

**SESSION E2/F2**

**GENERAL INSURANCE CONVENTION 1991**

**LLANDRINDOD WELLS 23-26 OCTOBER**

**P & I CLUBS**

Protection and Indemnity Clubs  
GISG October 1991

P & I Clubs were one of the insurance industry's best kept secrets. Although they have been in existence for over 100 years, insuring 90% of the free world's shipping, they were rarely in the news until the last two years.

The majority of Clubs have recently suffered total claims far exceeding the estimates on which they based their Calls (Club terminology for premiums). Some of the deficits have fallen on the shipowners - the Club members - but a large amount has hit the London Market via reinsurance. Much has been written about the resulting "P & I Crisis", but very little has been published about how the Clubs and their reinsurers got into the positions they did: whether they could have been foreseen, what lessons they have learned etc.

The Workshop will address these questions, in particular

- \* Whether there was a sudden upturn in claims, or a trend that was not spotted early enough.
- \* Whether the Clubs are now making adequate allowance for factors causing high levels of claims inflation.
- \* Whether the types of reinsurance written in the London Market can be correctly rated - and the role for Actuaries in the rating process.
- \* The moral hazard aspects of reinsurance.

Because of the limited time available in the Workshop sessions, background notes will be available on

- \* The cover given to members by the Clubs.
- \* The recent claims experience of the Clubs.
- \* Club terminology - particularly the different types of Calls and how they work.
- \* Types of London Market reinsurance, with numerical examples to show the rating/reserving issues.

Protecting & Indemnity Clubs Workshop  
General Insurance Convention  
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1. Introduction

P & I Clubs are one of the insurance industry's best kept secrets.

The oldest has been in existence for 125 years, they insure 90% of the free world's shipping, but were rarely in the news until the last two years.

The majority of Clubs have recently suffered total claims far exceeding the estimates on which they based their Calls (Club terminology for premiums). Some of the deficits have fallen on the shipowners - the Club members - but about \$400-500m has hit the London Market via various aggregate reinsurances. This is in addition to reinsurance of individual large losses, e.g. a \$500m claim on Exxon Valdez.

Much has been written about the resulting "P & I Crisis", but very little has been published about how the Clubs and their reinsurers got into the position they did; whether they could have foreseen it, what lessons they have learned etc.

2. Basic Nature of Clubs

Clubs are mutual insurance organisations.

Their shipowning members are indemnified against a wide range of legal liabilities they can incur whilst operating ships. In addition they are covered for numerous unusual miscellaneous expenses.

A shipowner enters specific ships in a Club; he can split his fleet between more than one Club.

All Clubs have a common renewal date of 20th February (when the Baltic is deemed to become free of ice). Until recently there was little movement of ships from one Club to another at renewal, but the large Call increases in 90 and 91 caused some significant changes.

If a shipowner sells a ship during the Club year he terminates its entry with a pro rata reduction in Calls. Similarly, purchases are entered mid year.

The system of Calls is the Clubs' most distinctive feature. At the start of the Club year underwriters quote a figure for each ship. This is only an estimate of the ultimate amount, and part of it (typically 80%) is due immediately.

As the year's claims experience of the whole Club develops Supplementary Calls are made; in recent years, for some Clubs, these have produced final total amounts far exceeding the original estimates. Mutuality means that any excess over the total of the original estimates is shared pro-rata by all members. Matters are complicated by some Clubs holding Central Reserves which can be used to smooth total Calls from one Club year to another.

Appendix A has fuller details of Calls, Reserves etc.  
Appendix B compares Clubs' ultimate total Calls with their original estimates.

Clubs have representatives in ports all round the world. Possibly the most important service a member receives from his Club is assistance in settling his disputes with port authorities, owners of cargo, etc.

### 3. Cover Granted by Clubs

Appendix C lists the principal items covered.

The proportions of total claim amount vary from Club to Club, but a typical split is

Death & Injury	40%
Cargo	40%
Others (incl pollution)	20%

As actions for death and injury can often be brought in the US, the Clubs have suffered the problems of US Casualty business: million dollar slip and fall claims etc.

Asbestosis seems not to be a major source of claims - so far. Asbestos lagging in engine rooms etc appears to affect ship builders, repairers and breakers more than seaman. However crew contamination from both this source and from cargo carried must remain a potential problem.

There are also claims for deafness and other industrial diseases. Pollution cover is in respect of spillages. Although cases can take time to settle, major claims are known about when they happen; there is not therefore the long discovery tail of toxic waste site pollution.

Finally, Clubs can, and do, pay discretionary claims

"Although the majority of claims are covered under the Club Rules as a matter of right, certain specified types of claim are only covered at the Board's discretion, and in addition the Board has a general discretion to allow claims which are incidental to the business of shipowning but which do not

fall squarely within any one of the specific listed areas covered under the Rules.

This philosophy is an adjunct to the mutuality principle: the Club exists to help its Members, not to find ways to avoid reimbursing them.

There will always be occasional casualties in the complex business of ship operation which have not been previously predictable and for which therefore no insurance policy expressly provides cover."

(Standard 1990 Annual Report)

#### 4. Club Underwriting

In the early days, Clubs tended to have a fairly homogeneous membership and charged all members a standard rate on Gross Registered Tonnage.

This developed into a complex system of discounts and loading that depended on type of ship, cargo, flag etc. However it remained essentially a rating manual with calls expressed in terms of \$ per ton.

This became unduly complex and from about the 1960's the Clubs began to quote calls based on a member's own claims experience.

The author has no direct knowledge of how any Club actually performed its experience rating. This may be an advantage; if he had experience he might not feel free to write about it. Club Annual Reports, however, have contained many interesting points in recent years, for example;

"It has been the practice of this Club, and indeed most other Clubs, to assess Members' rates by reference to a six year record .... This dependence on record creates an underwriting cycle in that it can be some time before an underwriter can legitimately react to what he believes to be a worsening claims situation"

(Standard 1989 Annual Report)

There are the usual problems of underwriting insurance with heterogeneous risks and individual claims experience that is not statistically significant. The main difficulties are

- \* IBNR
- \* Re-distribution of large claims
- \* Inflation/Trends

Firstly, IBNR. Most underwriting operations calculate IBNR for two purposes: balance sheet liability and feedback into underwriting. Because Clubs can levy Supplementary Calls they do not have to carry IBNR on their balance sheets. Notes in Reports

and Accounts vary. Some clearly state that the Directors are of the opinion that the Club has adequate assets to meet known and anticipated (IBNR) liabilities. Most, however contain phrases like :-

"Quantification of ultimate claims is based on experience and judgement ..... ultimate costs cannot be ascertained with any degree of certainty at the date of the Balance Sheet .... figures for ultimate claims on open years are not shown as it is considered that insufficient time has elapsed for them to be calculated with sufficient accuracy"

In fairness, however, such wordings are used by some of the strong Clubs (those with a good Supplementary Call Record).

It is possible, therefore that some Clubs made inadequate IBNR allowance in their underwriting calculations - particularly dangerous in liability business.

Secondly, very large losses (over the \$12M Pool limit) were always redistributed over all members - Club Underwriters passing on the cost of the International Group reinsurances. However a large proportional of total claims lies in the \$500K to \$12M band; most members will probably have no such losses in their six year claim experience.

Thirdly, it is possible that some Clubs made inadequate allowance for inflation and other trends. Much has been written about the increasing age of world shipping, lower maintenance and crewing standards etc. When valuing stop loss liabilities, the author found that Clubs had experienced about a 12.5% pa increase in retained claims costs per entered ton over the period 1984 to 1990.

Clubs publish figures for their increases in General Calls. Many show a total of under 20% over the six years 1983 to 1989. These figures may be misleading as loadings for poor claim records (and corresponding discounts for good ones) may mean that the published figures are a bad guide to the overall rate increases Clubs actually achieved. In fact, some of the highest published figures come from Clubs with the worst problems in 1988 and 1989. Conversely one of the strongest Clubs reported a slight overall decrease in General Calls in the period.

Finally, the Clubs appear to have competed against each other. There is a non-competition agreement (the International Group Agreement), but this was modified in 1984 after objections from the EEC Commission.

The implications of competition were understood.

"Within the P&I world we have also seen, on occasions, examples of rates being charged by some Clubs well below what, on any rational basis, can be regarded as the likely level of expenditure"  
(West of England 1988 Annual Report)

These problems have caused some changes in underwriting practice. The Standard's 1990 Annual Report has a long description of their actions, the main features being:

- \* Strengthening the underwriting function
- \* Establishing a separate statistical department
- \* Projecting each Member's claims experience and the total Club experience to ensure that the whole is the sum of the parts.

#### 5. Club Claims Experience - Past and Future

A bad underwriting result can be caused by either low premiums or high claims; the last paragraph dealt with the former, this one addresses the latter.

1987 was the first year to produce a bad result. At the time some Clubs thought it was a freak, or due to their share of the International Group Pool, and did not adjust their rates. By the time the 1988 claims emerged at the same high level it was too late to impose large increases in 1989.

It is now acknowledged that 87 was not a freak, but Club opinion is divided as to why it happened:

"The improved climate in the shipping industry and the upturn in world trade was always likely to produce a reversal in the relatively favourable claims trend through which the P&I market was passing in the mid 1980s."  
(Steamship Mutual 1989 Annual Report)

On the other hand some other Clubs have clearly said that they believe there was a continuing upwards trend. The author's 12.5% pa increase referred to in paragraph 4 appears to support this but must be treated with caution. It was derived for the purposes of valuing 1989 and 1990 Stop Loss reinsurance at 12/90. It was adequate for this purpose, but did not take account of innuring reinsurances, changes in mix of business & coverages, changes in Club philosophy in estimating individual claims etc. Only detailed work on a Club's records can really answer the question.

It is interesting that in 1989 Steamship Mutual said that the

most significant increases in claims costs in 87 and 88 was in collision with fixed and floating objects, that they were continuing to analyse, but that no definite pattern had emerged.

Unfortunately there are many factors that can create a sudden acceleration in claims, thereby causing a projection of past results to be a poor guide to the future. Specific items are:-

- \* The 1986 US Anti Drug Abuse Act. Owners or Charterers are liable for heaving fines (eg \$1000 per ounce of cocaine) for drugs found on board, unless they can prove that they did not know about them, and could not reasonable have known.
- \* The US Oil Pollution Act 1990 increases and widens liability - e.g. a restaurateur can sue for his financial loss if the market price of lobster increases after a pollution incident.
- \* Some governments increasingly use pollution legislation to enforce wreck removal - on the grounds that even a small amount of bunker oil in a wreck could cause pollution in the future.

The Clubs are well aware of these factors, but advance estimation of their effects is far from easy.

## 6. London Market Reinsurance Underwriting

Underwriting any Stop Loss reinsurance involves four main principles:

- \* projecting each year's claims to the ultimate
- \* adjusting for changes in exposure
- \* adjusting ultimates for inflation and other trends between their year of origin and the year being underwritten
- \* questioning whether past trends may not be continued into the future.

The placing data on P&I Stop Loss contracts usually gives the triangulation of total claim amount, along with the Club's estimates of ultimates.

Figures for entered tonnage are also given for each year - a rough measure of exposure changes.

Trends and inflation rates are more difficult to estimate. An underwriter may have a feel, but should check it for consistency with the data. As stated, the author has found that 12.5% p.a. gives a reasonable fit.

Proper underwriting should also take account of all the factors metioned in section 5: innuring reinsurances, changes in mix of business & coverages etc.. Such information is not usually included in placing data.



Overall, it is probably possible to underwrite P&I Stop Loss - giving the underwriter a reasonable medium term profit in exchange for protecting Club members from fluctuations in total claim amount.

Brokers often produce "what if" claims experiences. These compare the current \$ reported claim positions on past Club years with next year's limit and deductible, i.e. factual, but making no allowance for any of the above four principles. Some underwriters may have used the "what if", with a small margin to allow implicitly for the other effects, rather than making explicit use of all the placing data.

One Stop Loss was placed in 91 on data which implied that it was likely to be a 50-100% loss.

This may have been the result of good broking - a common London Market argument is that underwriters cannot impose too large an increase in deductible in a single year.

If underwriters have not changed their techniques, the result may be further losses followed by the virtual disappearance of Stop Loss protections.

Supplementary Call Insurance was probably underwritten by looking at a Club's past record. It if had not called more than its Original Estimated Total Call (OETC) in the previous five years, it seemed reasonable to assume that this would continue. Such a simple approach would ignore two crucial points: whether the adequacy of the OETC's has changed, and whether the Club ought to have been calling more than it did:

Some London Market underwriters avoided Supplementary Call insurance because, in theory, there could be a conflict of interest acting to their disadvantage; Committee members decide the level of Calls, are both Insurers and Insureds of the Club, and can buy Supplementary Call insurance.

In practice this does not seem to have been a problem; some Clubs have made large transfers from Central Reserves, without which the claims on Supplementary Call insurances would have been even higher.

In most classes of insurance, claims are triggered by the happening of an event over which neither Insured nor Insurer has any control. Supplementary Call insurance is different; the claim trigger is the decision of the Club Committee to make a call. Appendix D describes the options available when they close a policy year. Accordingly, it may not be possible to underwrite Supplementary Call insurance in the normal sense of the word.

Peter Smith  
October 1991

## Appendix A

### P & I Terminology etc

The following descriptions are generalisations; terminology and practice vary slightly from Club to Club.

#### Calls (Premiums)

Example - a Club originally estimates the Call (for a specific ship) for a year to be \$100. It calls for \$80 up front. After 2 years it has called for an extra \$25 (i.e. \$105 to date), and now estimates that the ultimate will be \$125 (i.e. a further \$20 to come).

The \$80 is the Advance Call

The \$100 is the Original Estimated Total Call.

The extra \$25 called, and the \$20 to come, are Supplementary Calls.

The \$125 is the current Estimated Total Call

If a ship owner wants to leave the Club (e.g. vessel sold) he can pay a Release. This may be the \$20 of estimated further calls, but could be slightly higher - \$22 say.

A Catastrophe (or Overspill) Call may be made iro a particular loss event. It can only be made in respect of amounts that exceed the vertical reinsurance protection bought by the Club - i.e. claims over \$1,262m or \$1,562m (see below). Some members have limited coverage from the Club. Consequently, they do not have to contribute to Catastrophe Calls. (see also Fixed Entry below)

N.B. all Call amounts are often expressed as percentages of the Advance Call.

### Levels of Protection etc

Clubs offer unlimited protection to their members, but with a limit on oil pollution (\$500m in 1991).

Most Clubs are part of the International Group - which pools large claims among the Member Clubs rather than buying reinsurance protection in the market.

## Appendix A - Ctd

In 1991 the structure (all amounts fgu), for members of the International Group, is :-

- \* Clubs retain the bottom \$1.6m.
- \* From \$1.6m to \$12m is paid by the International Group Pool (16 Clubs). Payments on a claim for a member Club are met by the other Clubs in proportions agreed provisionally at the start of the year and adjusted about three years after the year end. There is no concept of Advance Calls etc; the Pool works on a pay-as-you-go basis with periodic accounts.
- \* Reinsurance cover for \$12m to \$1,262m is bought from ILU/Lloyds/etc by the International Group. Premiums are based entirely on tonnage - e.g. 44 cents per gross ton for tankers, 17 cents for dry cargo vessels etc.
- \* Reinsurance cover for \$1,262m to \$1,562m is placed with Ace in Bermuda. Not all Clubs buy this cover.
- \* Liability in excess of the top reinsurance protection remains with the original Club but is reinsured by the other Pool Members. As the original liability is unlimited this could, in theory, be a very large amount. If the claim is on Club A, and Club B is unwilling or unable to pay its share, the resulting shortfall is borne by Club A - i.e. not shared between the other non-defaulting Pool Members.

### Fixed (or Special) Entry

Ships can be admitted to Membership for a fixed premium - i.e. not sharing in the mutual aspects of Supplementary Calls or Returns.

### Closure of Years and Central Reserves

The following is a brief summary of a single Club's rules; most other Clubs' rules are similar. The important point is that large run-off deficits arising on closed years may have to be borne by open ones.

Underwriting years are closed after a time, but there are significant differences from the Lloyd's concept.

In addition to the various underwriting years there are central funds: Catastrophe Reserves and Contingency Reserves.

Years are closed separately for Catastrophe Calls and Supplementary Calls. When a year has been closed, no further Calls of that type can be made.

## Appendix A- Ctd

A year is closed to Catastrophe Calls if, at the end of three years, no Catastrophe event has been identified. If one is identified at a later stage, it is borne by the nearest year still open to Catastrophe Calls and/or paid from the Catastrophe Reserve. A run-off surplus from the amount reserved for a Catastrophe claim is paid to the Catastrophe Reserve and/or returned to members who paid the Catastrophe Call.

A year is closed to Supplementary Calls when the Directors see fit. Any surplus at that time can be paid to Catastrophe/Contingency Reserves and/or returned to the members. Subsequent run-off surplus is dealt with in the same way.

Run off deficits on closed years can be covered in three ways: transfer from Contingency Reserve, transfer of (unallocated surplus) from other closed years, or from Advance or Supplementary Calls on open years. In the last case the members are told of the amount being transferred to the closed year before the payment is demanded.

A few Clubs (e.g. the London) keep each year separate and hold no central reserves.

### Reserves

Clubs use the term Reserves to mean the total pot of assets available to pay claims - very different from the usual insurance concept of total outstanding liabilities (including IBNR).

A number of Clubs have had reducing Reserves, which could reflect under-reserving in the insurance sense, i.e. possibly implying a deficit to be made up from either Supplementary Calls on old years and/or increased Total Calls on future U/W years.

### Discounting

When calculating Calls, transfers etc, Clubs may explicitly discount outstanding claim payments.

## Appendix B

### Clubs' Supplementary Call Histories

Figures are the latest estimates of Total Call (i.e. Advance Call, plus Supplementary Calls made to date, plus estimated future Supplementary Calls) as percentages of the original estimate of the Total Call.

Club	----- Year -----				
	87	88	89	90	91
Britannia	87c	92c	96	100	100
British Marine	117c	183c	125c	121c	100
Gard	83c	83	100	100	100
Liverpool & London	136c	200c	190	190	100
London	196	193	192	165	138
Newcastle	125	146	150	125	100
North of England	120c	140c	160	140	100
Shipowners Mutual	80c	80c	92	100	100
Skuld	119c	150c	183	154	100
Standard	135c	200c	200	200	100
Steamship Mutual	92c	100	100	188	100
Swedish	100c	140c	172	200	160
UK Mutual	100c	100c	167	179	100
West of England	192c	188	184	163	100

N.B.1 "c" indicates a closed year.

N.B.2 Figures correct as at early October 1991. Since many Clubs make Call announcements at that time of year, they will soon be outdated.

N.B.3 In 1991 many Clubs have published Release Calls far in excess of their estimated future Supplementary Calls. This may be to deter members from leaving, but could indicate that they expect Supplementary Calls to increase further.

## Appendix C

### Coverage Provided by Clubs

The following is a brief description of the types of cover given by Clubs to their Members.

### Legal Liability for Death and Injury of

- \* crew members
- \* passengers
- \* other third parties: stevedores working on board etc.

### Legal liability for loss or damage to Cargo arising from

- \* unseaworthiness of ship (particularly leaking hatch covers)
- \* short delivery, theft, pilferage
- \* improper stowage, heating/sweating caused by inadequate ventilation etc
- \* contamination by other/previous cargoes, rust/oil/paint of ship etc

In some cases the Cargo owner will have been paid by the Cargo insurers, who then exercise subrogation rights against the shipowner - who claims on the Club.

### Other Miscellaneous Expenses and Legal Liabilities

- \* oil pollution
- \* fines imposed on shipowner (Health & Safety legislation, regulations about cargo documentation etc, immigration rules, customs infringements - importantly the US Anti Drug Abuse Act 1986)
- \* additional costs in diverting ship to save, or attempt to save, life
- \* collision/contact  
(Various types of third party property damage. Traditionally 75% of damage to other ships is covered under standard Hull insurance, Clubs covering the remaining 25%. Clubs also cover 100% of liability for damage to bridges, quays etc.)
- \* expenses of on board keep of stowaways/refugees
- \* crew medical and repatriation expenses, and cost of flying out replacement crew
- \* removal of wreck when required by law
- \* quarantine expenses: wages, insurance, port charges etc when ship quarantined after outbreak of infectious disease
- \* sue & labour expenses - extraordinary costs and legal expenses borne after a casualty, and designed to reduce the member's liability for expenses/liabilities covered under other Club Rules.

## Appendix D

### London Market Insured Interests - and Reinsurances Thereon

The London Market reinsures the Clubs in a number of ways.

#### Individual X/L

Protection on the \$1.6m Club retention. (Some Clubs buy facultative protections below their X/L retentions, e.g. in respect of older vessels. Also, Gard reinsures the top part of its \$1.6m with the UK Club etc.)

#### Annual Aggregate Stop Loss

Protection on the total of claims with dates of loss in the U/W year (i.e. the Stop Loss on 87 year would not cover payments on earlier U/W years after they had been closed). Covers payments iro the bottom \$1.6m (less any specific X/L recoveries). Whether or not they cover contributions iro the \$1.6m to \$12m International Pool claims varies from Club to Club. In theory they also covers payments out the top of the Club's reinsurance protections (\$1,262m or \$1,562m).

#### Supplementary Call Protection

Protection on a Member's Supplementary Calls in excess of a buffer over and above the Original Estimated Total Call (buffer may be 0-20% of the OETC). If 86 and prior U/W years deteriorate after they have been closed, they may be financed by Supplementary Calls on 87. If long standing under-reserving of claims is rectified at a stroke, there could be large claims on Supplementary Call policies. Cover always has a Limit, and is usually written in one policy, i.e. not layered. Some covers are arranged by the Club and offered to their members. There are also Broker's Covers protecting more than one Club. Underwriters do not usually receive individual declarations or data on total exposures to each Club, but the latter can be obtained from the brokers on request. Supplementary Call protections do not cover Catastrophe Calls.

NB Claims on Supplementary Call Protections are not triggered by insured loss events in the usual sense of the word, but by the decision of the Directors to make a Supplementary Call. This means that three things happen: the Directors think that there is a deficit, they publicly acknowledge it, and they fund it by a Supplementary Call rather than transfer from Contingency Reserves or from higher Calls on later years.

#### International Group Protections

X/L protections (layered) on the \$12m to \$1,262m.

In addition some shipowners are not members of Clubs. They buy insurance in the Market for the types of liability that are covered by the Clubs.

## Appendix D - Ctd

### Reinsurance Protection of London Market Accounts

Until 1/1/87 most London Market Marine X/L contracts had Aggregate Extension Clauses, which should enable claims on P&I Annual Aggregate Stop Loss contracts to be recovered.

A typical Aggregate Extension Clause wording refers to "...risks covering on an aggregate basis...". It could be argued that Supplementary Call Protection claims are recoverable under such a clause, but an X/L underwriter consulted has said that this was never intended. However, it's not the intention that matters.

Furthermore, it has been argued that claims on Annual Aggregate and Supplementary Call policies for the same Club/year combination should be aggregated.

Alternatively, even if the X/L protections did not have an Aggregate Extension Clause, it can be argued that a Supplementary Call policy has a single loss event - the decision of the Directors to make a Supplementary Call - and the claim is therefore recoverable under the X/L.

At the time of writing the basis of settlement is in dispute.