Erasmus University Rotterdam

MSc in Maritime Economics and Logistics

2008/2009

Mutuality in P&I Insurance- an Institutional Approach

by

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SUMMARY

This thesis seeks to explain the mutual form of the P&I club system as opposed to a one based on commercial underwriting, using an institutional perspective. Two very basic theoretical notions supply the basic structure, adverse selection in the ex ante phase of the transaction, and moral hazard, ex post.

In overcoming the problem of asymmetric information ex ante, no particular advantages can be discerned in a mutual system. On the contrary, it requires more information to be exchanged due to the dual roles of the member, as insured and insurer. However, the present system has capacities and practices of spreading information informally.

Significant levels of aggregate uncertainty at the systemic level favour a mutual type of governance. This is particularly true for legal changes in the right to limit maritime liabilities. The presence of counterparty risk, which could develop into an aggregate shock to the insurance system, is another cause of mutuality, while lack of underwriting data is dismissed as motivation thereof.

Turning to the ex post section, it is asserted that the mutual form is crucial as it provides legitimacy for loss prevention schemes, but it also brings with it a risk of overexploitation of a common resource, a tragedy of the commons. P&I clubs have the institutional form necessary to shoulder functions of self regulation, bringing advantages in terms of influence. In tackling the problem of weak underwriting discipline inherent in long tail liability insurance, mutuality is found to be a disadvantage, but the mutual system may also have a unique institutional capacity to remedy this problem. Furthermore, the mutual form can legitimize the presence of liability insurance from a societal perspective, and is consistent with the polluter-pays principle.

Three agency theoretical hypotheses concerning mutuality are discussed, of which the risk sharing hypothesis has the highest degree of explanatory value, as it makes a correct prediction, and presents a plausible, but not universally prevailing, reason for the dominance of the mutual form. The managerial discretion hypothesis makes a prediction contrary to the actual market structure in P&I, but has the nice feature of shedding some light on the organisational set up of clubs. A limited degree of market segmentation is consistent with the maturity hypothesis.

ACKNOWLEDGEMENTS

My gratitude goes to Professor Ellen Hey and Doctor Alessandra Arcuri, my supervisors at the Erasmus School of Law, for their help and patience.

TABLE OF CONTENTS

1. INTRODUCTION

1.1INTRODUCTION AND OBJECTIVES

The protection and indemnity clubs have been supplying liability insurance for ship owners since the mid 19th century. Strangely archaic in trademarks and business practices, they have shown not only a remarkable instinct for survival, but also a certain swift footedness when adjusting to their members wants and needs. The world market is dominated by the 13 member clubs of the International Group, with a 90% share of the blue water tonnage segment. They are all mutual, meaning that they are fully owned by their members, and do not underwrite for profit, but exist solely for the good of their members. They are linked to each other through a common pool of risk, as well as in the International Group Agreement, which, in all essentials, is a pricing agreement. Recently scrutinized by the EU for their alleged anti competitive behaviour, P&I clubs were left intact, imposed only to make minor changes in pricing practices. Insurance trades which previously have been dominated by mutual players have seen an increasing degree of commercialisation, both in form of influx of private insurance, stock and privately owned, as well as in form of demutualisation of existing units. This development is, with few exceptions, absent from the P&I world of today.

This raises several questions, such as why the mutual form of insurance has proven so durable, why it is so dominant, and naturally if the prerequisites for another 150 years of successful business are present.

I intend to use a theoretical framework drawing on the new institutional economics to explain the dominance of the mutual form. NIE has the ability to explain organisational form, as opposed to a neo classical approach, which generally takes organisational form as a given. My main objective is explanatory and explorative. The latter is chiefly motivated by an obvious gap in existing literature; no previous study has sought to explain this particular phenomenon using an institutional perspective.

1.2 THESIS OUTLINE

This thesis will start a statement of the research questions I am aiming to answer, together with two working hypotheses, deduced from theory. For the purpose of understanding I will present some basic ideas from the new institutional economic school, which is to be understood as a theoretical framework, followed by an empirical background of the Protection and Indemnity Industry. A very brief historical summary and an account for the tradition of communitarian solutions in the shipping industry are provided; motivated by the emphasis on historical factors and embeddedness put by institutional perspectives.

Then follows the analysis, which has two basic parts, the former is focusing on ex ante aspects and adverse selection problems in the contract. The ex ante chapter is divided in two parts, one dealing with idiosyncratic risk and the other with aggregate risk. The second part deals with moral hazard and the ex post sequence of insurance transactions. Several theories are presented in connection with the analysis, representing extensions of the theoretical framework. However, as asset specificity (see framework for definition) logically is a prerequisite for hierarchal structures of governance (of which mutuality is an example) to arise I will seek to establish its presence right at the beginning of the analysis chapter, i.e. before the ex ante-ex post discussion.

A discussion on three different hypotheses from the literature constitutes the last part of the analysis. All three, have the explicit aim of explaining the organisational form of insurance providers. In order to assess their applicability in the case of P&I insurance, I will be using findings and concepts from the foregoing chapters. These hypotheses make contradictory predictions concerning mutuality, and when it is an optimal organisational form for insurance. A discussion concerning the applicability, and explanatory value, in this particular context will therefore be fruitful.

1.3 MAIN RESEARCH QUESTION

Which factors make the mutual form of organization particularly suitable for marine Protection & Indemnity insurance?

Sub questions:

1. Has a mutual form of insurance capabilities of addressing issues of Adverse Selection in the ex ante phase of the contract that would be more problematic in a fixed premium setting?
2. Can sources of aggregate uncertainty be discerned in the maritime industry, motivating the dominance of the mutual form?
3. Has a mutual form of insurance capabilities of addressing issues of Moral Hazard that would be more problematic in fixed premium setting in the ex post phase of the contract?

1.4 METHODOLOGY & SOURCES

1.4.1 CHOICE OF THEORIES

A word about the different theories I will be using may be necessary. I have permitted myself to be eclectic in the choice of theoretical notions and framework. However, all are consistent with each other in terms of ontological assumptions. More precisely, they take into account, or are

even based on, actors behaving opportunistically, but with a bounded rationality, stemming in part from the presence of asymmetric information. Its size and mutual form make the P&I system worth analyzing both from theoretical perspectives, and in its own right.

I will use two, very basic, key notions, Adverse Selection and Moral Hazard, both compatible with the school of thought, commonly referred to as New Institutional Economics. The latter has the, in this context fortunate, ability to explain a specific form of organisation, as opposed to the neoclassical school, which main focus is elsewhere, motivating the view upon the firm as a production function. My overriding research question is also very typical for this school of thought; the fact that NIE ask the right questions, may be at least as important as the ability to answer them.

In the chapter on adverse selection I rely heavily on Smith and Stutzer's work on mutuality in insurance. Their approach is chiefly within what is referred to as agency theory. The latter emphasize the ex ante phase of the contract, but is very much part of the Institutional approach. Williamson acknowledges this, but also discerns a need for ex post considerations[1]. For the latter I use a paper by Parsons who has developed and extended the notion of Moral Hazard, specifically for liability insurance. His work is more implicitly a part of the institutional approach, but it provides valuable insights, particularly so in the interface between liability insurance and contextual factors.

The last part of the analysis consists of a discussion on three hypothesis formulated within agency theory, with the aim of explaining mutuality in the insurance industry. The managerial discretion hypothesis can be traced back to Williamson's early work[2], but it has been adapted specifically for insurance by Mayers and Smith. It emphasizes ex post factors, together with the maturity hypothesis, while the risk sharing hypothesis takes its departure in ex ante factors.

1.4.2 METHODS

Methods used in the field New Institutional Economics are not coherent; on the contrary, a plethora of different approaches has been employed. In very general terms quantitative methods are less common than in the more orthodox schools of economic thought. The most commonly used approach is to formulate predictions based in theory and compare them with empirical data[3], a modus operandi which applies also for this thesis; hypotheses were deduced from theory, but also in accordance with the empirical quest.

A comparative study would off course be an ideal research design, including a fixed premium underwriter and a club. However, the extent of market concentration makes meaningful comparisons difficult to make, as commercial underwriting is largely absent in ocean going tonnage. This leaves the case study as the basic research design, where the P&I market constitutes the case, to which general theories, which seek to explain the mutual form of insurance, are applied.

Organisational form is taken as a dependent variable in this thesis. However, we are facing an accomplished fact; the mutual form is completely dominant. Instead of comparing companies or market segment with each other, the basic method used by Smith & Stutzer and Mayers and Smith, the theory itself will supply the material of comparison. Differently put, an assessment of those explanatory variables proposed in the literature, to account for the mutual form of

[1] Williamson 1990
[2] Williamson 1963
[3] Findlay 2006

insurance, will be carried out. Thus a positive analysis and an explanation of the mutual P&I system is what this thesis seeks to produce.

1.4.3 SOURCES

This work relies chiefly on secondary sources. Moreover, as academic writing on P&I clubs barely exists, with a few notable exceptions, most of these sources are of juridical nature. Thus they answer questions of "how" rather than "why". For more contemporary knowledge newspaper articles have proven useful. In addition to this, some interviews with P&I club and fixed premium underwriting staff have been carried out on an ad hoc basis.

2. THEORETICAL BACKGROUND

2.1 INTRODUCTION

This part of this thesis is intended to give the reader a basic understanding of some key notions of the institutional approach. The aim is to establish that the mutual form of insurance, such as that we see in P&I, corresponds to a more hierarchical form of governance, while a policy bought from a fixed premium corresponds to a less hierarchical mode of governance, i.e. the market. In Williamson's terminology, this is the choice between *make* or *buy.* This is also the link between theories used and the institutional framework. While the former seeks to explain the mutual form of insurance companies, they also explain the hierarchical outcome.

2.2 NEW INSTITUTIONAL ECONOMICS

2.2.1 INTRODUCTION

New institutional Economics is a result of a number of specific assumptions concerning individual behavior, which its claims are more realistic than those employed by the neoclassical school of thought. One primary interest of institutional economics has right from the start been to explain the emergence of organizations and firms. Its approach is often explicitly interdisciplinary; it uses elements not only from economics but also political science, law, organizational theory and sociology. Ronald Coase is often named the founding father, with his famous "Theory of the Firm". Among his disciples are Oliver E. Williamson and Douglass North.

2.2.2 WILLIAMSSON'S FOUR LEVELS

Oliver E. Williamson identifies four basic levels of social analysis. Each level affects the next in providing constraints for possible outcomes. There is a reciprocal relationship between levels, the level beneath can affect the level above.

The first level, embeddedness, is where informal institutions, customs, norms and religion are found. Change, if any, will be a lengthy process, measured in centuries rather than decades. In the following I will give an account for embeddedness specifically in the shipping industry, as it most probably affected the formation of mutual insurance clubs.

The Second level, Institutional Environment, includes the formal rules of the game, such as constitution, laws and property rights. Also distribution of power is part of the institutional

environment. The third level, Governance, primarily of contractual relations, defines the play of the game. A reasonable time horizon for change at this level is, according to Williamson, 1-10 years. The research question this thesis seeks to answer encompass the second and the third level primarily. Expressed In a diagrammatic fashion, my objective is to isolate phenomena on the second level, which could help to explain what is observable on the third level.

The last level is where allocation of resources is carried out, where prices are set and quantities are determined. This is the primary unit of analysis for neoclassical economics[4].

2.2.3 TRANSACTION COSTS

Ronald Coase's main point is that in a transaction, more costs than just the actual purchase price of a good or service should be considered. Depending on the nature of the relation between buyer and seller, a number of different costs can be distinguished, information costs, haggling costs, insurance costs. In more general terms, transaction costs can be seen as frictions in the economic system. In some cases these transaction costs may be significant, even to the point where the transaction is not executed at all. Coase used this notion when he sought to explain the evolution of companies, which economics, as a discipline, up to then had failed to explain. His main point was that a firm's raison d'être is to reduce transaction costs, through the lack of a pricing mechanism. Coase acknowledged that there are transaction costs also within the firm, but as long as they are lower than those found on the open market, the firm is still worthwhile. In this, Coase addressed the "make or buy" problem, arguably the basic thought behind the literature on vertical integration[5].

A useful distinction, made by Williamson, is the one between transaction costs *ex ante* and ex post. The former is understood as costs arising before completion of the contract, e.g. costs relating to search of suitable business partner, negotiating drafting etc. The ex post contractual costs are those emanating from the set up and running of structures, which are necessary for the bonding of commitments, stipulated in the contract situation.[6].

3.3 IMPERFECT INFORMATION

2.3.1 ASYMMETRIC INFORMATION

George Akerlof introduced the notion of asymmetric information in his "Market for Lemons". With a famous example of the used car trade, he illustrated that in a transaction one party often has the upper hand, as he or she knows more about what is sold and bought. A used car, as opposed to a new car, may have defects that only the seller knows about after driving it for a year or two. The buyer has no realistic chance of gaining enough information to put him on par with the seller. This also leads to the suspicion that a certain type of car may be over represented on the market, namely the "lemon" the bad car[7]. This is known as adverse selection. In insurance, adverse selection problems arise as people more prone to have accidents, also are more prone to take out insurance policies, leaving the insurance companies with a portfolio of lemons. As I will show in the following, asymmetric information may also pose a problem from the client's perspective, when a mutual form of insurance is employed.

[4] Williamson 2000
[5] Coase 1937
[6] Williamson 1985
[7] Akerlof 1970

2.3.2 BOUNDED RATIONALITY

The new institutional economics make some assumptions regarding human behavior which is in stark contrast with those applied by the neoclassical school, namely the utility maximizing and fully rational individual. The individual is instead presumed to be *intendedly rational, but only limitedly so.*[8] This assumption has implications for conceptualizations of contractual relations, and explanations of how costs for monitoring, planning and adapting them, arise. Furthermore, bounded rationality will also convey the possibility of discriminating governance structures, in the limited cognitive abilities of the participants. Bounded rationality is a way of asserting that the participants of a transaction are acting under the condition of uncertainty[9]

2.3.3 UNCERTAINTY AND COMPLEXITY

Also the level of uncertainty in a transaction is bound to influence the institutional outcome. This can be illustrated by comparing the purchase of a kilo of sugar with a contract to build a house. In the former case, it is very easy to specify what should be in the contract, the amount price and time of delivery would probably go along way. In the latter case however, there are more things or aspects than reasonably can specified in a contract. Such contract would probably contain provisions for negotiations and conflict resolution. Thus it is the difficulty of making reliable predictions concerning a transaction that will influence the choice of institutional structures.

2.4 OPPORTUNISM

The contractual man is expected to behave opportunistically, as opposed the weaker self interest seeking behavior assumed by neoclassical economists. The difference may for instance be illustrated by a propensity to withhold information from those around him, or even lying or cheating. From opportunism emanates information asymmetry, which, evidently is contrary to the idea of perfect information in every transaction. Economic organization becomes infinitely more complex when opportunism is considered. The Weberian bureaucrat is nowhere to be seen, in his is place, the opportunistic employee, actively pursuing a private agenda, adding a certain unpredictability also to organizational behavior. Off course such organization deviates grossly from the notion the firm as a production function[10]. Opportunism is an integer part of both moral hazard and adverse selection; without the assumption of opportunistic behavior, imperfect information would not have any on contractual relationships. Likewise, opportunistic behavior by agents provides the basis for the managerial discretion hypothesis, as well as the maturity hypothesis, discussed in the following chapters.

2.5 ASSET SPECIFICITY

Yet another dimension bound to influence contractual relations is asset specificity. This is defined as the extent to which the assets in a transaction are transferable to another one. In case

[8] Williamson 2000
[9] Simon 1986
[10] Williamson 1985

of low asset specificity both parties have the opportunity of simply conducting the transaction with someone else. The classical example of asset specificity is the relationship between a car manufacturer and its subcontractor which has adjusted its production in accordance with the former. If the car producer decides to renegotiate the contract, the sub contractor will have a difficult bargain position, as its client base consists of a single company. This situation is referred to as a hold up by Williamson, who discerns six different sources of asset specificity. However, I will be using only two, namely human and financial asset specificity, in the contractual relationship between the P&I club and the ship owner[11].

2.6 MAKE OR BUY?

According to Williamson the participants are likely to build governance structures in accordance with the contractual relations at hand. In explaining the organizational outcome he sees two main archetypical choices, namely make or buy. In this, he takes sides in the ongoing discussion on vertical integration, playing down technological factors as a valid, or at least common, reason to integrate functions under the same roof, He acknowledges that also production costs are important for governance structures, but maintains that they are by no means the exclusive determinant of such structures. One such factor, to which I will refer in this work, is economies of scale in risk diversification[12].

More generally, and to conclude this chapter, the make or buy decision in this context is made by the insured, that is the ship owner. The make node corresponds to a decision to join a P&I club, while buying an insurance provided by a commercial underwriter corresponds the buy node. The former is equivalent to a more hierarchical mode of governance.

[11] Riordan & Williamson 1985
[12] Williamson 1985

3. EMPIRICAL BACKGROUND

3.1 COLLABORATION AND COMMUNITARIAN SOLUTIONS IN THE SHIPPING INDUSTRY

In the following I will try to establish that the shipping industry has a long standing tradition of finding communitarian solutions to common problems. I will not attempt to give an exhaustive picture of different forms of intra industry collaborations, but I believe it is of some importance to understand norms and traditions present on the Embeddedness level, as it may dictate, and set boundaries for the actual institutional outcome, that is the formation of mutual insurance solutions.

The most striking, and well known, example of industry collaboration would be the establishment of conferences within the liner shipping trade. The conference system began with the forming of Calcutta Conference in 1875, as a successful attempt to control freight rates from the UK to Calcutta. However, collusions and cartels have occurred in almost every line of industry; what makes the cartel system unique is the perseverance with which it has continued to exist, despite wide spread political resistance. The EU finally managed to ban conferences in 2008, but only after a fierce battle that raged for years. The fact that the system is alive and kicking in other parts of the world should not be forgotten. In addition, extensive collaborations within liner shipping take place in forms of alliances and consortia, operating global networks[13]

The tradition of collaborating has been more conspicuous in Anglo-Saxon and Scandinavian countries, where the idea of pooling dry bulk tonnage was perceived. The shipping pool is yet another example of intercompany collaborations; organizing a group of small ship owners in a common arrangement, the pool, aiming to bid for contracts that otherwise would be out of reach. Sharing of risks and possibilities of optimizing scheduling are other advantages of shipping pool.[14]

The shipping industry has formed various organizations in order to influence policy making. Trade organizations as such are not uncommon in any industry, and lobbying is a common activity. However, the nature of for instance the Baltic and International Maritime Council, Bimco, and the direct channel it has into the International Maritime Organization, IMO, through its consultative status, is a case in point. Nevertheless, Bimco's position within the maritime cluster is not unique. The International Group of P&I cubs, IGPANDI, is another body sharing this advantage, along with some 50 other international organizations.

Historically there is a strong element of self regulation in the shipping industry. An obvious example is the presence and importance of classification societies. Members of the International Association of Classification Societies, IACS, another trade organization, have 90% of the world tonnage in their books. The IACS was originally set up in order obtain a higher level of coordination in technical requirements applied by classification societies [15] Classification societies are responsible for both providing standards and regulation for the construction of ships, as well as inspections of maintenance, so called surveys. Their importance, as providers of technical expertise is further illustrated by the fact that they act on behalf of port states, in

[13] Sicotte, 2001
[14] HE Haralambides, 1996
[15] Vorbach, 2001

carrying out inspections. Originally set up by insurers of Lloyd's in order to provide information about ships, classification societies still have a close relation with P&I clubs: A vessel not in class will not be allowed to enter a P&I club[16].

3.2 MUTUAL INSURANCE-AN ANCIENT PRACTICE

The Roman Collegia, first recorded about 600 B.C, is the first known example of mutual insurance. Members of the association, which resembled a guild, made a monthly contribution to a common pool, which could be used for unexpected problems. This tradition was carried on during medieval times, and beyond, by guilds and fraternities, which provided the individual with a basic income in case of illness or loss of income for other reasons. The first mutual life insurance company was the Amicable Society, set up in London in 1706[17].

3.3 EARLY HULL CLUBS

The history of the P&I clubs begins with the forming of hull clubs in mid 18th century England. As the term would suggest, their sole purpose was to supply insurance coverage against material damage to the hull. Hazelwood (1996), points to a number of different problems on the insurance market, making the forming mutual clubs necessary for ship owners. He also points out that the early Hull clubs can be seen as logic extension of the guild concept.

Firstly, the solvency of underwriters left much to wish for; high profile accidents left the insured without any, or, insufficient, remuneration. In addition, the market was in effect a monopoly, due to the so called Bubble Act, leading the British Government to set up two companies, which were the only intermediaries allowed to transact marine insurance. To make matters worse, underwriters were in the habit of bringing cases to litigation, making the claims adjusting a lengthy process. Lastly, underwriters often withdrew from the market in times of extra ordinary danger, leaving ship owners without protection, when they needed it the most[18].

This situation seems to be corresponding to quite a few of the criteria drawn up in the theory chapter, such as opportunism and uncertainty, and it is also a fair assumption that the hull club, the embryo of today's P&I clubs of, was a response to these problems; mutuality was the institutional response to these problems.

3.4 THE EMERGENCE OF P&I CLUBS

The hull clubs went through a period of decline, as the private market, in form of London Assurance and the Royal Exchange, became more competitive. Despite this, quite a few survived but with an uneven recruitment, meaning that "rust buckets" ended up being mutually insured, while quality tonnage was able to find fixed premium solutions on the commercial market. Deteriorating quality of the clubs' portfolios meant that the vast majority had simply dissolved by 1850. This is off course a classical example of an adverse selection problem. However, as producing an historical analysis not is an objective of this thesis, I will leave it at that.

Eventually the legal landscape changed, and instead of hull insurance, liability became the critical issue. This development can be seen as gradual definition, or sharpening, of property rights. Suddenly ship owners were held liable for externalities arising from their operations.

[16] Stopford, 1997
[17] Handel , 1999
[18] Hazelwood 1996

Several legal changes were behind the new need for a policy against liability towards third parties: The Lord Campbell Act of 1846 had established seafarers' right to sue ship owners for invalidity, and for relatives to seek compensation for casualties at sea. Passengers were given the same right, at a time when passenger traffic was growing immensely both due to technical advances and to massive immigration to the new world. Another act, passed a year later, gave port authorities the right to claim compensation for damages to their equipment. In addition, collision risks, and resulting liabilities, were insufficiently covered by hull policies[19]. The first protection club, The Britannia, commenced its operations in 1855, and several others soon followed.

In 1866 a court held a ship owner liable for the loss of an entire cargo, and during the 1870's most clubs incorporated coverage against liabilities relating to loss or damage of cargo. Eventually these two classes merged into one, and they are no longer possible to separate[20].

3.5 THE MODERN P&I CLUB

I will present a the modern P&I club in terms of operations, i.e. what kind of risk it actually provides insurance against, as well as the legal or formal structure. The thirteen member clubs are relatively similar in these respects. Nevertheless, there are variations, and the following has to be seen as a description of the archetypical club and its operations; to provide more detailed information on each and every club would not be feasible within the boundaries of this work.

3.6 COVERAGE OF A P&I POLICY

To assess where the problems of moral hazard and adverse selection may arise in P&I insurance a brief account for risks covered under a standard club contract may be useful. However, I have no ambition to make this account exhaustive, as the list of covered risks could be made very long.

Firstly, the P&I coverage has the ambition of covering what other types of insurance, hull & machinery and cargo, do not cover. Risks included in the coverage may therefore seem a bit eclectic. Furthermore, as clubs to some extent governed by their membership in the International Group, there is a strong element of coherence in club rules and coverage.

- Cargo liabilities arise when loss or damage has occurred to cargo, for which the ship owner is liable under a contract of carriage. The ship owner will however not be compensated further that what is said to in the Hague-Visby rules. If the ship owner has taken on a contract with the cargo interest which is more unfavorable to the latter than stipulated in this convention, he will suffer the "gap" between the Hague-Visby rules and the actual contract, without compensation from the club. If the transport contract includes other means of transport, cargo liabilities are still covered, as long as the sea journey is made with a ship entered in the club.

  Coverage is restricted in case of undue deviations from route etc. The club also compensates the ship owner for contributions made in a situation where General Average has been declared. The latter is, in short, a situation where a part of the cargo has to be sacrificed in order to save the ship, the crew and other cargo.

[19] UK P&I, corporate site
[20] Shipowners' Club, corporate site

- Clubs do also cover injuries, illness or loss of crew members. Such liabilities may come from collective agreements, the crewmembers' contracts of employment, or even statute national law. The same type of coverage applies for passengers, stevedores and other people who happen to be on the ship.

- Legal costs incurred as a result of a liability are covered by the P&I protection, provided, of course, that the liability itself is covered by the club. In practice, the club often takes over the legal defense of a claim, either on its own or through a correspondent. Interestingly, in many cases the club assumes this responsibility even before it is clear whether the liability actually is covered. This practice is known as a non waiver agreement[21].

- The Omnibus rule provides a certain degree of flexibility to the coverage. This rule basically recognizes that all liabilities which may occur in the operation of a vessel are not possible to foresee in an insurance policy. The omnibus rule therefore gives managers right to compensate a member for liabilities not specifically mentioned in the club rules. This provision also pinpoints the gap filling nature of the P&I coverage, as well as the degree of uncertainty faced by both ship owners and clubs.

  One would perhaps be tempted to assume, that the Omnibus clause is something completely unique to P&I clubs. However, Raetsmarine, a fixed premium underwriter and thus a competitor, applies a rule with a similar application called "Risks Incidental to Shipowning"[22], and a natural conclusion is that the Omnibus clause is specific for the maritime industry rather than for the clubs as such, even though one may guess that this is a type of benchmarking.

- P&I policies cover liabilities and costs arising as a consequence of stowaways entering the vessel undetected, including fines, imposed by port states, and repatriation. The same coverage applies to refugees and persons saved at sea. Liabilities for stowaways may also fall on the charterer, depending on whether the stowaway gained entrance to the ship by hiding in the cargo or not.

- Collision liabilities are principally covered by hull insurers, and the club will make sure that the owner has taken out such insurance. However, as the extent to which hull policies cover liabilities arising from a collision differs from country to country ,there is a need for a "patch" by club coverage: UK underwriters leave 25% uncovered while Norwegian and Americans offer full coverage. In addition, some liabilities are altogether left out by hull underwriters, such as wreck removal, pollution and damage to shore side structure (as a consequence of a collision).

3.7 CLUB GOVERNANCE

3.7.1 GENERAL MEETING

The highest organ of a P&I club is the General Meeting, where club rules are laid down, and auditing is scrutinized and adopted. Among its shores is also appointing auditors and decide on cooperation or even mergers with other organizations. In addition, the General Meeting appoints

[21] Hazelwood 2000

[22] Raetsmarine, Policy wording for Seagoing Vessel 2009

the Committee of Directors. Members are granted voting power in accordance with entered gross tonnage. In order to avoid capture by a single, but large, shipping company, additional voting power is granted on a sliding scale.

3.7.2 COMMITTEE OF DIRECTORS

This Committee of Directors corresponds relatively well to the Board of Directors in a conventional joint stock company, in terms of duties. An important difference is that only members of the club are permitted to enter the Committee. Some considerations are taken for type of tonnage and nationality, which the members of the Committee represent. This is in order to avoid bias. The Committee of Directors meets at regular intervals, to decide on issues like claims approval, settling of disputes, establishing the appropriate level of calls, employment of administrative personnel and approving reinsurance coverage.

3.7. 3 CLUB MANAGERS

The bulk of day-to-day operations in a club, like underwriting, claims handling and loss prevention, is handled by the club managers. The management consists of salaried employees, hired by an administration company. This unit is usually constituted on a standalone basis, with the P&I club as its only client. The management company is in many cases registered in a country with a benevolent tax regime, for instance Bermuda or Luxemburg, while actual offices around the world are kept at an agency basis.

Notably, granting of new members is also executed by the management, and not by the Committee of Directors or the General Meeting. The sheer number of members, as well as the constant in and out flux of tonnage, is behind this arrangement. The management is organized either by geographical boundaries or into different subcategories of work.

3.7.4 INCORPORATION

All clubs are by now incorporated. This has several legal implications, of which the limitation of liabilities is the most important. In this context it is however more interesting to note that the member through this structure make a commitment to the corporation rather than to other members. Legally, this arrangement implies that a conflict is seen as a thing between the assured and the corporation, and not between the assured and the other assureds. The size of a modern club makes a purer form of mutuality impractical; each claim would then have to be allotted proportionally on all members.

3.7.5 CORRESPONDENTS

In addition to the actual clubs, the correspondents form a crucial part of the P&I system. These are independent companies, working on behalf of clubs on a consultancy basis. A broad distinction can be made between correspondents whose operations are mainly commercial, and those which provide legal services. Many correspondents represent more than one P&I club. These companies are based in ports all over the world, usually specializing in different areas, where they draw on expertise and local knowledge and contacts. Correspondents deal with claims occurring at locations where the club does not have an office. However they do not settle claims as such; the main principle for correspondents is to investigate the claim, and if possible reduce it, through prompt action. They also fill an important function as conveyers of

information, for instance about local legislation and practices. Only a limited number of correspondents have P&I matters as their only subsistence; activities like chartering and broking are common "on the side".

As an illustration of the magnitude of the correspondent system, there are some 400 companies spread all across the globe, on the UK Club's list of correspondents.

3.8 FEE STRUCTURE

Premiums in mutual P&I insurance are referred to as "calls". The basic premium is the advance call which the member pays in installments over the insurance year. All members clubs of the International Group use a fiscal year beginning and ending at February 20. Advance calls are always expressed in dollars per entered ton. The club can also make supplementary calls, expressed in percentage of the advance call, after the end of the P&I year, depending on the claims outcome. As claim settling often takes time, supplementary calls can be made years after the actual period of insurance.

Practice in terms of supplementary calls differ somewhat, some clubs have the basic aim never to make any supplementary calls, thus reducing uncertainty for the individual member. Others make supplementary calls quite often, but price advance calls aggressively instead. In such cases the club makes forecast as for size of the additional call, in order to spare members unpleasant surprises. The grand total of forecasted supplementary calls and the advance call equals the estimated total call. In addition a special premium is charged members who leave the club, a so called release call[23].

An additional source of income is the investment yield from reserves built up over the years. This yield has a tendency to fluctuate substantially as a large share of reserves usually is invested in stock markets. Lately there has been some criticism against the investment philosophy applied by clubs which is perceived as being overly aggressive, exposing members to more financial risk than necessary[24].

3.9 P&I MARKET STRUCTURE

The P&I market is dominated by the 13 clubs which together make up the International Group of P&I clubs. The latter has a market share of roughly 90%. There is a peculiar geographical concentration; eight of the IG members are based in the UK (seven in London), while three are in Scandinavia. One club is based in Japan, and one in the US. The UK clubs have a 65% market share together, while the Scandinavians account for 25%. The remaining tenth is split equally by the Japan Ship Owners P&I Association and American Club[25].

There are mutual clubs, and fixed premium underwriters existing outside the International Group. Among the mutual, China Shipowners Mutual Assurance Association and the Korea Mutual Protection & Indemnity Association are significant players. In fixed premium Raetsmarine and Navigators Insurance Company deserve mentioning. QBE, AXA and Markel all

[23] Drewry 1998
[24] Lloyd's List August 27 2009
[25] Willis 2007

withdrew from the fixed premium P&I market during 2006 and 2007 despite ambitious attempts to gain a foothold[26].

3.10 SCALE ECONOMIES OF RISK MANAGEMENT

In the forthcoming analysis, clubs' incentives to grow, and battle each other for market share, rather than profit, will play an important role. Thus a run-through of scale economies in insurance may be helpful already at this stage.

An element of economies of scale is present in most lines of insurance. This is due to at least two reasons. Firstly, a big portfolio, in which risks are independent from each other, will statistically perform closer to its historical average, in terms of claims outcome and insolvency among the insured. This is commonly known as the law of large numbers. Uncertainty decreases as the portfolio increases in size, all other factors kept equal. A reduction of uncertainty can be realized through more efficient pricing of premiums, and in better possibilities of keeping reinsurance at an efficient/lower level. Also in administration and claims handling there are fixed costs, implying the presence of scale advantages.

However, in the specific case of P&I clubs it has been discovered that the cost curve is U-shaped, i.e. costs decrease per unit of insured tonnage, but only up to a certain point, after which it starts to increase again. The critical size was found to be at an entered Gross Tonnage of 80mn tons[27], meaning that the largest clubs, actually only UK Club, Gard and Britannia, suffer from diseconomies of scale.

In general terms, the case for economies of scale is not as strong in international lines of insurance, as in other lines, due to the extra regulatory burden that goes along with international presence; Insurance regulation is often nation specific, implying less significant synergies.

[26] Bunker Index 2008
[27] Aase 2007

4. ANALYSIS-ASSET SPECIFICITY

4.1 ASSET SPECIFICITY IN MARINE INSURANCE

A convenient definition of asset specificity is the degree to which assets are worth more within the actual transaction than they are outside, that is, on the market. I will in the following treat asset specificity as a binary variable. With this I mean that the degree of asset specificity present in the contractual relationship between insured and insurer in the maritime industry is not crucial. The important thing is that it exists, at a non trivial degree, using Williamson's wording. To establish that there is a sufficient degree of asset specificity is however of some importance; hierarchal modes of governance are needed in response to uncertainty and complexity etc, only if a certain degree of asset specificity is present, as it is determining the scope for opportunistic behavior[28]. Again, the more hierarchical form of Governance is here understood as a mutual form of insurance, as opposed to a non participating insurance provided by the market.

Relating to the previously used example of a car manufacturer and its subcontractor, it is important to know that relation specific assets can create bilateral dependence, i.e. not just a unilateral dependence as seen in the car producer example.

Williamson discerns several sources of asset specificity, of which I will focus on two, financial and human asset specificity, due to their obvious explanatory power for the relationship between the insured and the insurer in marine insurance[29]. The former is understood as a type of dedicated asset specificity, while the latter is best defined as specialized knowledge acquired over time in a learning-by-doing fashion.

4.1.1 HUMAN ASSET SPECIFICITY

To insure a complex risk like Protection and Indemnity requires expertise knowledge. This is illustrated by the organizational characteristics of clubs. Underwriters specialize in different areas, defined either by type of insurance product, geographical region, or in different sub trades within shipping. This has to do with both the difficulties in assessing probabilities of an accident, but also with the uncertainty as for the size of liabilities, requiring extensive knowledge both about the insured, the specific route in which he is trading, and his entered tonnage. Furthermore, the underwriting process is by now so complex that not two members receive the same premium per entered tonnage. A protection and indemnity underwriter will also have to build a claims department, staffed by maritime lawyers. A commercial operator which has built such organizational capabilities will have to utilize them as efficiently as possible. This is due to high fixed costs for which revenues, i.e. premiums, must be sought continuously. A major ship owner, threatening to take his business elsewhere will have significant leverage in a price negotiation under such circumstances.

Williamson stresses the learning by doing element in human resources and I believe this is the most important aspect of the relationship between the insurance parties: Over the years an extensive knowledge about the owner is built up within the club. If this enables the club to offer the owner a lower premium, than would be possible without that specific knowledge, it will serve to shift some power over in the transaction over to the insurance company, and also create a lock-in situation. This expert knowledge will, however, affect the relation bilaterally, as it from the insurers perspective only can be used for that specific owner.

[28] Regan 1997
[29] Williamson 1996

There is also a reciprocal element in human asset specificity, meaning that the member sooner or later will find it easier to deal with the club he is used to. Maybe more importantly, an extensive knowledge from the club about the member and his operation enables it to write off an exceptionally bad year in terms of damages as "bad luck". Thus the member can obtain a better premium than would be justified only by looking at his record of claims. This principle is also acknowledged in the International Group Agreement, prohibiting a new club from undercutting the "holding" club as it is perceived as having the best capacity to calculate a reasonable premium[30]. I will give a more detailed account for this agreement below.

4.1.2 FINANCIAL ASSET SPECIFICITY

Williamson acknowledges the need for credible commitment in a contractual relationship. In order to avoid opportunistic behavior, a promise made by either one of the parties can be secured by a "hostage". The decision as to which party to give up a hostage depends on the allocation of risk; a significant degree of assets specific investment on one of the parties will make him or her more prone to ask for some kind security to make sure that the counterparty honors the contract. Put differently, the party with the widest scope for opportunistic behavior will be the one making an extra commitment.

In P&I insurance the practice of release calls fills this purpose among others; If a member wants to move a vessel to another club, he is obliged to pay a special fee, calculated as a percentage of the advance call. The technical reasoning behind this practice is that the ship owner pays his way out of future liabilities emanating from the period under which he had tonnage entered into the club. As the settling of claims can be a matter of years, including court procedures etc, the club is not able determine its liabilities and hence not the calls. In order to avoid considerable uncertainty for both the club and the owner, a once and for all payment is made. The size of the release call is usually determined on an individual basis and varies substantially between 5% of the advance call to over 50%. The practice of release calls pin points the both long tail risk involved in Protection and Indemnity, and the subsequent contractual challenges.

The threat of a release call works to some extent as a stabilizing factor, as well as a lock in; the release call has to be paid up front. Moreover, although the release call is a practice unique for P&I clubs, it illustrates some of the difficulties faced also by a fixed premium underwriters, in the gap between contractual period and the almost endless duration of liabilities. While the club is able to go for another round among members, the fixed premium underwriter will have to make sure adequate reserves are available long after the insured has left for another insurance company.

With this, I have hopefully established that a non trivial degree of asset specificity is present in the contractual relationship between the insured and the insurer in this particular context.

[30] Hazelwood 2000

5. ANALYSIS- EX ANTE

Let me begin this chapter about P&I clubs in the ex ante phase by making an important distinction, namely that between the idiosyncratic risk and the systemic risk. The former relates to risk emanating from the insured on the individual level. Systemic, or aggregate, risk on the other hand stems from factors outside the control of both policy holder and insurance company. Both are off course important explanatory factors behind mutual forms of insurance. The term Adverse Selection relates to the idiosyncratic risk, the risk brought to an insurer's portfolio by an individual policy holder. As for the systemic risk, the notion of aggregate uncertainty will be the guiding light in this chapter. The latter disintegrates into different subcategories, provided by Smith & Stutzer. I will however begin with the idiosyncratic element, and adverse selection.

5.1 IDIOSYNCRATIC RISK

5.1.1 ADVERSE SELECTION

The term adverse selection refers to behaviour possible only if asymmetric information exists in the relation between a seller and a buyer in a transaction. This notion is thereby consistent with both "bounded rationality" and "opportunistic behaviour", the former on the buyer's side, the latter on the seller's side of the transaction[31]. Adverse Selection is a problem in the ex ante phase. The typical insurance contract situation implies quite grave disparities in terms of the availability of information between the buyer and the seller. A situation where only the "bad apples" find it worthwhile to even take out insurance, while the low risk clients simply stay out of the market, is at one extreme in terms of outcome. In this context however, the problem of Adverse Selection refers to the problem of pricing idiosyncratic risk correctly; to simply neglect taking out an insurance policy is not alternative available to (most) ship owners. This has both legal and financial reasons. For instance, banks usually include covenants regarding insurance coverage in loan agreements in order to protect their financial position in case of an accident. In addition a P&I policy is compulsory in the water of many port states; without such insurance a vessel is simply not allowed entry[32].

5.1.2 ASYMMETRIC INFORMATION IN P&I

The first aspect that needs to be taken under consideration is the degree to which asymmetric information exists in the contractual relationship between the insured, the ship owner, and the insurer, the P&I club. Let us begin with the type of information a ship owner is expected to submit to the club before he granted membership. "All" is the short answer to that question. One may however expect that some ship owners fail to fulfill the Duty of Disclosure, laid down in the British Maritime Insurance Act of 1906, to which all UK based clubs adhere[33]. According to the same act, the ship owner is obliged to disclose all information that he deems useful for the club, even if the underwriter does not specifically asks about them. Similar paragraphs are found in the rules of both the Swedish Club and Norwegian Gard[34]. Breach of the duty of disclosure will make the contract void, or limit remuneration in case of damage.

Information needed by the club can be put into five broad categories:

[31] Williamson 1973
[32] American Club 2009
[33] Hazelwood, 1996
[34] http://www.gard.no/gard/Publications/Guidances/Statutes/Rule38.htm and Swedish Club, Rule for Protection and Indemnity Insurance, 1985, amended 2007.

- Coverage: The required extension of a P&I policy is highly dependent on what other insurances the owner has taken out, considerable differences among different Hull & Machinery policies exist, and the club needs to be aware of the risks covered, in order to "patch the gaps".
- Vessel: Type of vessel, its condition and age are all highly relevant aspects to a P&I underwriter.
- Trade: Type of cargo and geographical whereabouts.
- Management: Quality of management, officers and crew.
- Claims record: Previous pattern of claims, in terms of size and frequency

5.1.3 SOURCES OF INFORMATION

5.1.3.1 CLASSIFICATION SOCIETIES

Classification societies remain one of most the most important source of technical information. To enter a club with a vessel not in class is not possible, and most clubs have even specified a number of classification societies regarded as bona fide, usually only members of IACS. Apart from the information on the most recent survey, clubs have access to the full class record, for a vessel i.e. results from surveys, stretching several years back in time, providing the underwriter with a complete technical history of the vessel, and presumably a hint of the owner's dedication to service and maintenance schedules. An intrinsic problem in this situation is that the classification society is employed and paid by the ship owner, and not by the club; a conflict of interest between the owner and the P&I club is present.

In addition to surveys carried out by classification societies, clubs are making own checkups before letting a vessel enter the club, and employ staff specifically in this purpose. Hazelwood asserts that the need for clubs doing their own surveys in part emanates from diverging interests between clubs and societies; the latter's primary interest is to ensure seaworthiness, while clubs also seek to establish the vessel's capacity of carrying cargo without causing damage to the same, a common source of liabilities[35]. Most clubs make in-house inspections if the vessel is more than ten years old[36].

One may also add that the classification system has been criticized over that last two decades. The practice of "class hopping" has increased, meaning that some ship owners have a tendency to shop around for the class society with the most lax approach to technical deficiencies. Moreover, class societies are engaged in fierce competition with each other, and are at the same time almost exclusively dependent on ship owners for revenues[37]. These circumstances have in all probability contributed to P&I clubs' reluctance to go solely on surveys carried out by class societies on older tonnage.

[35] Hazelwood 1996
[36] Bennett 1999
[37] Furger 1997

5.1.3.2 CLAIMS RECORDS

The most crucial part of the underwriting process is a record of claims for the ship and the record for the technical management. It is not uncommon that operations and management of vessels are outsourced to specialized firms. Records are often available, as 90% of new entrants to a club come from other members of the International Group. Claims record stretches up to ten years back in time, and has a direct influence on the quotation eventually presented to the owner. In case an owner or a vessel comes from another club within IGPANDI, records are obtained from the previous club. If the tonnage is from a fixed premium underwriter, the owner is asked to provide his claims history. An owner who fails to provide a loss record will have a hard time finding and underwriter willing to provide insurance at all.

5.1.3.3 INFORMAL SOURCES

In addition to the above mentioned formal sources of information, quite a few informal ways exist for underwriters to find business critical information about ship owners and their operations. In general the shipping industry relies to a significant extent on personal and informal contact, and the maritime insurance trade does not pose an exception. Firstly, the P&I world is relatively small, with a limited number of underwriters, who tend to know each other. The geographical proximity between those clubs headquartered in London may be of importance here. A ship owner can easily gain a bad reputation, with an adverse effect on his future premiums. Secondly underwriters have frequent and personal contacts with other ship owners and with insurance brokers, further reducing the risk of deviant behavior going unnoticed[38].

5.1.4 ASYMMETRIC INFORMATION- A RECIPROCAL PROBLEM

Some information about a shipping company may be of sensitive nature, such as solvency, specific trading patterns and business models. Notwithstanding, this information is well needed in the underwriting process, and even more important to secure the member's role as an insurer. According to the mutual character of P&I club the shipping company must be in a financial position stable enough to honor its obligations in case of a supplementary call. This may cause problem as it is not in the individual ship owner's best interest to go public with such information, and especially not to other ship owners in the same P&I club, many of which may be his competitors. There is indeed, at least formally, a duty of disclosure also on the club's part. A court case, which however ended in arbitration, involved a Greek shipping company which wanted to know the identity of other companies in the same class, in order to make an assessment of the club's position. The club, the now liquidated Oceanus Club, maintained that it was not obliged to disclose terms under which other owners were enrolled[39].

However, financial information concerning club's solvency and capital coverage are publically available, and clubs are given credit ratings by for instance Standard & Poor's[40]. Furthermore, annual reports and yearly statements for claims are published.

Important to note is also that the sheer size of a P&I club makes transparency very difficult to obtain. The Swedish club, one of the smallest clubs in the International Group, has more than 1200 vessels entered. For the individual member to assess the financial position of the club, and his peers, is a daunting task.

[38] Bennett 1999
[39] Hazelwood 1994
[40] See e.g. Lloyd's List, February 2009

5.1.5 INSTITUTIONAL STRUCTURE AS RESPONSE TO ASYMMETRIC INFORMATION

Despite clubs' efforts to gather as much information about new entrants as possible, I believe that the asymmetric nature of information between the club and the ship owner never can be fully redeemed. Likewise, the individual ship owner has no realistic chance gathering and assessing information on hundreds of club peers. It may even be a fair assumption that the latter asymmetry is more conspicuous than the former. Furthermore, the problem of a member not being able assess his peers in the same club, would not exist in a fixed premium context. The insured would still have to make an assessment of the insurance company's quality and ability to honor its commitments in case of an accident, but this task would be far easier than the corresponding problem in a mutual environment.

As the problem of adverse selection only can be remedied, or limited, by careful assessments of new members, the professionalization of underwriting is the institutional response to the problem. This professionalization has occurred only in contrast with mutual clubs of the old days, and not compared to the fixed premium underwriters, who are likely to make more or less the same assessment, using the same type of expertise, except maybe for a more lax solvency check. The present system thus represents a refined institutional set up, but according to the same principles. In part, the present organization is serving the purpose of decoupling the dual role of ship owner's, i.e. insured and insurer, a necessity due to size and complexity.

Likewise, corporatization of clubs is a way of partly decoupling members from each other, or decoupling the dual roles of insured and insurer, taken on by a member of the P&I club. It is also a way of overcoming an information deficit; it makes the individual member's knowledge about his colleagues less important. Corporatization makes it possible to assess the club according to conventional standards, of which credit ratings is one example. However, It should be remembered that a credit rating is by no means an exhaustive measure of the quality of a P&I club.

5.1.6 CONCLUSION IDIOSYNCRATIC RISK EX ANTE

In conclusion, the mutual form, as such, cannot be regarded as a major advantage in overcoming the problems of adverse selection, in the relation between the insured and the insurer. On the contrary, it can be argued that it adds extra layers of uncertainty, due to the dual role of a member. However, the P&I system of today has indeed ways of sharing information which could be difficult to duplicate in a fixed premium setting. In addition, corporatization and professionalization of clubs can be seen as an institutional response to reciprocal information deficits.

5.2 SYSTEMIC RISK

5.2.1 SMITH AND STUTZER

I will now shift the focal point of this discussion over to systemic risk from idiosyncratic risk but remain in the ex ante phase of the insurance contract.

Smith and Stutzer have in their paper "A theory of mutual formation and Moral Hazard with Evidence from the History of the Insurance Industry", isolated some of the causes behind the formation of mutual insurance companies. They apply their theoretical framework primarily to life insurance setting. I will however assume that the basic problems faced by a mutual insurance company are the same, regardless the form of risk, i.e. life or non-life.

At the very core of their thinking is that mutual companies are especially useful when costly loss prevention is the optimal outcome. Furthermore, mutual insurance companies have a distinct advantage over fixed premium companies, in their ability to handle moral hazard among the insured. This would, according to Smith & Stutzer mean that the latter type suffers from higher damage frequencies, cateris paribus. Both the moral hazard problem and loss prevention take place in the ex post stage, and will thus be discussed in the next chapter

A prerequisite, or at least a contributing factor, for the forming of mutual companies is the presence of aggregate uncertainty, according to Smith and Stutzer. In a life insurance context the latter may stem from different sources; a Legal upheaval may put both the company and the insured in a very difficult position. So would a financial panic or a recession, which in all probability is a very valid aspect in the shipping industry, which is widely acknowledged to one of the more volatile. Other sources of aggregate uncertainty may be unanticipated catastrophes and a general lack of reliable data, for instance regarding damage frequencies or costs.

Importantly, Smith and Stutzer's theory seems to predict a sequential development, from a state where risks are unknown, then mitigated in mutual companies. In a later stage, when the dust has settled, and data is available, risk can be placed in listed or privately owned companies [41]: To explain the absence of this sequential development in Protection & Indemnity is very much what this thesis seeks to accomplish.

5.2.2 AGGREGATE UNCERTAINTY AND MUTUALITY

I will in the following look for sources of aggregate uncertainty which would make the mutual insurance form more suitable than a fixed premium or non participating contracts.

5.2.2.1 LEGAL UNCERTAINTY

The first aspect is the amount of legal uncertainty involved. Smith & Stutzer assert that unpredictability of court decisions within product liability and medical mal practice have been an important factor behind mutual forms of insurance. In the case of marine insurance, liabilities stemming from environmental pollution would probably the most obvious example of claims difficult to predict, both in terms of likelihood and economical magnitude[42]. Regulation concerning maritime pollution is increasing almost by the day, both in international conventions and on the national level.

Oil pollution is particularly difficult, as expenses for damage control and clear-up can be extremely high. The US Pollution act from 1990 has also made a contribution to aggregate uncertainty within maritime insurance. It is highly complicated, and provides a higher limit of liabilities resulting from accidents involving oil pollution. Consequently clubs are forced to review their policy concerning liabilities in the US, and make sure they have sufficient reinsurance capacity. A further complicating factor is that individual states are allowed to adopt their own legislation on the pollution area[43]

The Exxon Valdéz accident came to change maritime insurance and its legal environment and therefore deserves a special mentioning. With a total claim amounting to US$ 400mn, it reached

[41] Smith and Stutzer 1995
[42] Faure 2008
[43] Hazelwood 2000

the limit in coverage for oil damage, as it was then. This accident also spurred the US Government to adopt the already mentioned oil pollution act, which eventually resulted in a new insurance line, the Certificate of Financial Responsibility, COFR. At the core of this issue is the distinction between a guarantor and an insurer, of which the former could be held liable in court, while the latter merely assumes the responsibility to compensate the responsible party up to a certain level, i.e. the limit of the coverage[44].

This coverage is nowadays provided by fixed premium companies, such as shoreline, Arvak and Great American. However, the coverage provided by the companies mentioned above, is very much dependent on P&I coverage as they commit to cover oil pollution damage *not* covered by clubs. The members of IGPANDI offer a cover of oil damage up to US$ 1bn, while the Oil Pollution Act requires unlimited guarantees. In effect, clubs remain the principal insurers of oil pollution[45].

In this case, it is worth noting that the occurrence of a rapid change in legislation actually gave rise to a fixed premium segment, rather than the other way around. However, as the two systems live in symbiosis, the situation is not fully equivalent with life insurance, examined by Schmitz and Stutzer, where it is difficult to imagine fixed premium and mutual insurance so closely interconnected.

5.2.2.2 UNCERTAINTIES CONCERNING RIGHT TO LIMIT LIABILITIES

Numerous attempts to abolish the ship owner's rights to limit their liabilities arising from accidents have been made, and here the coming Rotterdam rules deserve a mentioning. It will overthrow the liability limitations rules laid down in the Hague Rules, and the subsequent Hague-Visby. A ship owner will no longer be able to limit his liabilities claiming navigational errors. A prudent guess is that these changes will have to be addressed in P&I club Rules. In addition, the EU has presented its own liability regime, which may not be coherent with the Rotterdam Rules. These were watered down by the lobbying of the International Group, an issue to which I will return to later on. To further add to legal uncertainty, it is not certain whether the Rotterdam Rules will come into force, as national law. This will largely depend on which countries supporting it. The Hamburg Rules, for which the convention was adopted in 1978, did not become come into force until 14 years later. The Rotterdam Rules are supposedly backed by the US and Japan, improving its chances. Nevertheless, it seems like a case in point when addressing legal uncertainty in the maritime sector[46].

5.2.2.3 MULTIPLE SOURCES OF REGULATION

Also on a more general level the shipping industry is operating under more legal uncertainty than other trades. Regulation may emanate from classification societies, a form of self regulation, from port states, coastal states or flag states. Some of this legislation is governed by international conventions, of which quite a few do not ever get ratified to a satisfying extent.

A lot more can be said about sources of legal uncertainty but I will assume that I have established legal uncertainty is a constituent of aggregate uncertainty in marine insurance.

5.2.2.4 AGGREGATE COUNTER PARTY RISK

Another feature which could help explaining a predominantly mutual insurance system is turbulent economical conditions endured by the insured. More uncertainty on this level would

[44] Banham 1995
[45] Zhu, 2007
[46] Ince & Co, Lloyd's List May 28 2009

imply more uncertainty also for the insurer, who stands a counter party risk in all transactions, meaning in short that the ship owner may go bankrupt before he pays his premium[47]. Shipping is known as one of the more volatile industries, with a very conspicuous boom and bust cycle. Furthermore, the fact that most shipping companies are relatively small entities, hence lacking credit ratings, also adds an element of counterparty risk. From this it should be clear that the volatile nature of the actual shipping business, pose a risk of an aggregate shock also to the insurance industry.

In the short run, this mechanism will however be blurred by the fact that shipping insurance is more or less countercyclical to general shipping industry, as a shipping boom always results in more claims, and more expensive claims due shortage of ship yard capacity. Consequently Markel, Axa and QBE all withdrew from from blue water P&I in 2006 and 2007, during what has been called the best times ever in the shipping industry.

5.2.2.5 LACK OF UNDERWRITING DATA

A lack of quality data can make mutual forms of insurance more suitable. The most typical example would be the case when a new line of insurance is entering the market. Commercial underwriters may shun risk that cannot be calculated from historical data. Off course, a new insurance product does not automatically imply lack of data. I believe this may help explaining the creation of the P&I club system: In the early days hull and cargo underwriters at Lloyd's were unwilling to take on any liability risk which could not be assessed. To a certain extent, the argument holds still today, as clubs control expertise within maritime insurance. Nevertheless, expertise can be bought on the open market, and availability of claims records contradicts lack of information as a principal factor behind today's system. To some extent informal information sharing structures, commented above, may preserve the existing system, as one may assume that a newcomer would not as easily gain access to such knowledge.

5.2.3 CONCLUSIONS SYSTEMIC RISK EX ANTE

It is time to sum up the case for the mutual form of insurance after considering a number of ex ante aspects on the systemic level. It is evident that there are several sources of aggregate uncertainty present in P&I Insurance, of which those of legal origin probably are the most important. It is also probable that a significant degree of counter party risk is present, which on a systemic level may lead to situation referred to by Smith & Stutzer as an aggregate shock. A lack of underwriting data is not present, and can therefore not be a valid argument for mutuality.

[47] Smith & Stutzer 1995

6. ANALYSIS EX POST

6.1 MORAL HAZARD

Moral Hazard is a problem in most lines of insurance. It is an example of opportunistic behavior on the part of the insured in the ex post stage of the contract with the insurer. The former is thought to change his behavior in accordance with his narrow self interest, and in the fact that he now has an insurance cover against a risk, which occurrence he may provoke by his own activity. Thus, the interest of the individual insured diverts from the insurers, and thereby poses a contractual challenge. The latter takes different forms depending on whether the insurance is taken out from a stock insurer, i.e. in a non participating form, or through a mutual company, in a participating form. Opportunistic behavior, and moral hazard, in a mutual environment, and at a non trivial scale, will result in a situation commonly referred to as the "tragedy of the commons"[48]. The best interest of the collective, in this instance the club, may be at odds with the rational interest of the individual, the insured. The situation in a non participating context is less complex ; the contractual challenge lies in the relation between the shareholder and the insured[49]. Nevertheless, mutual forms of insurance are perceived as having an advantage over non participating schemes in their capability of handling moral hazard issues, as they can enroll insurees in efforts to reduce damage probabilities. These efforts may even be costly, and can also include forcing the insured carry some risk arising from aggregated variability in claims outcome[50].

6.2 PARSONS' ELABORATION ON MORAL HAZARD

Christopher Parsons has elaborated on the notion of moral hazard, and very conveniently for this author, specifically for liability insurance. Parsons maintains that the most important difference between a first party insurance, of which hull & machinery would be good example, and liability insurance, is that in the latter case the claimant and the insured is not the same person or entity. It is possible to see situations where the presence of liability insurance would affect the behavior of a third party.

Parsons takes his departure in Stiglitz when he asserts that moral hazard chiefly is a question of incentive problems, arising from asymmetric information among different agents, creating problems for the underwriter in discriminating between the insuree's actual behavior and exogenous uncertainty. The outcome of this situation is bound to be non Pareto optimal, and should therefore be regarded a second-best solution. To be more precise ,the inferiority consists in the imperfect mix between spreading of risk, and providing the right incentives for insurees.

Parsons breaks down moral hazard in four different subcategories in the setting of liability insurance, of which three are of interest also from a P&I context. The first category, *policy holder hazard,* corresponds with the classical definition of moral hazard given at the beginning of this chapter. *Claimant hazard* refers to the changing behavior by the third party, who may for instance be more prone to sue a person with a liability policy than one without. In extreme cases the latter claimant can collude with the insuree, against the insurer. *Jurisprudential Hazard* arises when lawmakers, policymakers and courts change their action, and in their practices, due to the availability of liability insurance. In this, also politicians are expected to be impaired by opportunistic behavior, which may induce them to take the easy way out, leaving a hot potato to

[48] Bennet 2000
[49] Adams & Hossain
[50] Smith & Stutzer 1995

the private sector, even if the outcome is suboptimal. *Underwriting Hazard* refers to the effect a long tail risk, like that present in most lines of liability insurance, can have in terms of skewed incentives for underwriters, making them more prone to take on risk; he or she might not be there to suffer the consequences in form of heavy damage costs[51].

These four categories of moral hazard will make up the basic structure of the ex post discussion. I will have reason to include other theoretical conceptions, such as the tragedy of the commons, in connection with each form of moral hazard. Again, the objective is to find out to what extent the mutual form is an advantage in the mitigation of different types of moral hazard.

6.3 POLICY HOLDER HAZARD

6.3.1 SOURCES OF POLICY HOLDER HAZARD

I will in the following discuss different forms of policy hazard in maritime insurance, the P&I clubs' way of curbing them through loss prevention, as well as the advantage of mutuality in this particular setting, using Parsons' typology. This is followed by a discussion on the tragedy of the commons, including both an internal perspective, i.e. between the club and its members, and an external perspective on exploitation of a common resource in the entire system.

It is indeed not difficult to discern situations where a ship owner's rational self interest would divert from that of his P&I club. One obvious example where moral hazard, on the ship owners' behalf, may arise is crewing. Due to the global shortage of seagoing personnel, in particular officers, magnified by the recent shipping boom, vessels with inexperienced or insufficient crews are commonplace. For the ship owner, simply refraining from operating a ship due lack of personnel is not a realistic option. Streamlining is another strong incentive to under staff a vessel. Indeed shortage of personnel has led to increasing damage frequencies, and for instance the Britannia club predicts that the current trend will continue, even through the present slump[52]. Again, maritime insurance is normally contra cyclical result wise, in relation to actual shipping industry.

Likewise, shortcomings in technical maintenance of a ship may lead to expenses, and subsequent insurance claims, for towage or even salvage, but also serve the purpose of saving the member some expenses on the short run.

A typical example from Hazelwood, which also pin points the special character of liability insurance, is a charterer seeking compensation for damages on his loading equipment. The club decides to represent the ship owner in defending the claim. However, as the ship owner may be dependent on the charterer for future business, an amicable solution, where the P&I club compensates the charterer fully, regardless of whether the claim is legitimate or not, is the desired outcome from the owners' point of view. The club, representing all its members, on the other hand has an incentive to fight the claim to the bitter end.

An even more ruthful version would be if the claimant, the charterer, and the policy holder, the ship owner, would to split the proceeds after a false claim is settled. Note that the basic principle

[51] Parsons 2003

[52] Lloyd's List June 5 2009

behind policy holder hazard remains intact in both cases; the sheer fact that the ship owner gets to keep his client with the help of a dubious claim would be an equivalent situation, from a theoretical perspective.

6.3.2 MITIGATING POLICY HOLDER HAZARD

6.3.2.1 PRICING

The first and most obvious way of mitigating moral hazard behavior among the assureds is of course to raise their insurance premium if something goes wrong. As we have seen in the previous chapter this is done on a regular basis using claims records for both vessels and owners.

However the deterring function of a higher premium may not be sufficient, as the insured calculates his chances of getting away with for instance poor maintenance, without having an accident; in general ship owners are not known to be the most risk averse group of people[53]. In conclusion there is an incentive problem, the relation between the insurer and the policy holder, resembling the classical definition of moral hazard closely.

As we have seen from Smith & Stutzer, mutual insurance is usually a superior form of governance when costly loss prevention on the assureds' part is an optimal outcome. It is therefore of interest to investigate to what extent P&I clubs are carrying out loss prevention schemes, and if possible also why they are more apt for this task than fixed premium underwriters.

6.3.3.2 LOSS PREVENTION

Loss prevention initiatives undertaken by P&I clubs can address almost any aspect of shipping operations. Furthermore all major clubs employ designated staff for loss prevention, usually ex sea going officers. It can include everything from better anchoring routines to actual training of officers. Of the latter, the Swedish Club's maritime resource management initiative is a good example. Educational videos are another example of loss prevention, a measure undertaken by most clubs. Indeed, quite a few of those measures would be costly for the member to implement, even more so when considering the sheer quantity of bulletins and recommendations.

Information on current perils is commonly used in order to prevent losses. The Internet has made the process of spreading information a whole lot easier. Online information databases, available to all members, are constantly updated. In addition all clubs issue newsletters and bulletins, bringing present issues and dangers to members' attention.

Loss prevention seems to have gained more momentum lately telling from attention the issue is given for instance in Lloyd's List. This would make sense, as price pressure has made premium increases more difficult, at the same time as the claims statistics are exploding. A natural strategy from clubs' positions would be to fight the causes of claims. However, loss prevention expenses are not accounted for separately in P&I clubs yearly financial statements, and I'm not able to verify any rising trend in loss prevention.

In the choice of carrots, sticks or sermons, clubs will almost always have to go for the first and the last alternative. The ship owner is in principal both a customer and employer in relation to the club, which is probable cause of the absence of imperative rules of conduct[54]. On the other hand, a manager representing a mutual company is in the possession of a higher degree of

[53] Stopford 1997
[54] Hazelwood 2000

legitimacy and credibility than a colleague representing a fixed premium underwriter, as the former acts in members' best interest, as opposed to share holders'. Therefore he does not need to employ coercive regulation to the same extent.

6.3.4ESCAPING THE TRAGEDY OF THE COMMONS

6.3.4.1DEFINING THE COMMON RESOURCE

I believe that loss prevention in a mutual setting can be understood as a way of avoiding a situation commonly referred to as the tragedy of the commons, meaning the overexploitation of a common resource. In addition, I maintain that an understanding of how clubs seek to mitigate this problem, which is inherent in the mutual structure, provides an explanation of their staying power, which, after all, is the objective of this thesis.

Firstly, the common resource needs to be defined in a mutual insurance setting. Bennett, who takes a similar view on moral hazard as an impending tragedy of the commons in P&I, does not provide a definition of the common resource which needs to be preserved[55]. In general terms the common resource can be defined as the risk premium a commercial underwriter, or his shareholders, would seek to appropriate when providing marine liability insurance. However, the mutual form has drawbacks as well, in the wider scope for opportunistic behavior by the management. Both systems have their unique sources of transaction costs, the difference can be seen as the common pool resource in a mutual system. To give a more comprehensive definition of common resources in the P&I system is beyond the scope of this thesis, but its existence can hardly be denied. We must also keep in mind that a market situation fully dominated by commercial underwriters is a highly hypothetical scenario. It is even possible that "the market" would not be willing to supply insurance whatsoever. Under such circumstances, the common pool resource that has to be managed in the mutual system is simply defined as the possibility to insure a vessel from third party liabilities.

6.3.4.2 MANAGING THE COMMONS

Garret Harding, the author of the classic article "The tragedy of the commons" acknowledged that coercive measures taken in order to preserve the common resource would have to be agreed upon in a social arrangement[56]. Elinor Ostrom , and others, have identified a number of basic principles for enduring governance of a common resource. I will not attempt an application, or even giving a complete account for these principles, but even at a basic level the common resource literature offers some insights in club's activities.

An important feature in the successful management of a common resource is that the resource should be clearly perceivable as being exhaustible by those using it. Furthermore, the resource in question must be tangible enough for actors to agree on a definition of the resource. A third prerequisite is the existence of a community between users capable of taking on a normative function and social control. Another necessity is a system of rules, perceived by participants as legitimate. Lastly, an incentive structure capable of punishing deviant behavior is regarded as a necessity by Ostrom[57].

[55] Bennett 2000
[56] Harding, 1968
[57] Ostrom 1999

6.3.4.3 THE HAPPY FEW

Many activities undertaken by P&I clubs are designed to build a sense of community among members. Numerous seminars, courses and social gatherings are planned throughout the insurance year. Building a community sense among members is instrumental as it will increase the chance of adherence to safety recommendations and bulletins. Therefore such measures are integer parts of loss prevention. Many underwriters spend a considerable part of the year traveling, building long term relationships with members, and thus securing loyalty. Most clubs claim to have a superior portfolio, i.e. better quality tonnage and members, compared with other clubs. This feature is very typical for mutual insurance in general[58] and in particular vis-à-vis clients of fixed premium underwriters. It should be noted that the sheer size of most clubs is an important obstacle to community building ambitions; the size of the community is perceived as a crucial factor in many theories concerning successful management of common pool resources. The physical distance between members and club management is another inherent impediment of a modern P&I club's aspiration for more rigorous social control of members.

6.3.5 POLICY HOLDER HAZARD FROM THE OUTSIDE

However, there is another perspective on policy holder hazard highlighted by Parsons, namely social implications of liability insurance. From societal point of view, liability insurance is more problematic than a first party insurance, as it may give rise to a type of behavior which society can do without. The basic thought here is that liability insurance may offset incentives provided by the public sphere, in order to keep citizens from deviant behavior.

To be sure, this has been a concern of policy makers right from the very start of maritime liability insurance; the maritime insurance act from 1745 prohibited ship owners from taking liability insurance in excess of what the vessel was worth on the market in order not to encourage recklessness[59]. In recent times extensive P&I system, with more or less unlimited coverage, has been under fire from environmental interests , who asserts that the system distorts the ship owner's incentive to implement strategies to avoid accidents. These concerns have been manifested in, for instance, the EU's Environmental Liability Act from 2004[60], and also in other political initiatives with the explicit goal of sharpening incentives for the individual ship owner.

Consequently, the mutual form of clubs has been used in the debate, as defense[61]; massive oil pollutions are likely to hit members sooner or later, in form of ill needed supplementary calls. Put differently, the mutual form blurs the distinction between assured and assurer to such an extent, that the morally dubious element inherent in an insurance against wrongful behavior, disappears or is at least mitigated. The mutual form is needed to legitimize the existence of liability insurance, in particular for those liabilities arising from pollution and environmental disasters. It is not a bold guess that the legitimizing function of mutual liability insurance will increase, on par with a public opinion increasingly intolerant with pollution of the maritime environment.

[58] Smith & Stutzer 1995
[59] Bennet 1999
[60] Lloyd's List April 2 2009
[61] See for instance Lloyd's List November 4 2004

6.3.6 CONCLUSIONS POLICY HOLDER HAZARD

There are numerous sources of policy holder hazard in marine insurance, such as crewing, technical maintenance. Pricing of policies may not always be a sufficient incentive for the insured to avoid a situation of moral hazard. Clubs are fighting claims through extensive loss prevention schemes, for which their mutual form provides legitimacy.

On the other hand the mutual form also implies that there is a risk of a situation similar to the tragedy of the commons. In order to understand the robustness of the mutual form, it is of interest to see what measures are being undertaken by clubs to avoid this. Here Ostrom's sheds some light on phenomena like community building measures and bonding between club managers and members.

Parsons acknowledges that from societal perspective, liability insurance may pose a problem as it distorts individual incentives to avoid accidents which may be harmful to society. This thesis maintains that the mutual form of liability insurance provides protection against this type of argument s.

6.4 CLAIMANT HAZARD

This form of moral hazard exists only in liability insurance, as it involves a third party, who is simply not present in other lines of insurance. Claimant hazard arises when a claimant change his or her behavior, as a consequence of the presence of an insurance.

However, I will not dwell on this aspect as a mutual structure, in principle, does not possess any particular advantage over commercial underwriters, in mitigating risk of claimant hazard. The claimant is in this case not the same person as the policy holder, and from the former's perspective corporate structure is largely irrelevant. To some extent loyalty etc, could help prevent a scenario where, the assured conspire with the claimant, but in that case, we end up with the same inducement for mutuality as we saw in the case of policy holder hazard.

6.5 JURISPRUDENTIAL HAZARD

6.5.1 INTRODUCTION

At the centre of attention in the following pages is whether the availability of liability insurance, provided by mutual companies, is influencing the legal framework within which P&I clubs exist. As an example of an area where the policy makers have failed to act due to the existence of a system based on liability insurance I use the handling of stowaways. Maybe more importantly, I argue that the significant degree of self regulation given to the maritime industry may be explained by jurisprudential hazard, and the mutual form of clubs make them more apt to shoulder their part of this responsibility.

There are two different aspects of jurisprudential hazard; the first is to which extent courts change their decisions due to the fact that a defendant is covered by liability insurance. The other aspect is whether law and policy makers are influenced by an existing liability insurance system. The first of these issues, I will leave unanswered, as it would require quite some time, and also legal expertise.

As for the relationship between tort law and liability insurance there are some controversies concerning which role to assign to insurance. One side maintains that the main function of tort

law is deterrence and retribution, while the insurance system is merely transactions on an open market, to which policy makers do not need to pay any attention. The other asserts that tort law is an integer part of the insurance system. The latter is seen as an efficient way of compensating people in accordance with other criteria, for instance minimization of accidents, reducing law to a mere tool to do so[62].

6.5.2 STOWAWAYS-AN EXAMPLE OF JURISPRUDENTIAL HAZARD

The problem of stowaways may be a used also as an example of jurisprudential hazard and difficulties affiliated with repatriation may be a good example of jurisprudential hazard. In the absences of a proper international legal regime, the issue is left to the shipping industry itself, and in the subsequent stage, to a group of liability insurers and their correspondents. Parson's framework takes into account opportunistic behavior also on politicians' part. In this case the international community may have failed to address the issue due to the presence of liability insurance.

There is no ratified binding convention forcing port states to accept disembarkation of stowaways. On the contrary, there is a practice of imposing fines on vessels, from which stowaways escape, where Spain is in the undisputed lead, imposing a penalty of $160,000 per stowaway, while the USA, Canada and Australia use a maximum fine of $50,000. The ship owner is able to recover such expenses under his P&I policy. Stowaways, who do not make it ashore but actually are detected on the ship, probably the majority, are left to ship owners, and eventually to P&I clubs to disembark and repatriate. P&I clubs in turn use correspondents specializing in such matters. The average claim is steadily rising. The Swedish Club has seen an increase from roughly $17,000 to 34,000 over the period 1998-2008[63]. A further increase, not only in cost per claim but also in number of claims, which according the London Club is probable outcome of the economical turmoil[64].

As a consequence of the present mode of governance, there is an entire industry dealing with matters that normally would fall on national Governments.[65] Transaction costs through the entire process are extremely high, due to uncertainty, and could with functioning legal regime be reduced considerably. The fact that there is a well functioning, but expensive system based on liability insurance, keeps the issue of the political agenda, and puts policy makers in a situation which could be labeled jurisprudential hazard.

6.5.3 JURISPRUDENTIAL HAZARD AND SELF REGULATION

Turning to the occurrence of self regulation as a form of jurisprudential hazard, Bennett asserts that P&I clubs' future might be dependent on how well they manage to portray the benefits of their mutual form in a wider perspective. In this he refers to the dark cloud hovering over the P&I system in form of the European competition legislation, and to the self regulating function which has been assigned to clubs, for instance in the European's Commission's "Quality shipping" initiative. During the latter process, the International Group has had the role both as a consultative body, as well as a major stakeholder. He also recognizes that such involvement can give the stakeholder "substantial input into the policy process and regulatory design".

[62] Parsons 2003
[63] Statistics Swedish Club
[64] Lloyds List July 14 2009
[65] Walters 2008

Now, the distinction between lobbying and being a consultative organization is somewhat blurred. The outcome may be similar, but a more formalized influence on the regulatory environment is usually "disguised" under a veil of self regulation. Parsons sees a similar tendency in the UK, where the Government has been persuaded to accepting self regulation in the liability insurance industry, as opposed to statutory control that it otherwise would have. From this he concludes that the liability industry has considerable lobbying power. Parson's point is valid, but in the maritime world, the means to impose statutory control do not exist to the same extent.

As a lobbyist the International Group has been successful; according to some sources it managed to bring down the EU proposal on unlimited liabilities for certain types of ships singlehandedly. (Gilles Savary, MP and rapporteur for the directive, later stated he was impressed by the power of the P&I industry.) For natural reasons, the Group has not openly taken credit for this successful lobbying venture, which relied on good contacts in the Council of Ministers[66].

From the international community's side there is a need of a self regulating system, which is perceived as being legitimate among those expected to adhere to regulation. The mutual structure of P&I clubs and International Group provides this legitimacy. A similar system based on an international association of fixed premium underwriters would be considerably less apt for handling the exercise of power inherent in a system based on self regulation. Bennett stresses the importance of organizations like the International Group but also the implicit power in this relationship:

The involvement of private institutions in the regulatory process can have substantial benefits for those institutions. Once regulation is perceived as more than simply a relationship between government and shipowner, then such intermediate &stakeholders' become viewed as an essential part of it. This can give them substantial input into the policy process and regulatory design.[67]

So, the influence P&I clubs can or will exert on liability legislation, via the International Group, may, at least in part, be justified by the fact that implementation is left to them. This is admittedly a more positive view on jurisprudential hazard, than found in Parson's definition. When we contrast Bennett's view with Parson's we see that the former holds a more positive attitude towards self regulation, for that very reason. Parson's view has some points in common with Stigler's notion of regulatory capture, while Bennett leans towards a model of pluralistic modes of Governance.

6.5.4 CONCLUSION JURISPRUDENTIAL HAZARD

To conclude the chapter on jurisprudential hazard, there are two sides of the problem in a P&I context. One of policy maker failing to take action due to the existence of a liability insurance, like in the case of stowaways. The other perspective is more of two way street, where policy makers need a liability insurance system, as a mode of self governance, which therefore is allowed to exert influence. Only in the latter aspect mutuality is beneficial, as it provides the legitimacy a system based on self Governance needs. It is not a bold statement to say that the institutional structure necessary to handle this function, also gives the mutual system staying power. This is particularly true when considering the state of mutual dependence between policy makers and the P&I system; politicians would in all probability be unwilling to act against the latter, for instance on grounds of anti-competitive practices, as they are, to a significant degree dependent on the P&I industry for implementation within other areas.

[66] Lloyds List May 9 2008
[67] Bennet 2000

6.6 UNDERWRITING HAZARD

6.6.1 ANOTHER RISK OF OVEREXPLOITATION OF A COMMON RESOURCE

The last of Parson's categories is that of underwriting hazard, which I will be using to examine the present problems of clubs' apparently poor underwriting discipline. I will label it an institutional failure, as well as an impending situation similar to a tragedy of the commons. This time it relates to the situation among clubs instead of within a club, as in the case of policy holder hazard. In this instance the opportunistic element is found among underwriters or among clubs. Lastly I will present some reflections on a mutual system's capabilities to remedy its inherent weakness in terms of underwriting hazard.

Parsons asserts that doubtful underwriting practices are more common in liability insurance than in other lines of insurance. He attributes this mainly to the long tail nature of claims results, meaning that the underwriter may not be provided with sufficient incentives to price risk correctly. In fact he may in many cases be retired, before the full implications of his underwriting of risk are possible to assess. As we have seen, the process of settling claims is often lengthy in P&I insurance, however not to the extent of professional indemnity insurance, the example used by Parsons, where an underwriter might well be deceased before the result of his underwriting is clear[68]. In conclusion the underwriter faces a temptation to undercut competition when pricing risk. From this perspective, a mutual form of governance is actually a disadvantage due to its weaker control structures needed to avoid opportunistic behavior among underwriters and managers[69]: It is a fair assumption that shareholders would not have accepted combined ratios at the level we have seen over the past decade in P&I insurance. One may guess that this race to the bottom among clubs has effectively deterred private operators from entering the market, but that is another story.

6.6.2 THE INTERNATIONAL GROUP'S DISCIPLINING CAPACITY

Some words on the current organizational structure may be necessary, as one main function of the International Group is to uphold underwriting discipline among clubs. This function has for natural reasons complicated its relationship with European Commission ; despite the successful defense against the civil liability bill, the Group's biggest triumph as lobbying organization is the defense of the exception from the European antitrust legislation. A brief account of the principal issue may however be useful, as it touches upon the International Group's right to exist. It is also useful for the following section, in which underwriting hazard will be discussed.

6.6.2.1 THE INTERNATIONAL GROUP AGREEMENT

The first pillar of the Group is the need of upholding pricing discipline between clubs, through the International Group Agreement. The basic principle is that competition is limited to new tonnage, i.e. vessels which have not yet been insured. A club can however make a quotation on an existing vessel already entered into a club. If this quotation undercuts the premium charged by the "holding club" the transaction can be submitted to a committee, on the holding club's initiative, to ensure that the new premium is not unreasonably low. In this committee, the new

[68] Parsons 2000
[69] Adams & Hossain

as well as the old club, and the International Group, are represented. A premium found to be unreasonably low, will not lead to the new club having to return the vessel, but the International Group will limit its pooling facility[70].

6.6.2.2 THE POOLING ARRANGEMENT

The pooling arrangement is the second pillar of the International Group. When one of the member clubs is hit by a claim, it retains this cost up to $5mn; the excess is shared by the other members of the Group, up to $30mn. The share of the claim in excess of this amount is covered by the Group General Excess Loss Reinsurance Contract, which is effective between $30mn to $2.3bn. This reinsurance facility is spread among some 200 syndicates at Lloyd's and a similar number of insurance companies across the globe. The cost for the reinsurance facility is shared among clubs in accordance with their size, in terms of entered tonnage. A claim exceeding even the Reinsurance Contract, $2.3bn to roughly $4.25bn is called an Overspill, for which the risk goes back to the member clubs, again contributing on par with their size. So far, no claim has reached to Overspill range[71].

6.6.3 LACK OF DISCIPLINE

Recent years' underwriting results among P&I clubs have been nothing short of disastrous. All of the major clubs, with North of England as the only exception at 104.6%, had average combined ratios well above 110% in the period 2002-2006. A combined ratio above 100% means that premiums did not cover damages, administration and reinsurance. However, all clubs have reserves in order to ensure financial stability. Depending on investment strategies these reserves can be expected to generate investment income. A protracted period of combined ratios above 100% does not necessarily mean that the club is depleting its financial reserves, but that it, in one way or another, is making a redistribution of wealth between old and new members.

The depletion of funds is particularly troublesome considering the nearby implementation of the Solvency 2 regulation. bringing clubs under pressure to strengthen their capitalisation. It should however be remembered that the unique feature of clubs, namely the ability to raise premiums retroactively through a supplementary call, makes the need for a hefty capital buffer relatively less important than in other lines of insurance[72].

From the above, one must draw the conclusion that the underwriting discipline among clubs has deteriorated. One argument against this reasoning would be that the countercyclical nature of P&I insurance makes this outcome inevitable, as the same period, 2002-2006, posed an unprecedented boom in the actual shipping market. However, experts, and even club managers, seem to agree that underwriting results among clubs were exceptionally bad, even considering present circumstances[73]. Furthermore, the cyclical nature of the industry, in combination with poor underwriting, has left club members and managers in a difficult position; clubs need to strengthen their balance sheet, during a period when most ship owners carefully guard their meager cash flow.

This may also be understood as possible tragedy of the commons. Besides the inherent problem in liability insurance underwriting, there may be some other reasons for this "race to the bottom" in premium levels; it seems that growth in terms in terms of members have become important. As noted above there are economies of scale in insurance, due to a higher degree of

[70] Official Journal of the European Communities
[71] Hazelwood 2000
[72] Aisam 2004
[73] e.g. Lloyd's List August 27 2009

predictability in claims outcome, meaning that size can bring advantages to the a club and its members. In this instance, the interest of the individual club, growth, may contradict the interest of the community of clubs, sustainability. There may also be a more shortsighted interest from individual members to keep premiums down. Failing to address this by club managers automatically puts the club under the risk of opportunistic behavior vis-à-vis the common of the commons, the International Group.

6.6.4 TOWARDS A TRAGEDY BETWEEN CLUBS-THE UNDERWRITING CYCLE

What has been said above must give rise to the suspicion that the P&I industry has joined, or in fact always been a part of, what is commonly known as the insurance or underwriting cycle. This is in very brief terms, a boom and bust cycle, spanning over roughly six years. The most common explanation attributes these fluctuations to insurance capacity being built up when times are good, the so called hard market phase. When over capacity is present, price pressure arises, in what is referred to as the soft market phase. Under such market conditions it is very difficult to uphold underwriting discipline, and risk is systematically underpriced, even by experienced underwriters, who act in order to retain presence on the market i.e. market share[74]. Underwriting cycles have been observed in other lines of insurance dominated by mutuals, for instance in fire insurance in Chicago in the 19th century. In that particular case, the cycle was connected with a strong influx of mutual operators during the hard market phase, causing premiums to drop eventually[75].

An obvious reason for doubting such pattern, or rather doubt the relevance of the proposed causes, is that new entrance, i.e. more capacity, rarely is seen within P&I, and capacity as such is not built up in clubs, due to their mutual form. Strangely, I have not been able to find any research seeking to address the presence of an insurance cycle within P&I, or isolating possible causes thereof. In all humbleness I let this be my proposal for further research. It should be noted that some P&I clubs refer to the "insurance cycle" or "underwriting cycle" for instance when presenting financial results, but in a unproblematized fashion, more as a way of describing general fluctuations of the market[76].

However, it may be that the aggregate uncertainties, referred in the previous chapter may induce to clubs to attract new members, hoping that sheer size could help bolster effects of a disaster. This cause for cut-throat competition between clubs is in any case closely intertwined with economies of scale in portfolios of risk. Furger offers another insight when he maintains that the social bonds between club managers and members may cause problems in pricing, particularly during what is referred to as soft market conditions[77]. A size-matters reasoning and incentive problems in underwriting may be leading clubs to engage in a, seemingly pointless, battle for market share.

[74] Berger 1988
[75] Zanjani 2004
[76] e.g Nepia 2003,
[77] Furger 2001

6.6.5 CONCLUSION & RECOMMENDATIONS - UNDERWRITING HAZARD

6.6.5.1 SUM UP

It may be relevant to speak of clubs' lack of underwriting discipline as an institutional failure. There seems to be serious shortcomings in underwriting discipline among clubs, as well as insufficient incentives on the individual level. At the same time, the structure of the International Group Agreement does not seem to provide members with proper incentives to stem pricing competition. In short, underwriting hazard as a theoretical notion seems to explain some of the competitive practices between clubs, while the occurrence of a full blown insurance cycle needs further investigation.

6.6.5.2 RECOMMENDATIONS

Here mutuality, and a comparatively benevolent antitrust legislation, offers a unique possibility of governing the commons. The institution for the job is already there, in the International Group. Already, the Group has the possibility to limit the reinsurance facility of a club, which has been found to unduly undercut another in premiums. A similar deterring structure could be applied in situations where clubs fail to uphold premium setting discipline on a more general level, e.g. when combined ratios come in above 100% during several consecutive years. Here I off course draw on Ostrom's principles for governing a common, and structures capable of punishing deviant behavior.

However, any coercive measures, as well as rules governing those measures, would have to be perceived as legitimate, by clubs as well as their members in order to be effective, (Not to mention the European commission, but that is another story). The common resource will have to be framed by measures to increase the tangibility of the common resource, as well as strengthening the sense of community. After all, the Pooling Arrangement means that 90% of the World's ship owners insure each other.

7. HYPOTHESES CONCERNING MUTUALITY

7.1 INTRODUCTION

In the following I will review some hypotheses derived from agency theory in the explicit purpose of explaining the presence of mutual insurance companies. They have been tested by their instigators, with positive results, despite the fact that their predictions are contradictory; the managerial discretion hypothesis, in Mayers and Smith's version, predicts that mutual companies should be found in less risk lines of insurance, while the risk sharing hypothesis by Doherty and Dionne implies the opposite. Tests have been carried out, comparing stock and mutual companies operating in lines of liability insurance, and also life insurance, comparing either lines of insurance with perceived differences in terms of risk, or comparing different segments within the same market, looking for systematic differences. Again, the total dominance of the mutual form in Protection and Indemnity poses a methodological problem; comparisons are difficult, or impossible, to make. Nevertheless, as each of the hypotheses referred to below, are products of clear reasoning, and employ the same ontological assumptions as this thesis, I believe they may be used to shed some light on the mutual form in P&I insurance. I'm not in the position to accept to reject any of these hypotheses, but I will give an account for their explanatory capacity and applicability in a marine protection and indemnity setting.

7.2 THE MANAGERIAL DISCRETION HYPOTHESIS

7.2.1 AN INDUSTRY SPECIFIC HYPOTHESIS

This hypothesis is industry specific for insurance. At its core are contracting problems between different parties in a firm. It assumes opportunistic behavior is a salient feature in the management of every insurance company, just as in the relationship between the insurer and the insured. Similarly, there is an inherent conflict in the relationship between policy holders and stock holders in a stock insurance company[78]. The major advantage of a mutual company is that it overcomes this tension in merging the policy holder and the share holder into same entity. On the other hand, the advantage of a stock company is that it is able to keep management on a tighter leash, with positive effects in terms of cost control etc. Mayers and Smith therefore maintain that the cost of asserting a high level of control over management is more expensive and/or and less beneficial for a mutual company than for a privately owned. A logical result would be that the mutual form is less common in lines of insurance where a high degree of managerial discretion is uncalled for. According to Mayers and Smith, risky lines of insurance would require a high degree of managerial discretion, and would hence be dominated by stock insurers. This hypothesis has been tested in other lines of property liability insurance, and indeed a correlation was found[79].

As the P&I insurance industry must be regarded as a high risk environment, regardless of which measurement of risk that is used, the prevalence of mutual insurance seems to contradict the managerial discretion hypothesis. However, the organizational set up of P&I clubs has an important difference, compared to other forms of insurance, in which the mutual form is common; the policy holders are represented directly in the Committee of Directors. Thus the P&I club merges not only the policy holder with the owner, it also merges, to some extent, the management with the two other interests. This is also a plausible explanation to why the

[78] Adams & Hossain 1998
[79] Mayers & Smith

managerial discretion hypothesis, as presented by Mayers and Smith, does not apply to the P&I industry.

7.2.2 CRITICISM

The managerial discretion hypothesis is criticized by Smith and Stutzer. Their main point is that it would imply that the mixed form would be the ultimate solution to opportunistic behavior on the managements account. The mixed form, i.e. a company which combine the ownership structure of a joint stock company , with the provision of participating policies, (for instance by profit and loss sharing schemes) is in reality rarely seen. In addition they maintain that the empirical support for managerial opportunism in mutual companies is weak. Smith and Stutzer also raise objections towards the assumption that geographical dispersion among the assured would make the mutual form less suitable; Mayers and Smith hypothesize that portfolios of mutual companies therefore should be more geographically concentrated, than private insurance. This criticism is certainly valid in P&I context, as it is difficult to imagine a company more geographically dispersed than a modern P&I club, a fact that does not seem to pose any particular problems.

7.3 THE RISK SHARING HYPOTHESIS

7.3.1 NON DIVERSIFIABLE RISK

Doherty and Dionne argue that the mutual form has superior capacity for risk sharing, if risk is not easily diversifiable. The latter should be understood as a risk which the insurer is not able to mitigate through diversification in his or hers portfolio. As an example they use the earthquake in San Francisco, which wiped out a large number of regionally based insurers. In this case the whole city was demolished; the fact that portfolios were diversified within the city did thus not help. In Doherty and Dionne's reasoning, independence between policyholders is emphasized, meaning that a loss on a single policy holder does not automatically increase the risk of other policy holders. In reality, individual risk is never completely independent due to force majeure factors etc. (The independence criterion is reasonably well fulfilled in P&I insurance due to the global nature of most club portfolios.) In every insurance contract there is an idiosyncratic, i.e. diversifiable, risk and a systemic risk, i.e. non diversifiable risk. Doherty and Dionne show that an organizational form that is capable of efficiently decomposing the idiosyncratic and systemic risk according to the mutuality principle and the risk transfer principle is a superior outcome (closer to Pareto efficiency).

The risk transfer principle and mutuality principle require some explanation: The former is illustrated by a simple insurance contract in which the policy holder buy his insurance against a fixed, and once for all premium. If the claims outcome turns out an unpleasant surprise, it is the underwriter's headache, and not the policy holders. The mutuality principle means that in the presence of systemic (undiversifiable) risk, policy holders can still insure against idiosyncratic risk, but they will have to retain a share of the systemic risk, for instance in form of mutual insurance. The difference between a mutual company and a fixed premium company is that the mutual is capable of decomposing risk, i.e. allocate risk according to both principles, for instance through a re-insurance facility according the risk transfer principle. A stock insurer can only employ the risk transfer principle.

The crucial aspect in Doherty and Dionne's reasoning is the bundling of policy and equity, into one unit. This can be attained in different ways, even by the policy holder buying shares in the same listed company, so called home made mutualization. In this Doherty & Dionne draw on the

Miller-Modigliani theorem, where the analogous home-made leverage is referred to[80]. The most common method is of course the participating insurance, underwritten by a mutual insurance company.

7.3.2 AGGREGATE UNCERTAINTY AND DIVERSIFIABLE RISK

It is clear that the notion of non diversifiable risk is akin to that of aggregate uncertainty and aggregate shocks referred to above. Legal uncertainty is one obvious source of non diversifiable risk from an insurer's perspective. Changes in the rights to limit a claim will affect the entire trade, and hence the entire insurance portfolio of a protection and indemnity. The Rotterdam Rules pose a good example of legislation that could shake the very foundations of maritime liability insurance, and the ambition of legislators in this process is explicitly universal. A paradox is that uncertainties concerning the success rate, i.e. the degree to which this convention will be ratified, creates another layer of non diversifiable risk. There are numerous other examples of sources of systemic risk; a particularly bad hurricane season, with heavy losses in human life, is one example of risk which may not be diversifiable to the extent required by commercial underwriters.

7.3.4 THE POOLING AGREEMENT DECOMPOSES RISK

As for the decomposition of risk, this is precisely the main function of the pooling agreement between clubs. At the first stage risk remains on the club and its members, a larger claim will be pooled among other clubs, while claims even bigger will be covered by the International Group's reinsurance facility. In the first stages of this process, the mutuality principle prevails, while the reinsurance facility brings about a transfer of risk, from members to a consortium of reinsurers.

7.4 THE MATURITY HYPOTHESIS

7.4.1 TIME HORIZON AS THE EXPLAINING VARIABLE

Mayers and Smith hypothesize that the mutual form is more suitable, and more successful, in liability insurance, where contracts are long term. The duration of this relationship is affected both by the terms of the contract, and the settlement period[81]. A long term relationship is thought to give the share holders, in a stock company, and the management more leeway to act opportunistically, with an adverse effect on the value of claims held by the policy holder vis-à-vis the insurance company. As already mentioned the mutual form eliminates this tension. In particular useful is the mutual form where there are significant lags in settlement of claims[82].

There is an obvious and intuitive match between the club system and this part of the management discretion hypothesis; claims settling is if often a matters of years. Supplementary calls, which basic purpose is to cover a worse-than-expected year, are made 2-4 years after the underwriting year in question when the full extent of claims are possible to assess[83]. One would expect that this is specific problem for the clubs, and hence not a very good argument for a mutual structure, but fact of the matter is that claims in marine lines of insurance often are complex, and require legal expertise, regardless of the structure of the insurer.

[80] Doherty & Dionne 1993, Lamm-Tennant & Starks 1993
[81] Krupa & Cummins
[82] Wende, Stölze & Lai, 2008
[83] Raetsmarine, corporate site

Indeed, relations in the P&I world are of longstanding nature. An underwriter at the Swedish Club estimated the retention rate to be above 90%, meaning that 90% of owners will remain in the club after renewal season, even if parts of tonnage is moved to another club.

7.4.2 SEGMENTATION

Logically, segmentation of the market would be the result, where mutual companies would dominate niches where settlements are protracted, while fixed premium underwriters would have a strong foothold in segments with less complicated and thus faster settlements.

Now, it may not even be relevant to speak of market segmentation in the present situation, due to the total dominance of the mutual form. Notwithstanding, there is a pattern towards fixed premium underwriters taking on smaller and specialized tonnage, and to some extent also river barges, so called brown water vessels[84]. Also the size of the ship owning firm seems to of some importance, with small and medium sized ship owners being overrepresented in fixed premium insurance. The maturity hypothesis implies that fixed premium underwriters would enjoy a less complicated, and thus faster, process in claims settling, which probably would be true for brown water tonnage. Intuitively, smaller tonnage, for coast and river traffic, would tend to generate less complex damages, requiring less juridical expertise, with a positive impact also on the claims handling process. Less ambiguity concerning which legal regime has precedence would also make claim settling less difficult, and thus a swifter process.

[84] Interview Raetsmarine, Interview Swedish Club.

8. CONCLUSIONS

8.1 SUMMING UP

It is time to go back to the hypotheses drawn up in the beginning, and first ask to what extent I have managed to present a plausible explanation of the predominance of the mutual form in Protection & Indemnity insurance or in Williamson's terminology, the predominance of a hierarchical mode of governance.

I made a distinction between idiosyncratic and systemic in the ex ante phase. As for the idiosyncratic risk I have to conclude that a mutual form cannot be regarded a distinct advantage. In fact the opposite may be true, as the mutual form requires a more extensive exchange of information, due to the dual roles of the member, as insured and insurer. Thus the information asymmetry which forms the base of adverse selection may even more grave in the mutual form. However, the current system holds some characteristics which make informal exchange of information relatively easy, of which some could be difficult to duplicate in a fixed premium form.

As for the systemic risk, still in ex ante, numerous sources of uncertainty, which would be an argument for mutuality, can be discerned. Of those I believe that legal uncertainty is the most important, and particularly uncertainty relating to limitation of maritime liabilities. The coming Rotterdam Rules as well as EU's constant saber rattling seem prominent examples. An ever present element of counter party risk in the shipping industry, due to the boom and bust cycle, is also a source of aggregate uncertainty, which, in extreme cases, could subject the marine insurance industry to what Smith and Stutzer refer to as an aggregate shock. However, lack of underwriting data, upon which to base sound underwriting practices, is dismissed as a valid cause for mutuality, at least as a direct causality, due to the general availability of claims records for members and vessels.

If we instead turn our attention to the ex post phase of the insurance contract and to policy holder hazard, extensive loss prevention schemes for which the mutual form provides legitimacy, is carried out. However the mutual insurance companies also run the risk of ending up in a situation where the common resource is overexploited by the users, or members, in this case. A very brief look at the extensive literature on management of common resources provided an explanation of clubs' attempts to foster an esprit de corps among its members: Adherence to common rules and recommendations is likely to increase in the presence of a sense of community among members.

The mutual form can also offer some *external* legitimacy to liability insurance. This is an advantage as policy holder hazard can appear problematic from a societal point of view; the existence of liability insurance may distort individual incentives to avoid accidents. The mutual form is consistent with the "polluter pays principle", providing the shipping industry with a shield against environmental interests concerned with reckless practices in shipping.

Another ex post problem, claimant Hazard, understood as opportunistic behavior on a third party's account, has interesting implications, but cannot explain mutuality, as organizational form is largely irrelevant from the claimant's perspective.

One aspect of jurisprudential hazard is nicely illustrated by the lack of internationally ratified conventions for handling of stowaways. The present mode of governance is costly for the shipping industry, and incentives for policymakers to produce an alternative solution are largely lacking. This aspect is however akin to claimant hazard, and the institutional form of the

insurance system may not be very important to policy makers, as long as it keeps the issue off the table. The second aspect of jurisprudential hazard leads to P&I clubs' role in a system of self regulation. I concluded that the mutual form of P&I clubs makes them apt to function in this role, due to a higher level of legitimacy than would be the case in a system entirely based on commercial considerations. In return clubs are provided with significant possibilities to influence their own regulatory environment, an influence which would be more problematic in a non mutual context.

The P&I system seems to suffer from problems labeled here as underwriting hazard, a specific problem for liability insurance, depending on insufficient incentives to uphold underwriting discipline. The long tail risk, where lengthy claim settlements are a part of the problem, at least to some extent serves to explain opportunistic behavior on the underwriter's account. I raise the question of whether this weakness in terms of incentives has resulted in P&I clubs following a pattern commonly known as the insurance cycle. In this, the mutual form is a disadvantage rather than the opposite. I argue however that the P&I system of today has unique institutional capabilities of addressing this problem, in the International Group and the Group Agreement.

The managerial discretion hypothesis' prediction of over representation of stock insurers in lines of insurance where risk is high obviously contrary to dominance of mutual insurers in P&I, which is characterized by high variance in claims outcome. However, the emphasis placed on managerial discretion offers insight, when considering that a P&I club, to some extent, merges not only the policy holder with the shareholder, but also the manager, into one entity.

The risk sharing hypothesis makes a prediction in line of what we see in P&I, and in all probability is risk sharing capacity an important advantage in the mutual form. The distinction between aggregate risk and idiosyncratic risk is consistent with the discussion on aggregate uncertainty held in the ex ante chapter. In addition, it highlights the function of the pooling agreement, namely decomposing of risk.

The modest degree of market segmentation in P&I, with fixed premium underwriters having a relatively larger share of brown water and costal tonnage, can be attributed to less complicated and thus quicker settling of claims. Thus it is consistent with the maturity hypothesis.

8.2 CONCLUDING DISCUSSION

When examining the organizational structure of P&I clubs it became clear that the modern P&I club merge the shareholder, the policyholder and the manager into one single entity. This is of course a very crude statement as there is still an element of managerial discretion intact, despite the fact that the Committee of Directors set the level of calls, i.e. the level of premiums. If we, for the sake of argument, take this crude statement as true, some of the responsibility for insufficient pricing of risk falls on members, who may act with an element of shortsightedness when determining the level of calls. In the foregoing chapters I have referred to two different problems in terms of over exploitation on a common resource, within the club, and between clubs. This function and behavior of the member's behalf effectively merge those two problems, above referred to as tragedies of the commons, into one. A systematic under pricing of risk, by members of clubs, serves to cripple both the individual club as well as the market, upon which all other clubs within the International Group, are dependent.

There are two solutions to this problem. The first is equivalent with that used within clubs, namely to foster some a sense of the community and awareness of the common resource in order to prevent over usage. Only this time it has to be done on an even larger scale. Such sense of community could also serve to legitimize coercive measures by the International Group

towards clubs which fail to uphold fair underwriting practices. A second solution is to provide club managers with a higher degree of discretion, thus protecting the common resource from the narrow self interest of the individual owner.

To conclude, I do not claim to have presented the final answer to why the P&I market is dominated by mutual clubs. I'm however quite confident that I have at least shed some light over the issue. I do not think that the answer to that question can be found solely by examining advantages of the mutual form from a technical side, corresponding to a transaction cost economizing perspective, in Williamson's system of definitions. In this thesis, the notion of legitimacy has been used quite extensively as an inducement for the mutual form. The conception of legitimacy points in a different direction, towards the level of social analysis, dubbed embeddedness by Williamson (actually by Mark Granowetter). At this level, norms, customs and traditions constitute the explaining variables of the formal rules and governance structures, of which the mutual form is an example, found further down the pyramid. Although it was not one of my initial objectives, I believe that this thesis has illustrated the importance of Embeddedness for institutional outcome.

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