1.65	1.56	1.52	1.54	1.47	1.88	2.11	3.74	2.83	2.00
Iron Trades Mutual *	2.25	2.25	2.35	1.91	1.60	1.48	1.56	1.18	1.34	1.57	.85	.50	--	--
Legal & General	2.79	2.55	2.53	2.15	2.23	1.93	2.01	1.98	2.17	2.00	1.39	3.67	3.00	2.00
London & Edinburgh	2.48	2.36	2.52	2.22	2.08	1.95	1.69	1.66	1.84	1.29	1.08	3.08	3.00	2.00
Nat. Farmers Union Mut.	3.07	2.92	2.79	2.31	2.14	1.77	1.57	1.38	1.17	1.03	1.94	1.61	3.00	2.00
Nat. Ins. and Guarantee	2.34	2.16	2.26	1.94	1.63	1.40	1.35	1.11	.84	1.07	.84	.18	.50	--
Norman *	2.76	2.85	3.70	3.58	3.54	3.07	2.32	1.63	1.67	1.50	.50	--	--	--
Norwich Union *	2.54	2.39	2.41	2.11	1.90	1.71	1.61	1.40	1.35	1.13	.75	.50	--	--
Pearl	2.68	2.24	1.92	1.62	1.13	1.42	1.27	1.60	2.06	1.53	1.56	1.02	3.00	2.00
Provincial	2.94	2.77	2.70	2.41	2.22	1.77	1.78	1.64	1.26	1.44	.74	1.30	1.88	2.00
Prudential	2.70	2.67	2.89	2.75	2.78	2.82	3.08	3.11	3.19	3.08	2.81	2.67	2.91	2.00
Royal *	2.69	2.34	2.33	2.13	1.89	1.72	1.68	1.42	1.04	.88	.55	2.09	.50	--
Sun Alliance & London	2.42	2.17	2.15	1.96	1.76	1.85	1.70	1.78	1.87	2.53	2.51	3.18	3.07	2.00
Wesleyan & General	2.39	2.40	2.36	2.12	1.88	2.58	2.07	2.22	3.01	2.07	1.48	.50	--	--
TOTAL	2.73	2.56	2.64	2.41	2.26	2.17	2.20	2.26	2.28	2.37	2.23	2.27	2.11	2.00
TOTAL of 1988 data	2.63	2.46	2.51	2.27	2.15	2.12	2.11	2.16	2.15	2.26	2.18	2.16	2.00(12+)	

\* For these companies separate Comp data were available

## Risk Group : MOTOR ~ NON COMPREHENSIVE

Method : COMPANY INCURRED

## RUN-OFF PATTERN PER MILLE

NAME	SIZE	0	1	2	3	4	5	6	7	8	9	10	11	12	13+
Avon	12,750	268	244	124	105	84	61	40	27	19	9	8	4	3	5
Britannic	4,568	261	225	96	115	113	60	48	39	18	9	13	3	0	0
Commercial Union	30,208	265	243	141	121	97	59	35	22	9	3	2	0	3	0
Co-operative	73,728	215	205	107	95	83	72	59	38	36	19	15	6	32	17
Cornhill	36,134	264	246	145	103	83	60	31	19	15	8	17	1	0	9
Eagle Star *	72,825	243	232	134	125	82	69	53	24	10	10	8	3	4	4
General Accident	116,735	277	238	112	99	88	57	41	28	24	12	8	8	2	4
Guardian Royal	152,843	247	261	147	113	90	58	32	18	17	5	4	0	0	6
Iron Trades Mutual *	33,754	340	234	95	99	91	63	21	31	12	2	3	9	0	0
Legal & General	7,680	232	227	114	153	74	79	41	30	20	6	18	1	0	5
London & Edinburgh	99,416	319	276	116	109	72	44	27	20	6	6	5	0	0	1
Nat. Farmers Union Mut.	26,451	310	225	110	127	73	57	43	25	14	8	1	4	0	3
Nat. Ins. and Guarantee	75,342	280	258	109	91	87	68	40	30	22	6	3	7	-1	0
Norman *	1,042	341	299	73	69	27	13	16	61	21	0	23	11	11	33
Norwich Union *	125,524	270	230	119	109	89	71	40	32	17	12	8	2	0	0
Pearl	10,041	201	220	182	114	144	60	34	11	3	6	7	15	0	2
Provincial	27,600	267	232	134	118	72	74	38	29	18	3	10	1	1	2
Prudential	40,807	302	244	114	97	74	55	36	24	20	10	8	8	0	9
Royal *	54,858	231	262	149	104	85	67	38	23	21	14	6	0	1	0
Sun Alliance & London	146,766	271	256	144	106	89	50	34	20	15	4	5	1	0	3
Wesleyan & General	1,433	350	211	88	67	77	38	81	65	0	6	1	16	0	0
TOTAL	1,150,505	268	244	124	105	84	61	40	27	19	9	8	4	3	5
TOTAL of 1988 data	908,179	270	244	126	107	84	59	41	25	17	9	7	4	7(12+)	

\* For these companies separate comp data were available

## Risk Group : MOTOR - NON COMPREHENSIVE

Method : COMPANY INCURRED

## MEAN TERMS

NAME	0	1	2	3	4	5	6	7	8	9	10	11	12	13+
Avon	2.84	2.70	2.80	2.58	2.42	2.34	2.31	2.28	2.26	2.37	2.17	2.26	2.12	2.00
Britannic	2.96	2.83	2.85	2.40	2.12	2.08	1.81	1.57	1.55	1.30	.71	.50	--	--
Commercial Union	2.60	2.35	2.26	1.97	1.74	1.64	1.54	1.47	1.68	1.97	1.77	1.40	.50	2.00
Co-operative	3.83	3.75	3.89	3.66	3.45	3.28	3.17	3.14	2.95	2.94	2.60	2.19	1.38	2.00
Cornhill	2.79	2.61	2.67	2.58	2.47	2.51	2.73	2.73	2.58	2.45	1.99	3.52	2.88	2.00
Eagle Star *	2.91	2.68	2.65	2.39	2.28	2.06	2.00	2.30	2.43	2.10	2.01	2.12	1.74	2.00
General Accident	2.90	2.82	2.96	2.70	2.50	2.45	2.32	2.19	2.01	2.06	1.93	1.68	2.16	2.00
Guardian Royal	2.68	2.40	2.41	2.23	2.07	2.07	2.19	2.25	2.19	2.99	3.26	3.82	2.86	2.00
Iron Trades Mutual *	2.49	2.51	2.61	2.22	1.95	1.89	2.01	1.58	1.88	2.05	1.25	.50	--	--
Legal & General	3.04	2.80	2.77	2.38	2.43	2.14	2.21	2.09	2.05	2.08	1.47	3.68	3.00	2.00
London & Edinburgh	2.31	2.15	2.28	1.99	1.90	1.83	1.73	1.60	1.80	1.41	1.16	3.07	3.00	2.00
Nat. Farmers Union Mut.	2.62	2.57	2.58	2.22	2.17	1.96	1.80	1.82	1.94	2.20	2.78	2.20	3.00	2.00
Nat. Ins. and Guarantee	2.71	2.56	2.72	2.41	2.07	1.86	1.72	1.47	1.27	1.43	1.03	.29	.50	2.00
Norman *	2.99	3.28	4.59	4.63	4.95	4.60	3.91	3.25	3.93	3.82	2.82	2.80	2.38	2.00
Norwich Union *	2.82	2.68	2.69	2.37	2.12	1.92	1.81	1.54	1.39	1.07	.71	.50	--	--
Pearl	2.93	2.55	2.32	2.15	1.82	2.19	2.50	3.04	2.92	2.14	1.51	.96	3.00	2.00
Provincial	2.77	2.59	2.56	2.32	2.19	1.89	1.90	1.74	1.74	2.05	1.40	2.42	2.02	2.00
Prudential	2.76	2.73	2.93	2.74	2.64	2.59	2.59	2.56	2.47	2.58	2.42	2.36	2.91	2.00
Royal *	2.79	2.48	2.50	2.33	2.08	1.88	1.79	1.57	1.17	.88	.70	2.45	.50	--
Sun Alliance & London	2.58	2.36	2.36	2.18	1.98	1.97	1.86	1.80	1.74	2.19	2.07	2.89	3.04	2.00
Wesleyan & General	2.77	2.99	3.18	2.86	2.42	2.13	1.50	1.41	2.91	1.93	1.47	.50	--	--
TOTAL	2.84	2.70	2.80	2.58	2.42	2.34	2.31	2.28	2.26	2.37	2.17	2.26	2.12	2.00
TOTAL of 1988 data	2.80	2.65	2.72	2.50	2.34	2.26	2.20	2.19	2.17	2.27	2.16	2.17	2.00(12+)	

\* For these companies separate Comp data were available

WEIGHTED MEAN TERMS (USING OUTSTANDING PROPORTIONS ON RUN-OFF PATTERN AS WEIGHTS)

Risk Group : FIRE

Name	METHOD				SENSITIVITY ANALYSIS OF AGGREGATE DATA			
	WEIGHTED MEAN TERM				BY ASSUMED MEAN TERM FOR TAIL			
	8% IACL	BCL	8% AVC	CI	Assumed Mean term for tail	8% IACL	BCL	8% AVC CI
Avon	1.85	1.83	1.94		1	1.23	1.21	1.21 1.43
Britannic	.62	.63	.61		2	1.28	1.26	1.26 1.50
Commercial Union	1.12	1.11	1.11		3	1.33	1.31	1.31 1.57
Co-operative	1.16	1.15	1.20		4	1.38	1.36	1.36 1.64
Cornhill	.90	.89	.91					
Risk Group : FIRE								
Eagle Star	1.38	1.35	1.34					
Ecclesiastical	2.19	2.19	2.06					
Economic	1.57	1.57	1.36					
General Accident	1.01	1.00	1.01					
Guardian Royal	1.10	1.09	1.09					
Ins. Co. of North America	1.54	1.55	1.31					
Iron Trades Mutual	.62	.61	.63					
Legal & General	1.72	1.69	1.46					
Minster	1.39	1.41	1.39					
Municipal General	.70	.70	.76					
Municipal Mutual	1.59	1.59	1.59					
National Farmers Union Mutual	.45	.48	.44					
Norwich Union	.98	.96	.96					
Provincial	2.07	2.06	2.17					
Prudential	1.06	1.05	1.00					
Refuge	.80	.81	.76					
Royal	.66	.67	.67					
Sun Alliance & London	1.28	1.26	1.25					
Wesleyan & General	1.72	1.70	1.51					
TOTAL	1.28	1.26	1.26	1.50				
TOTAL based on 1988 data	1.41	1.37	1.39	1.60				

# WEIGHTED MEAN TERMS (USING OUTSTANDING PROPORTIONS ON RUN-OFF PATTERN AS WEIGHTS)

## Risk Group : EMPLOYERS LIABILITY

### METHOD

## SENSITIVITY ANALYSIS OF AGGREGATE DATA

### WEIGHTED MEAN TERM

### BY ASSUMED MEAN TERM FOR TAIL

### Risk Group : EMPLOYERS LIABILITY

Name	METHOD			
	8% IACL	BCL	8% AVC	CI
Avon	2.14	2.13	2.12	2.77
Commercial Union	2.25	2.30	2.34	2.55
Co-operative	3.58	3.70	3.89	3.62
Cornhill	2.89	3.04	2.82	4.61
Eagle Star	4.35	4.55	4.38	4.42
General Accident	3.16	3.29	2.93	3.16
Guardian Royal	3.00	3.08	2.84	3.14
Iron Trades Mutual	2.96	3.07	3.03	6.11
Iron Trades Employers	3.05	3.20	3.09	3.61
Legal & General	4.32	4.49	4.27	4.25
Norwich Union	3.94	4.17	3.88	4.18
Orion	2.76	2.74	2.95	2.78
Pearl	2.93	3.02	2.82	3.10
Provincial	3.05	3.19	3.06	3.45
Prudential	2.30	2.32	2.28	4.35
Royal	5.78	6.03	5.75	6.02
Sun Alliance & London	5.63	5.91	5.09	5.59
Wesleyan & General	2.02	2.01	1.98	2.63
TOTAL	3.85	4.04	3.82	4.22
TOTAL based on 1988 data	3.54	3.70	3.52	3.86

Assumed Mean term for tail	METHOD		
	8% IACL	BCL	8% AVC
2	3.58	3.75	3.56
4	3.85	4.04	3.82
6	4.12	4.34	4.09
8	4.39	4.63	4.35
			4.88

# WEIGHTED MEAN TERMS (USING PROPORTIONS ON RUN-OFF PATTERN AS WEIGHTS)

Risk Group : MOTOR - COMPREHENSIVE

## SENSITIVITY ANALYSIS OF AGGREGATE DATA

### WEIGHTED MEAN TERM

BY ASSUMED MEAN TERM FOR TAIL

Risk Group : MOTOR - COMPREHENSIVE

Assumed mean term for tail	METHOD		
	8% IACL	BCL	8% AVC
1	2.02	2.07	2.03
2	2.05	2.09	2.06
3	2.07	2.12	2.08
4	2.10	2.14	2.12

### METHOD

NAME	8%		
	IACL	BCL	AVC
Avon	2.05	1.95	2.07
Britannic	2.15	2.19	2.17
Commercial Union	1.71	1.74	1.73
Co-operative	2.68	2.73	2.69
Cornhill	2.29	2.37	2.30
Eagle Star *	1.88	1.96	1.93
General Accident	2.21	2.27	2.25
Guardian Royal	1.61	1.64	1.62
Iron Trades Mutual *	2.27	2.47	2.17
Legal & General	2.19	2.18	2.27
London & Edinburgh	1.88	1.92	1.86
National Farmers Union Mutual	2.14	2.15	2.18
National Insurance and Guarantee	1.61	1.62	1.63
Norman *	1.74	1.80	1.74
Norwich Union *	1.65	1.70	1.62
Pearl	1.75	1.77	1.74
Provincial	1.87	1.90	1.89
Prudential	2.45	2.54	2.48
Royal *	1.89	1.98	1.91
Sun Alliance & London	1.65	1.66	1.69
Wesleyan & General	2.57	2.70	2.57
TOTAL	2.05	2.09	2.07
TOTAL of 1988 data	1.95	2.01	1.96

\* For these companies separate Non-comp data were available

# WEIGHTED MEAN TERMS (USING PROPORTIONS ON RUN-OFF PATTERN AS WEIGHTS)

Risk Group : MOTOR - NON COMPREHENSIVE

## METHOD

### SENSITIVITY ANALYSIS OF AGGREGATE DATA

#### WEIGHTED MEAN TERM

#### BY ASSUMED MEAN TERM FOR TAIL

Risk Group : MOTOR - NON COMPREHENSIVE

Assumed mean term for tail	METHOD		
	8% IACL	BCL	8% AVC
1	2.43	2.48	2.41
2	2.46	2.51	2.44
3	2.49	2.54	2.48
4	2.52	2.57	2.52

NAME	METHOD		
	8% IACL	BCL	8% AVC
Avon	2.46	2.24	2.46
Britannic	2.98	3.07	2.99
Commercial Union	1.96	2.00	1.95
Co-operative	3.07	3.13	3.07
Cornhill	2.47	2.53	2.49
Eagle Star *	2.51	2.61	2.54
General Accident	2.74	2.79	2.76
Guardian Royal	2.01	2.05	2.01
Iron Trades Mutual *	1.99	2.02	2.04
Legal & General	2.34	2.36	2.34
London & Edinburgh	2.25	2.29	2.25
National Farmers Union Mutual	2.44	2.47	2.43
National Insurance and Guarantee	1.99	2.03	1.98
Norman *	3.13	3.27	2.94
Norwich Union *	2.24	2.27	2.17
Pearl	1.85	1.87	1.85
Provincial	2.46	2.52	2.41
Prudential	2.79	2.91	2.80
Royal *	2.08	2.17	2.14
Sun Alliance & London	2.04	2.06	2.05
Wesleyan & General	2.24	2.32	2.26
TOTAL	2.46	2.51	2.46
TOTAL of 1988 data	2.35	2.42	2.35

\* For these companies separate Comp data were available



## Run-off Survey Questionnaire

At the 1989 GISG conference, the Claims Working Party presented its final report on run-off patterns experienced in four risk groups (comp. and non-comp. motor, fire and employers' liability) by companies representing a substantial proportion of the UK market in these areas. This report was based on data from the 1981-87 DTI returns. At the 1990 conference, Peter Hinton and Andrew Macnair (two members of the original party) presented updated tables based on data to the 1988 returns, and at this conference have issued a second update based on data to the 1989 returns.

In order that future updates can be tailored to readers' needs, we would be grateful if you could complete as much of the following questionnaire as pertains to your use of these tables.

Name (optional) \_\_\_\_\_

Company (optional) \_\_\_\_\_

Do you use :

(a) the tables of run-off patterns ? \_\_\_\_\_

(b) the tables of mean terms ? \_\_\_\_\_

If so, do you use individual company (as opposed to aggregate)

(a) run-off patterns ? \_\_\_\_\_

(b) mean terms ? \_\_\_\_\_

Would it be a loss if :

(a) the company incurred method was omitted

(b) the other three methods (BCL, IACL, average cost per claim) were reduced to a single method (which ?)

\_\_\_\_\_

Would you like to see the following appearing in the updates, assuming that something else (perhaps mean terms or individual companies or some of the methods) would have to go to make room for it :

(a) risk groups such as public liability where the underlying business varies between individual companies making aggregate run-off patterns less useful ?

\_\_\_\_\_

(if so, would you then need individual company run-offs or would an aggregate run-off still be useful ?

\_\_\_\_\_)

- (b) risk groups written by few companies so that again the aggregate run-off would be unreliable ?

\_\_\_\_\_

(again would you need individual company run-offs ?

\_\_\_\_\_)

- (b) more companies ?

\_\_\_\_\_

- (c) home foreign risk groups ?

\_\_\_\_\_

- (d) major non-UK country risk groups ?

\_\_\_\_\_

- (e) blocks of countries (e.g. Europe) ?

\_\_\_\_\_

(bearing in mind for (c)-(e) the increased heterogeneity and possible currency problems).

Please add any further comments you think would be useful :

*A. J. Macnair*