WORLD MARITIME UNIVERSITY  
Malmö, Sweden

THE ROLE AND RESPONSIBILITY OF MINOR STAKEHOLDERS IN THE ELIMINATION OF SUBSTANDARD SHIPPING:  
A Critical Analysis

By

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DECLARATION

I certify that all the material in this dissertation that is not my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

The contents of this dissertation reflect my own personal views, and are not necessarily endorsed by the University.

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ABSTRACT

This dissertation is a study to determine the role and responsibility of the minor stakeholders in the elimination of substandard shipping and its impact on their pursuit for profitability in a very dynamic shipping industry.

The shipping industry is examined to determine the origin and nature of substandard shipping, within the context of maritime safety and environmental protection, and the environment that fosters its continued existence. The efforts of governments through a regulatory regime and various international identities (major stakeholders), to deter and where necessary apprehend substandard shipping is analysed. The need for the support of the market players (minor stakeholders), in the overall process of eliminating substandard shipping is established.

The economic pursuit of the minor stakeholders, along with their obligations and response to safety and environmental regulations being integrated in the shipping market dynamics, are all examined. The relatively dormant notion of self-regulation of the shipping industry is explored, with the objective of giving it greater prominence. The concept of quality shipping and its antecedents of transparency and safety culture, as well as an appropriate regulatory regime that would enhance the concept, are also examined. Finally, the propeller principle is conceptualized as a representation of the cooperating, coordination, and dynamics involved in pursuing the goal of quality shipping.

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<td>ABS</td>
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<tr>
<td>CDI</td>
<td>Chemical Distribution Institute</td>
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<td>DNV</td>
<td>Det Norske Veritas (Norwegian Classification Society)</td>
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<td>EC</td>
<td>European Commission</td>
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<td>EQUASIS</td>
<td>European Quality Shipping Information System</td>
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<td>FOC</td>
<td>Flags of Convenience</td>
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<td>FSA</td>
<td>Formal Safety Assessment</td>
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<td>FSC</td>
<td>Flag State Control</td>
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<td>Flag State Implementation</td>
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<td>H&amp;M</td>
<td>Hull and Machinery</td>
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<td>IACS</td>
<td>International Association of Classification Societies</td>
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<td>ILO</td>
<td>International Labour Organization</td>
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<td>IMO</td>
<td>International Maritime Organization</td>
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<td>ISM</td>
<td>International Safety Management Code</td>
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<td>LR</td>
<td>Lloyds Registry</td>
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<td>MA</td>
<td>Maritime Administration</td>
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<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from ships, 1973/78, as amended</td>
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<td>MEPC</td>
<td>Maritime Environmental Protection Committee</td>
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<td>MOU</td>
<td>Memorandum of understanding</td>
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<td>MSC</td>
<td>Maritime Safety Committee</td>
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<td>OCIMF</td>
<td>Oil Companies International Maritime Forum</td>
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<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<td>OPA 90</td>
<td>United States Oil Pollution Act, 1990</td>
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<td>Paris MOU</td>
<td>Paris Memorandum of Understanding on Port State Control</td>
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<td>P&amp;I</td>
<td>Protection and Indemnity</td>
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<td>Acronym</td>
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<td>PSC</td>
<td>Port State Control</td>
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<td>PSCO</td>
<td>Port State Control Officer</td>
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<td>ROs</td>
<td>Recognised Organisations</td>
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<td>SIRE</td>
<td>Ship Inspection Report Exchange programme</td>
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<td>SOLAS</td>
<td>International Convention for the Safety of Life at Sea, 1974, as amended</td>
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<td>STCW</td>
<td>Standards of Training, Certification and Watchkeeping for Seafarers UN</td>
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<td>UN</td>
<td>United Nations</td>
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<td>UNCTAD</td>
<td>United Nations Conference on Trade and Development</td>
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<td>UNCCROS</td>
<td>United Nations Convention on the Conditions for the Registration of Ships</td>
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<td>US</td>
<td>United States of America</td>
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<td>USCG</td>
<td>United States Coast Guard</td>
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<td>TMS</td>
<td>Traditional Maritime State</td>
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<td>WW II</td>
<td>World War Two</td>
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CHAPTER 1

INTRODUCTION

Shipping is a truly international industry, which today forms an integral part of the domestic and international economic landscape. Without effective and efficient means of moving both bulk and parcel goods by sea, international trade would grind to a halt and nations the world over would suffer the repercussion of stagnant economies, leading to chaos, starvation, and possible anarchy. Globalisation has had the effect of further propelling shipping to even greater prominence, that of a catalyst for world peace and prosperity. The reality, however, is that ships operate in a very fragile marine environment with an inherent perilous nature, which creates social cost detractors of safety and environmental protection.

The International Maritime Organization (IMO) tasked with the responsibility of minimising the social cost of shipping, has established a clear mandate to strive for cleaner oceans and safer ships. Consequently, there is a plethora of international conventions that set standards for safety of life and property, and the protection of the marine environment from pollution. Ships that operate outside these standards are deemed to be sub-standard, and therefore pose the greatest risks.

Flag state, port state, and coastal states have the most at stake in the event of a maritime catastrophe, therefore, along with the ship-owners, have an explicit legal responsibility to enforce the provisions of conventions. However, disasters surrounding the *Erika* incident, and more recently the *Prestige*, underscore that despite the evolution of efforts, and the widening of the dragnet to deter, as well as where necessary, eliminating sub-standard ships, catastrophes still occurs. This therefore begs the question as to the role of minor stakeholders, classification societies, charterers, insurers, and financiers; since they do not have an explicit legal responsibility, should they not feel obligated to exercise a moral or ethical
responsibility for safety and environmental protection? The fact is that they are all participating in the industry to make a profit, but use the insurance regimes as insulation against the inevitable social cost of shipping.

The purpose of this study is to determine the role and responsibility of the minor stakeholders in the elimination of substandard shipping, and its impact on their pursuit for profitability in a very dynamic shipping industry.

In order to better understand the issues concerning quality shipping, it is important to examine the fundamentals of the industry in which the ships operate. Hence the nature of shipping and its economic importance is first examined; highlighting the various shipping markets, the market dynamics, and the players that are prepared to take the inherent risks and participate in the market. This provides a prelude to understanding the ship-owners’ and minor stakeholders’ reaction to regulations. Next, the industry’s regulatory regime concerning safety and environmental protection is brought into perspective. Here the emphasis is placed on maritime law and its evolution, as well as the nature, importance and validity of international law. These laws form the basis on which governments put the reins on the industry and seek to integrate safety issues in business activities and culture.

The role and responsibilities of the major stakeholders are then examined. Their efforts and successes are determined and analysed, and their weaknesses established both individually and collectively. Efforts and measures already taken to address the deficiencies are also outlined and the need for additional support from other quarters in the elimination of substandard ships is emphasised. Next, the minor stakeholders are brought into focus, where their interest and role in the industry are examined. Competing interests are identified, particularly in response to maritime safety regulations; and ways in which these interests can be best served whilst making an active contribution in the elimination of sub-standard ships, are explored.
Finally, a holistic approach is used to analyse current trends and make recommendations as to the way forward in achieving the goal of quality shipping, emphasising a radical change of culture, prevailing in an atmosphere of transparency. The propeller principle posited seeks to emphasise that the way ahead is through the full participation from all stakeholders, which will serve as a force multiplier in the policing of substandard ships.
CHAPTER 2
THE ECONOMICS OF SHIPPING

2.1 The Nature of Shipping and its Economic Importance.
Since time immemorial, man’s quest to improve his living conditions has led to the exploration and exploitation of natural resources with transportation being the catalyst. With 75% of the earth’s surface covered by water, it is no wonder that maritime transport realised significant development, as man’s hunger for power and wealth extended to all corners of the globe. Today, 95% of world trade moves in whole or in part by sea, thus making shipping the most international of all industries: a ship, whatever its type, size or flag is nothing by itself, as its sole purpose is to transport cargoes, equally world trade without shipping would quickly come to a halt (Farthing & Brownrigg, 1997, p.1-2). With the volume of shipping expected to grow even further as globalisation continues to spread\(^1\), creating trade flows requiring transport, even more interest in shipping will be generated (Commission, 1996).

2.1.1 The Shipping Market
The shipping market, like any other market, is a place where the buyers, those people demanding the service, communicate with the sellers, those people who supply the ships, to make meaningful deals (Ma, 2002a, p.2). In a general sense, the shipping market is a service-oriented single market, but made up of important commercial subdivisions based on the type of ships and the trade requirements. Therefore, there is the tramp market (bulk carriers), the liner market (container vessels), special or industrial shipping market, and the passenger shipping market (Chrzanowski, 1985, p.15). All these markets combined characterise the shipping industry. There are several shipping companies that have the flexibility of operating in more than one market, due to unique ship designs.

\(^1\) The world fleet now consists of around 88,000 ships (O’Neil, 2003, p.4)
Therefore, in a depressed market, owners can move their investment from one market sector to another to avoid problems. Consequently, supply and demand imbalances in one part of the market can ripple across the other sectors (Neresian, 1981, p.75).

Stopford (2000, p. 6), quoting the Rochdale Report, aptly summarises the market:

Shipping is a complex industry and the conditions which govern it operations in one sector does not necessarily apply to another; it might even, for the purposes, be better regarded as a group of related industries. Its main assets, the ship themselves, vary widely in size and type; they provide the whole range of services for a variety of goods, whether over short or longer distances…

2.1.2 The Dynamics of the Shipping Market.

The shipping industry is subjected to the economic forces of supply and demand like all other industries; however, it is unique in the sense that the demand is derived from the need to trade goods. Further, “it can create new demand for trade, this is not only in terms of reduced transport cost, it is also true in terms of newly developed technology” (Ma, 2002a, p.21). Therefore, shipping will be affected by anything that influences world trade, be it economic factors, political events and development, natural causes, or technological advancements.

The fact that shipping is a service industry suggests that it should always provide the best service at the lowest price; however, ship demand depends on several factors including price, speed, reliability and security. It is important to note also that political directorates also exert an influence on cost, price and free market competition. Shippers always seek to get better and cheaper transport for their goods, due to its correlation with profit margins. Likewise, ship-owners always seek to get the highest possible freight rates. The final cost of shipping goods is reached when there is equilibrium between supply and demand, a product of the free market system.
Another phenomenon that is very much rooted in the culture of the industry is the “market cycles”. The cycles, according to Stopford (2002), are the primary driving force behind shipping investment and chartering. The cycles cause cash to be pumped in and out of the business, and forces companies to compete with each other for a share of the wealth, thereby luring them in the direction needed to give the most efficient use of the resources.

The cycles are created due to changes in the equilibrium between supply and demand for ships. When demand increases faster than supply, freight rates move up to a peak, conversely when supply exceeds demand freight rates are driven down by competition. There is a time lag to the next equilibrium as supply is slow to react to changes in demand; basically it takes time to construct new ships, this being the most volatile period as everyone tries to maximize profits often resulting in an over supply in the long run.

The cycles play a critical role in the overall economics of the industry. Though fairly unpredictable, the general rule is that one occurs around every seven years. For example, in 1999 a 280,000 dwt tanker was earning $9,000 a day, but just nine months later in 2000, it was earning up to $90,000 a day: this signifies the importance of cycles as it gives incentive for the prudent ship-owner to “play the cycle” (Stopford, 2002, p.204).

2.1.3 Shipping Risk
All ship owners in the industry have to contend with shipping risk: the risk that an investment in a ship, including the return on initial capital, is not recovered during the period of ownership. Further, the market cycle, with its four distinct stages of a trough, a recovery, a peak, and a collapse, dominates the shipping risk, with no firm rules as to the length of time at each stage (Stopford, 2000, p.74). Predicting the stages of the cycle and playing it is the key to success in the industry. With the possibility of making a fortune during the recovery or at the peak of the cycle, allied
with the freedom to enter or leave the market, the industry is inherently competitive. This competitiveness is accentuated by the fact that the returns on investment in shipping are lower than in other industries, averaging less than 10% per annum, which translates to one ship-owner’s fortune being another ship-owner’s loss. Therefore the stakes are high (Stopford, 2000, p.75).

2.2 The Players in the Maritime Industry

The ship is the focal point of the maritime industry, and has a very well defined life cycle of design, construction, equipping, operation, and demolition. This life cycle has spawned four distinct shipping markets trading in different commodities. The freight market trades sea transport, the sale and purchase market trade in second-hand ships, the new-building market trades new ships and the demolition market deals in scrap ships (Stopford, 2000, p.79). These four markets make up the maritime industry and give rise to a supporting cast with their own peculiar activities directly related to the regulatory, commercial, technical, legal, and financial aspect of the industry, all supporting the core function of transporting goods (Ma, 2002a). Figure 2.1 shows the main relationships within the maritime industry.

![Figure 2.1 Main relationship within the maritime industry](Source: Ma, 2002a p. 4.)
Shipping is generally free of regulatory market access barriers compared to other modes of transportation. This implies that any operator, regardless of nationality and location of his company, can provide international shipping services. However, in reality, important restrictions remain and the danger of new restrictions is still present (Commission, 1996). Other special features of the industry are that it is well structured and organised internationally, and the main source of competition comes from the relatively low operational costs and the possibility of capitalizing on economies of scale, (Ma, 2002a, p.4-6). These features give the industry a distinct character and cultivate unique cultures.

2.3 The Culture of the Industry
It has been demonstrated that the dominant culture in the industry is one of cost directly linked to the elusive market cycles, with the focal point being the freight rates. This is true right across the market spectrum, however, as O’Neil (2002) rightly points out, “safety and productivity should never be seen as opposing or mutually exclusive objectives – because safety at the expense of commercial success is no more desirable than corporate success at the expense of safety”.

The trans-national scope of the business and its significance as a major economic force means that it cannot escape the attention of national and international political influence. Stopford (2000, p.34) referring to the Rochdale Report, aptly describes this relationship: “most of the industry’s business is concerned with international trade and inevitably it operates within a complicated world pattern of agreements between companies, understanding with shippers and policies with governments”. With the devastating results in human casualties and significant damages to the marine environment, from the numerous maritime accidents, more focus is now being placed on cultivating a safety culture within the industry.
2.4 International Shipping Standards

The complexity and diversity of the shipping industry dictates that for it to be efficient it must operate within prescribed standards, which have to be international in scope and nature. Enforcement of these standards is critical to improve safety and fair competition in maritime transport (Commission, 1996). So far certain aspects of the economic standards, which deal with commercial practices have been described. However, there are two other categories that are of equal importance. These are, social standards, which deal with the well being and treatment of seafarers, and the safety and environmental standards, dealing primarily with the technical and operational aspects of a ship or a shipping company (Ma, 2002b). Unfortunately not all ship-owners give equal credence to all the categories, and often it is the economic standards that take precedence over the others. However, the reality is that safety and environmental issues cannot be separated from economic activities, simply because the latter is the origin of the former (Pearce & Turner, 1990, p.36).

2.4.1 Safety and Other Quality Standards

Figure 2.2 categorises the key players within the industry that should play a role in achieving the desired safety standards and other quality goals. It shows the stakeholders within the industry who have a critical role in ensuring quality shipping, are divided into two main groups: the market forces group, comprising the charters, insurers, et al; and the regulatory forces, consisting of flag state, port state, et al. The generic sphere of influence of the classification societies is the market forces. However, the regulatory forces group has delegated some functions to them, thereby enabling them to essentially straddle both groups. All forces, under the influence of public opinion seek to influence the behaviour of the ship-owner in meeting the prescribed standards.
2.4.2 Stakeholders Defined

The role of the stakeholders and the effectiveness of the model in Figure 2.2 in achieving the quality goals and standards, are critically analysed in subsequent chapters. However, in order facilitate this analysis, it is necessary to further categorise the stakeholder within the context of the safety standards. Therefore, those falling under the umbrella of the regulatory forces, because of their explicit legal responsibilities, are classified as major stakeholders: this includes the shipowners, the primary subject of regulations. Those within the market forces group, without this legal responsibility, but who should demonstrate an ethically responsibility, are classified as minor stakeholders: for now, this includes the classification societies since their generic function belongs to this group.
CHAPTER 3

THE REGULATORY REGIME OF THE MARITIME INDUSTRY
AND RELATED ISSUES

3.1 National Significance of Shipping.

One of the products of civilisation is specialisation, and with it, at the domestic level, came bartering, the earliest form of trade. With the ease of access to the sea and waterways, at the regional level, particularly in Europe and the Mediterranean, maritime transport allowed trade to flourish between civilised nations. In time States realised that maritime expansion and improved maritime lines of communication between each other were the keys to profit and power (Reynolds, 2000, p.3). This spawned the epoch of exploration and conquest, as man sought to extend his horizon beyond the near seas and bridge the divides of oceans, ushering the era of colonisation; and with it came ocean trade, a further source of wealth and political dominance. Shipping became so important to the colonial powers, that they developed large merchant fleets and naval forces to service and defend the convergence of political, economic, trade and military/strategic objectives inherent in their maritime interests (Gibson & Donovan, 2000, pp. 11, 26)².

In the 19th century, the advent of industrialisation in the West and its dominance over the rest of the world, shaped world economies. Further, this period showed an unprecedented boom in the world exchange of goods and services (Harlaftis & Theotokas, 2002, pp.9-10). The introduction of new technologies during this period meant that ships were now larger and faster, supporting a world trade dominated by the movement of industrial goods from Europe to the rest of the world, and the flow of raw material in the opposite direction. The states that dominated shipping during this period are referred to as Traditional Maritime States (TMS), which had

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² Referred to by Robins (2002).
established a thriving business and support industry around ship construction and operations. Post World War II saw several new independent States emerging with hopes of prosperity and wealth similar to the West. These States, referred to as developing nations, recognising shipping as the catalyst of economic development, eagerly embarked on establishing ship registries to attract revenues. These developing nations soon gained notoriety as their established registries were referred to as “open registries” and dubbed “flags of convenience” (FOC).

3.1.1 Shipping and Politics

Today the landscape of world trade is fashioned by globalisation, which represents a new trend in moving either entire industries or parts of the production process to any State globally that supports the most efficient utilisation of the factors of production\(^3\). This phenomenon is only made possible due to modern efficient lines of communication of which maritime transport plays an integral and dominant part.

Robins (2002, p. 33), in analysing the relationship between the maritime industry and the power of States, highlights the fact that there are three pillars, political power, economic power and military power, that enable nations to achieve their goals internationally. He went on to explain that if any of these pillars are weakened or removed, then there is corresponding structural weakening or collapse in the power of the State. He further states that the military and economic pillars are directly dependent on the maritime industry, while political power affects those pillars and is influenced by them.

This leads us to examine in more detail the political dimension from the perspective of the establishment and enforcement of maritime law. Given the international nature of shipping, the only way to ensure that the various standards applied are universal in scope, is through the application of international law, adopted by international conventions, enforced through national legislations.

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\(^3\) The factors of production are land, labour and capital.
3.2 Maritime Law and its Evolution

Just as statutes developed as society evolved, simultaneous with the development and expansion of trade and shipping came the development and evolution of maritime law. Maritime law, initially exclusive in scope, evolved to what is now universally accepted as international maritime law; a direct result of nations’ political will in setting standards for mutual benefit.

Early maritime law can be traced to the Eastern Mediterranean, where under the influence of the Phoenicians, the Greeks, the Rhodes, and later the Romans, saw the establishment of standards based on the codification of customs and practices (Farthing & Brownrigg, 1997, pp.2-7). Further, the earliest codes had traces of both private and public law. Elements of insurance law, rules relating to salvage and the carriage of goods by sea, compensation for seamen lost or injured at sea, and so on, represented private law. On the other hand, the protection by war ships of merchant ships from pirates, so as to enable them to continue to trade, represents a form of public law. These concepts further evolved to encompass (Farthing & Brownrigg, 1997, pp.2-7):

- the treatment of shipwrecked sailors;
- the jurisdiction of courts dealing in maritime matters;
- rules regarding blockade and piracy;
- the settlement of disputes relating to maritime contracts; and
- the role of prize courts.

The fundamental principle of unmolested navigation, now referred to as “freedom of the seas”, first established by the Greeks and later stoutly defended by Grotius when the Portuguese attempted to alter to concept, survived the entire period of the rise and

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4 Private law relates to the rules governing the relationship between private parties. Public law governs the rights, duties and obligations of States.

5 Hugo Grotious in the early 17th century, through his famous book *Mare Liberum*, contested what Portugal took upon itself the right to prohibit others from engaging in seaborne commerce in the East Indies.
fall of nations as maritime trading powers, with self-serving maritime pursuits (Farthing, 1997, pp.6-7). However, today the principle of the freedom of the seas in its widest context does not necessarily mean an absence of regulations, but that no one State has the right unilaterally to regulate; any regulation must be for the good of all (Farthing, 1997, p.10).

Colonization had the effect of spreading the fundamental principles of maritime law globally, outside the realm of national and regional application in Europe and the Mediterranean. Taking Britain as an example, where up to the middle of the 19th century there were few rules and regulations, and virtually no construction or safety standards for merchant ships: many ships were sent to sea badly built, ill found, grossly overloaded and often over insured. However, this changed with the passage of the “Plimsoll Act”\(^6\) in 1896, which was followed by a steady build up of other maritime laws (Stopford, 2000, p. 440). Further, because Britain then dominated the maritime scene, it was common for countries developing maritime interest to adopt British law as a basis for drafting their own legislations.

At the end of the Second World War, newly independent states pursuing the development of their maritime industry, and the exploitation of resources of the sea and its subsoil, as well as efforts to enhance their security by extending the territorial seas, brought into sharp focus the international application of maritime law. Nations were forced to find mutually acceptable solutions in international law in order to establish maritime delimitations, to prevent conflicts, and to enhance the sustainable exploitation of the sea. As a result maritime law...“has taken on a new meaning, to refer to the entire body of laws, rules legal concepts and processes that relate to the use of marine resources, ocean commerce, and navigation” (Mukherjee, 2002a, p.1).

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\(^{6}\) The Plimsoll Act empowered the British Board of Trade to survey ships, pass them fit for sea, and have them marked with a load line indicating the legal limit to which they could be submerged.
3.3 International Law

International law is a body of rules that nations are expected to and usually do observe in their relations with one another, firmly grounded on the sovereign state concept (Encarta, 2002). This definition is expanded to include the rule of law relating to the functioning of international institutions or organisations, their relations with each other, and their relations with states and individuals (Starke, 1989, p.3). The importance of international law is underscored by Starke (1989, p.15) when he states that, “in the absence of some system of international law, the international society of states could not enjoy the benefits of trade and commerce, of exchange of ideas, and of normal routine communication”.

Early international law consisted mostly of customary rules. These are rules that had evolved after a long historical process culminating with the feeling of legal obligation and recognition by the international community (Starke, 1989, p.35). By the 19th century international law had expanded, primarily due to the emergence of powerful new States, colonisation, modernisation of transport, the greater destructiveness of warfare, and the influence of new inventions (Plant, 1998, p.14).

The 20th century witnessed an even greater impetus for further development, fuelled by the growing interdependence of States and developments that overcame the difficulties of time, space, and intellectual communication (Starke, 1989, p.15). The rate of expansion and urgency during these periods called for a quicker means of law making, as states could no longer rely on the slow process of customs for the formation of international law (Plant, 1998, p.14). This resulted in greater emphasis on multilateral treaties such as conventions, as another primary source of international law.
3.3.1 The Nature of International Law

The primary sources of the vast body of prevailing international laws are customs and treaties, and it is the substance that will determine whether it is a public or private treaty. In addition, subsidiary sources are judicial decisions, awards of arbitral tribunals and juristic opinions, and writing of distinguished publicists (Mukherjee, 2002b). Further, treaty laws are contractual in nature and is therefore binding only on States that become parties by acts of ratification or accession. However, regulations and procedures contained in treaties often developed into general customary usage, hence considered to be binding even on those States that did not sign and ratify them (Encarta, 2002).

There are also several other instruments generated by organs of international institutions or other such law making bodies, which in the strict sense may not be binding, but possess a persuasive character, often referred to as “soft law”. These include resolutions, codes, recommendations, guidelines, etc, the legal effect of which depends largely on the subject matter and the manner in which they are adopted (Mukherjee, 2002b). Oftentimes nations may choose to incorporate soft law instruments into their national maritime legislations thereby converting them into enforceable laws in those States.

To some extent there is a machinery to enforce treaties, either arbitration or conciliation procedure or the submission of the dispute to a regional or international court. However, no court has the authority or power to give judgement backed by coercive sanctions, therefore, a delinquent State may only be subjected to moral sanctions, that is the public opinion of the civilised world; but in a world of globalisation this could be just as punitive (Encarta, 2002).

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7 There are several universal terms generated from the generic term “treaties” which are conventions, final acts, protocols, et al, all of which are contractual in nature (Mukherjee, 2002b).
3.3.2 Mechanism for Creating International Law

The United Nations (UN) is one of the primary mechanisms that articulate and create international law (Encarta, 2002). However, *international maritime law* governs the very wide and specialized activities of maritime transport and international seaboard trade, which requires special attention. Consequently, the UN has delegated the role and responsibility of the creation of international maritime law to the International Maritime Organization (IMO) and the International Labour Organisation (ILO), two of its specialised agencies. However, it is the United Nations Convention on the Law of the Sea, 1982 (UNCLOS) that provides the blueprint for all maritime conventions.

UNCLOS provides a comprehensive framework for the regulation of all ocean space by establishing the limits of national jurisdiction over the ocean space, access to the sea, navigation, and protection and preservation of the marine environment (Stopford, 2000, p. 429). The provisions of UNCLOS are elaborated on in technical conventions dealing with design, construction, manning, equipment and operation of ships, promulgated by the IMO; and in conventions on working and living conditions, social security and other standards for seafarers, established by the ILO (Robins, 2002, p.15). This therefore means that the rights and responsibilities of States, with an interest in maritime affairs, are embodied in the regime of international maritime law with UNCLOS providing the umbrella framework.

3.3.3 Implementation of International Conventions

When a State becomes party to an international convention, the legal effect is that the State then becomes bound by the convention and is therefore obliged to implement it by incorporating it into its body of national law (Mukherjee, 2002b). Legislation must properly reflect a convention’s provisions; provide the requisite legal and administrative framework to enable effective discharge of State responsibilities; provide effective sanctions against breaches; and provide control mechanisms such as surveys, inspection and certification of ships to ensure compliance with technical standards (Robins, 2002, p.18).
It is important to note that in establishing its national maritime law, based on the conventions, a State may incorporate requirements on matters that are not subject to any international treaties or agreements. Further, the requirements laid down in conventions are not always specific, but leave the States to specify more details. Some regulations in maritime conventions require interpretation, which may be expanded on in domestic legislation. Therefore, the requirements of a convention are to be regarded as minimum requirements (Jansen, 1991).

If the State fails to implement the provisions of a convention in its national legislation\(^8\), it is nevertheless subject to it *vis a vis* other State Parties, but it cannot enforce the convention against them. The implementation of an international convention to which a State has become party is therefore an essential step without which the State Party cannot benefit insofar as the application of the that law within its jurisdiction is concerned (Mukherjee, 2002b).

### 3.3.4 The Validity of International Law

There has been much debate about whether international law is in fact law. One school of thought says that there is no such thing as international law. This is because there is no sanction for such law that can be binding upon nations. Others say that it should be classified as a branch of ethics; as such, it is a code of rules of conduct, of moral force only. This is supported by those who regard nothing as law that is not the will of a political superior (Castel, 1976).

The counter arguments say that the doctrines of international law are founded on legal, not simply on ethical ideas: they purport to be rules of strict justice, not counsels of perfection. This is supported by the argument, that the only essential condition for the existence of law is the existence of a political community, and its recognition by its members of settled rules binding upon them in that capacity; international law on a whole seems to satisfy these conditions (Castel, 1976).

\(^8\) The convention, when enacted in national law, provides the regime of constraint within which shipowners are required to operate (Stopford, 2000, p. 443).
3.4. Safety and Environmental Protection in Perspective

The seas and oceans have and will always hold perils for those whose sail them. The transition from adventurers who challenged the seas ill prepared and equipped, to the more calculating merchants who use the seas for commerce; has seen an equal transition of proficiency gained from experience, to deliberate attempts to regulate shipping considering the safety of ships. With the expansion of international shipping came more awareness as the importance of having seaworthy ships for the intended voyage to ensure the safety of crew, passengers, cargo and the environment. This challenged the old modus operandi where the increase desire for profit facilitated the scope for greater compromise of safety standards.

Despite this awareness, it was not until major disasters struck that claimed the lives of many and severely damaged the marine environment, that significant efforts were made to improve maritime safety and environmental protection. Therefore maritime disasters such as the Titanic and the Torrey Canyon, and more recently the Herald of free Enterprise and the Exxon Valdez have led to a plethora of safety and environmental regulations aimed at spurring changes in the individual and collective behaviour of those engaged in maritime activities.

Today the bulk of the maritime law produced focuses on all aspects of maritime safety and environmental protection, and is constantly evolving due to the dynamic nature of the shipping industry, particularly influenced by the changes in technology. All these conventions prescribe the legal responsibilities for all the major stakeholders who must take the prescribed action in order for the regulations to have full and complete effect. Maritime safety, pollution control and conditions of employment, therefore strike at the heart of ship operating economics (Stopford, 2000, p. 443).
3.5 Classification of Substandard Shipping

IMO resolution A.787(19), Procedures on Port State Control, defines a substandard ship as one “whose hull, machinery, equipment or operational safety is substantially below the standards required by the relevant convention”. This might be as a result of the absence of such equipment or arrangements; or if these items do not comply with the specifications of the regulations in force; or substantial deterioration of the ship or its equipment due to wear and tear or poor maintenance (Ulstrup, 2002).

The lack of valid certificates constitutes *prima facie* evidence that a ship may be substandard and will form the basis of a decision to carry out a more detailed inspection or to detain the ship. The word “substantially”, as used in the definition, is so broad, that it is incumbent on the surveyor to exercise his professional judgement to determine whether the deficiencies as a whole or individually make the ship unseaworthy\(^9\), and would put at risk the life of persons on board if it were to proceed to sea (Ulstrup, 2002). This presents a potential problem due to the subjectivity of the interpretation of whether or not the various standards have been adequately met.

3.6 The Cost of Shipping Regulations

The cost associated with international safety regulations can be quite high, the brunt of which is borne by the ship-owner. These costs can be divided into, preventative and appraisal cost (e.g. design, training, equipment, etc) and failure cost (e.g. design failures, client rejects, etc): if there is no quality investment in the former then the latter will be very high. Therefore, a high initial preventative and appraisal investment is needed in order to reduce the failure cost to an acceptable level (Reynolds, 2000, p.26). Though the initial high investment in quality results in lower short-term profits, once this implementation phase has passed, quality cost is continuously reduced and failure costs steadily decline, which in the long run should result is an increased profit margin.

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\(^9\) Seaworthy means that the ship is capable of combating and enduring the ordinary perils of the sea on the intended voyage (Ulstrup, 2002).
CHAPTER 4

THE REALITIES AND PERFORMANCE OF THE MAJOR STAKEHOLDERS

4.1 The Legal Responsibilities

When we consider the safety and environmental protection aspects of shipping, the phrase “quality shipping” is synonymous with the objective of the numerous conventions promulgated\(^\text{10}\). In reality, quality shipping requires the complex interaction of a number of parties to achieve and maintain it. Using the analogy of a building, the standards found in international conventions, regulations and codes, provide the foundation on which the pillars are placed to support the roof, in this case quality shipping (North, 1999).

Several pillars are required to effectively support this roof; in effect these pillars represent all the stakeholders in the industry both major and minor. However, it is the major stakeholders that comprise the most prominent pillars by virtue of their explicit legal responsibilities within the regulatory regime. Therefore, flag states, port states, the ship owners and the IMO, all have peculiar but complementing responsibilities that provide the framework to ensure quality shipping.

4.2 The International Maritime Organization (IMO).

The IMO was established to develop international maritime laws to replace the comparatively few international treaties that were neither widely accepted nor implemented, but were superimposed on the very diverse and oftentimes contradictory national maritime laws\(^\text{11}\). It was generally accepted then, that the

\(^{10}\) Appendix 1 shows a summary of the status of Conventions as at 30 June 2003 (IMO, 2003b)

\(^{11}\) In 1958 the predecessor to the IMO, the Inter-governmental Maritime Consultative Organisation (IMCO) was established, however, since in 1982 there was only a name change to the IMO, with the primary mandate still intact, then it can be considered that the IMO has been in existence since 1958.
existing state of affairs was damaging to shipping safety at the global level, because standards were often very different, with some being far higher than others. This meant that ship-owners who spent relatively little money on safety had an economic advantage over their more conscious rivals, thus threatening any serious attempt to improve shipping safety (IMO, 2003).

The IMO is responsible for adopting legislations on matters relating to maritime safety, environmental pollution prevention, and other areas relating to the operation and facilitation of maritime traffic on a worldwide basis, and to act as the custodian of a number of related international conventions (Jensen, 1991). This is complemented by the work of the International Labour Organization (ILO), which is engaged in the promotion of standards of working and living conditions on board ships, and the United Nations Conference on Trade and Development (UNCTAD)\(^\text{12}\), which has produced Conventions of a commercial nature.

The IMO collectively represents 162 member governments\(^\text{13}\), which have adopted around 40 conventions and protocols; most having been amended several times to reflect the dynamics of international shipping (Winbow, 2002). The vast majority of maritime nations have ratified\(^\text{14}\) the most important conventions, as shown in Appendix 2.

\(^{12}\) UNCTAD was particularly active between the 1960s and the mid 1980s when it produced a number of international conventions, the most popular being the Code on Conduct for Liner Conferences. After UNCTAD IX (1996) the committee was discontinued, because of changes in both the political and economic environment (Ma, 2002a).

\(^{13}\) IMO now has 162 member States and three associate members, which are: Faroe Islands (Denmark); Hong Kong (China); Macau (China). (IMO, 2003c, p.7).

\(^{14}\) Ratification is an act whereby a State establishes, on the international plane, its consent to be bound by a treaty (Vienna Convention on the Law of Treaties, 1969).
4.2.1 The IMO in Focus

Conventions produced by the IMO represent the deliberation, compromise and consensus of the member States, with the added benefits of consultation and direct input of non-governmental organisations\(^\text{15}\). The general view is that the IMO has made tremendous strides over the years in fulfilling its mandate geared towards achieving safer ships and cleaner oceans. This is reflected in the wide acceptance of IMO measures (Appendix 1), recognised as being sensible, practical, and of a high standard. In fact, most of these measures are mandatory in so many countries that it is now commercially important for ships to conform to them (IMO, 2003a).

However, the IMO remains in the spotlight because despite the proliferation of regulations and standards, sub-standard shipping continues to exist, causing several aspects of IMO’s work to be placed under the microscope over the years.

To be fair, it is important to remember that the IMO is in a position of weakness rather than strength in the relationship it maintains with its members, since it does not have any authority to coerce them into having the conventions adopted or implemented. Even those members that do ratify conventions face no penalties or sanctions if they fail to subsequently comply with them.

4.2.2 Over Regulation and Other Issues

The cardinal charge brought against the IMO is that the shipping industry is over regulated. Its cause is the proverbial “knee jerk” reaction by member states in the aftermath of a major accident, primarily dictated by political expediency and emotive responses, rather than technical rationale or successful performance (Classification, It’s time…, 2003). The sincerity of the efforts to genuinely improve the safety and environmental protection is recognised, but the tendency is to overcompensate for insufficient compliance by creating yet more rules, which appears to create further economic incentives for the unscrupulous rule-breakers (Netelenbos, 1999).

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\(^{15}\) There are 61 non-governmental organisations, articulating the interests of their members. They are actually associations representing the wide cross section of the industry’s players, including ship owners, insurance companies, classification societies, shipbuilders, \textit{et al.}
The IMO, recognising this deficiency and identifying that the lack of effective implementation was its root cause, established the Flag State Implementation (FSI) Sub-committee in 1992 to address this and other related issues. The Sub-Committee has progressively discharged its mandate, producing important guidelines and recommendations\textsuperscript{16}. One of the significant measures taken is the adoption of the Formal Safety Assessment (FSA)\textsuperscript{17} for use in the IMO rule making process. It is a structured and systematic methodology, aimed at enhancing maritime safety, including protection of life, health, the marine environment and property, by using risk and cost/benefit analysis (Rasmussen, 2002). This represented a shift from the traditional reactionary approach to a more proactive policy. In the opinion of Storey (1999), the FSA is specifically designed to look objectively at the shipping industry to ensure that new regulations are kept to a minimum and that any new regulation that is developed is well focused and will be effective.

Also of consequence is the introduction of the \textit{Flag State Self-assessment Form} and procedures. The Secretary-General answered the questions regarding its benefits when he said that it would serve to assist flag states in obtaining a clear picture of how well they are functioning, compared to the agreed criteria, and based on any assessed deficiencies, take appropriate actions to receive assistance to close the identified gaps. In addition, it could be used as the basis for bilateral discussions, between flag and port states, to adopt a co-operative approach towards enhanced safety and environmental protection (Plaza, 1999).

\textsuperscript{16} The IMO Assembly, the MSC and the MEPC have adopted some as resolutions, while others have taken the form of IMO circulars (Hoppe, 2000).

\textsuperscript{17} The FSA was approved as outlined in MSC/Circ.1023-MEPC/Circ.392 dated 5\textsuperscript{th} April 2002 and supersedes MSC/Circ.829-MEPC/Circ.335 on Interim Guidelines for the application of FSA.
Another noteworthy development is the harmonisation of ships statutory surveys under SOLAS 74, MARPOL 73/78 and Load Line 66 Conventions\(^\text{18}\). This has brought benefits to all the major stakeholders where: it reduces the economic burden on the ship-owner by decreasing the number of time the ship has to be surveyed; it enables flag states to exercise better control since all surveys are done at the same time; and when fed into a data base, it facilitates effective port state control.

Despite these noble efforts, the implementation dilemma continues to be a problem and, as such, other efforts have been taken to bring the efficacy of quality shipping to the industry. O’Neil (1999), confirming this observation said:

> …there is a general agreement that we cannot continue to promote safety simply by imposing more and more legislation upon the shipping industry. This adds to the regulatory burden without any guarantee of it being effective. Instead we have to make sure that existing legislation is implemented more effectively… the measures taken by the IMO to improve flag State performance, the development of regional port State control systems, the entry into force of the ISM Code and the revision of the 1978 STCW Convention are all part of this process and can be expected to lead to improvements in the years to come.”

### 4.2.3 Unilateralism and Regionalism

The role of the IMO is often challenged by States taking unilateral actions and by regions with political unions implementing regional policies and regulations, even with the universal and profound recognition of the international nature of shipping. The danger is that a national or regional approach can only lead to clashes, an unworkable situation for shipping, and regulatory chaos (Farthing & Brownwigg, 1997). In some cases they may also result in retaliatory measures, which will have negative commercial consequences.

\(^{18}\) This came into effect by Resolution A.746(18): *Surveys guidelines under the harmonisation system of surveys and certification*
The rationale appears to be the relatively long time it takes for meaningful action via the IMO, when political expediency to appease the anxiety and outrage of their nationals, whether real or perceived, is given the highest priority. The subsequent tabling of the provisions of their regulations in the IMO, in order to gain international legitimacy, is a manifestation of this hypothesis. An example is the United States (US) OPA’90, which came on the heels of the *Exxon Valdez* casualty\(^{19}\). The pressure was so great that unilateral action was seen as the best solution, with the law binding on all foreign ships operating in US ports. However, when the dust settled, and the reality that casualties involving foreign vessels operating beyond US jurisdiction can still affect its shores, efforts were then made to internationalise many of the law’s provisions through the IMO mechanism, particularly the issue of tankers having double hulls (Sipes, 1991).

Another rationale for operating outside the auspices of the IMO appears to be interpretation or perceptions that a particular IMO Convention does not adequately address certain issues. This is exemplified in the recent European Commission’s (EC) proposed Directive on criminalising marine pollution\(^{20}\). The proposed Directive is based on the assumption that the enforcement of MARPOL 73/78 is not strong or consistent enough and that the Civil Liability Conventions and their attending Funds do not provide enough deterrents to would-be polluters (Gavin, 2003). Regardless of plausible rationale, any new measures to ensure quality shipping must be taken under the auspices of the IMO in order to avoid mistrust and resentment. It is the IMO that is uniquely equipped to deal with most shipping issues, and is in the best berth to develop sound positions that have global consensus (Paniguian, 1999).

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\(^{19}\) The *Exxon Valdez* accident occurred in Prince William Sound, Alaska, spilling 11 million gallons or 257,000 barrels of crude, impacting nearly 1,300 miles of coastline, killing hundreds of thousand of wildlife, and costing about $2.1 billion to cleanup (Retrieved from: http://www.oilspill.state.ak.us)

\(^{20}\) This is the result of a hardening in attitude by the European Member States with respect to pollution in the aftermath of both the *Erika* and *Prestige* incidents, where both the environmental and economic impact, particularly the cost of clean up, were exorbitant
4.3 Flag State Control

A State must exercise control over ships entitled to fly its flag, by using the jurisdiction inherent its sovereign right as a State to give full and complete effect to the provisions of conventions. Article 26 of the Vienna Convention of the Law of Treaties, 1969 specifies that, “every treaty in force is binding upon the Parties to it, and must be performed by them in good faith”. This is further qualified by Article 29, which states that, “unless a different intention appears from the treaty or is otherwise established, a treaty is binding upon each party in respect to its entire territory”. To accomplish this task, States must establish a viable, competent and empowered national system or authority that will be responsible for administering and enforcing their national maritime laws; which should ultimately be supported by an efficient judicial and penal system.

4.3.1 The Question of Nationality.

A ship is a unique creature, because under domestic maritime law it is considered to be both a property and a business venture, while on the international scene it assumes a profile akin to a person, requiring a nationality. In essence, a merchant ship on the high seas has to possess a nationality to be able to prove its existence in order to ensure that each vessel will be subjected to some regulatory scheme and system of law (Özcayir, 2001). This concept is supported by Mukherjee (1993); who opines that, “a ship must, of necessity, be subject to some legal regime at all times. In waters other than the high seas, a ship could well be subject to laws of a littoral state… But upon the high seas without he benefit of flag or nationality, she would, metaphorically speaking, floating in a legal vacuum”. Article 91 of UNCLOS prescribes the process for a State to confer nationality on a vessel. It states that:

1. Every State shall fix conditions for the grant of its nationality to ships, for the registration of ships in its territory, and for the right to fly its flag. Ships shall have the nationality of the State whose flag they are entitled to fly. There must exist a genuine link between the State and the ship.
2. Every State shall issue to ships to which it has granted the right to fly its flag documents to that effect.
4.3.2 The Question of Jurisdiction

Jurisdiction is predicated on the fundamental principle of a State’s sovereignty, which is the supreme political power in a State: that is power to govern without external control. In international law, jurisdiction describes the power of the State to exercise its authority by means of legislative, executive or judicial action, over persons and property by the use of its national law (Özcayir, 2001, p.61). Again, because of the international nature of shipping, a State must conform to provisions of UNCLOS Article 94, outlined in Appendix 3, in order to fully discharge its duties. In executing these provisions, States are required to conform to the general accepted international regulations, procedures and practices, and to take steps that may be necessary to secure their observance.

UNCLOS Article 217 further expands the duties of the flag State wherein they are to ensure that their ships:

1. Comply with all applicable international rule and standards for the prevention, reduction and control of pollution of the marine environment, and they shall adopt laws and regulations and take other necessary measures for their implementation and enforcement; and
2. Are prohibited from sailing, until they can proceed to sea in compliance with the requirements of the international rules and standards, including requirements in respect of design, construction, equipment and manning.

4.3.3 The Maritime Administration

The Maritime Administration (MA) is that arm of a State’s government that is entrusted with the responsibilities for the administrative, technical and social matters concerning ships flying its flag and other maritime activities. It therefore means that the Administration must be structured to deal effectively, either directly or indirectly, with the entire duties outlined in Article 94, et al. This must be balanced against the

\[ \text{Annex} \] Under International law there are five generally accepted bases of jurisdiction for a State: 1. The territorial principle, jurisdiction over crime committed in its territory; 2. The national principle, a State can punish its nationals for offences on the sole basis of nationality; 3. The protective principle, an act committed outside its territory which is deemed prejudicial to security, integrity or vital economic interest; 4. The passive personality principle: a State can claim jurisdiction on the basis of the nationality of the actual or potential victim; 5. The universal principle: a State has jurisdiction to try particular offences, like piracy and war crimes, irrespective of nationality (Özcayir, 2001, pp.61-62).
national economic development aspect of shipping, which often creates full compliance problems.

Compliance with national maritime law is achieved through a system of periodic surveys and physical inspections of the ships and their systems. Once the MA is satisfied that the standards are met or have been exceeded, a certificate is issued as evidence of compliance. Some of these duties are often delegated to recognised organisations (ROs), normally classification societies, because of limited technical resources and the lack of global reach. This practice has become so widespread, and with the inherent risk of dereliction of duties so great, it was necessary for the IMO to develop guidelines on the monitoring of ROs.

The MA has to guarantee fully the completeness and efficiency of the surveys performed by the ROs, therefore it must at least possess the necessary monitoring skills and resources, and where necessary require remedial action or impose appropriate sanctions against identified breaches. The problem is that many States, particularly emerging flag states, fail to meet even these minimum criteria.

4.3.4 Registration of Ships

It is through the process of registration that nationality is conferred on a ship. Registration then represents an administrative act whereby pertinent data on the vessel, having fulfilled the relevant national requirements, is entered into the public records. This act bestows nationality, along with its collateral rights and duties, on the vessel, thereby bringing it under the national jurisdiction of the State (Özcayir, 2001, p.10).

According to Mukherjee (1993, p.32), registration has both a public and private law function. The public law function is concerned with administrative matters pertaining

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22 This is achieved through IMO Resolutions A.739 (18) and A.789 (18).
to the national interest comprising, *inter alia*: conferment of nationality and the right to fly the national flag; national regulatory jurisdiction over matters such as maritime safety, pollution control, manning and labour conditions, and shipboard discipline; the right to diplomatic protection including consular services; the right of the ship to naval protection; and the right to engage in cabotage activities. While the private law function is concerned with the protection of the private proprietary interest in the ships, such as providing *prim facie* evidence of title and ownership; and protecting the interests and priority ranking of holders of security interests in ships, such as mortgages and hypothecques.

International law only dictates that flag States should maintain a register of ships flying its flag; it is therefore incumbent on individual States to determine the size and structure of its registry. However, international law does require that there must be a “genuine link” between ship and State, the interpretation of which appears to be the primary influence on how a ship registry is classified.

### 4.3.5 The Concept of Genuine Link

Despite the very definitive requirement for the existence of a genuine link between a ship and the State that is conferring nationality, the convention provides no explanation as to the meaning of “genuine link”; neither does it address possible consequences for not having it. There have been numerous debates on the issue without a final consensus as to a definite meaning. However, according to Churchill, (2000, pp.4-5) the following legitimate conclusions may be drawn:

1. The granting of nationality through registration obviously creates a link between the ship and State, but it requires conditions that demonstrate that the link is real, not artificial, causal or tenuous.

2. There is no single or obligatory criterion by which the genuineness of a link is to be established. A State has the discretion as to how it ensures that the link between itself and a ship is genuine be it through the requirements relating to the nationality of the beneficial owner or crew,
its ability to exercise its jurisdiction over such a ship, or in some other way.

3 Although it is not an obligatory criterion for the establishing the genuineness of a link, the effective exercise of jurisdiction and control over its ships is one of the principal ways in which a flag State may demonstrate that the link between itself and the ship is genuine23.

4.3.6 Types of Ship Registries
The onus is on the flag state to determine the type of ship registry that it operates. This is certainly influenced by how a State projects the national significance of shipping, which in turn shapes the national laws to exercise exclusive jurisdiction. All this is predicated by the States own interpretation of the ambiguous requirements for the genuine link, and its own conviction of international ethics and moral obligations. In the early years international shipping was dominated by the closed registries (national registries), which later saw the emergence and proliferation of the “open registries” commonly referred to as “flags of convenience” (FOC). As shipping continued to evolve the secondary registry, the hybrid registry, and the unique bareboat charter registration, emerged as flagging options (Mukherjee, 1993). Appendix 4 summarises the profile and characteristics of the different types of ships registries.

4.3.7 Flag State Control in Focus
The well-defined and comprehensive guidelines for flag state control represent the battle plan for an offensive assault on substandard ships, if all the provisions are implemented uniformly and consistently. In an imperfect world this would be asking too much, so while many flag states do have good reputations recognised by both the industry and the general public, others are guilty of delinquency. They fail to

23 For this to be convincing, a State must be able to show that the necessary mechanisms are in place at the time when the ship is granted nationality. Such mechanisms could include sufficient and suitably qualified personnel for carrying out the necessary surveys of the ships, checking the certificates of crew, et cetera.
exercise effective jurisdiction over their ships, or to take action against negligence on
the part of ship owners and other parties (Boisson, 1999, p.423). The number of
vessels detained worldwide for regulatory non-compliance clearly indicates the
performance of quite a few flag states is still less than satisfactory24 (Paniguian,
1999). The consequence of this dilemma is that substandard ships continue to roam
the seas, resulting in the employment of more defensive tactics.

It is clear that some flag states have been surfing on the sentimental wave of an over
regulated shipping industry. This is inferred from remarks made by Streeter (1999,
p.2) when he says, the explosion in technology has caused the creation of new, and
the amendments of existing conventions, which are sometimes outdated by the time
they are implemented. This makes it extremely difficult for many member states to
develop the requisite national legislation in a timely manner. The argument of “too
much too soon” is also used by some to argue against any changes, thereby avoiding
the increased costs of compliance. What is conclusive, however, is that there is often
a major divide between States motivated by strong environmental and safety
concerns, and those with different priorities and realities, including off-shore
registries, financial considerations, and insufficient capacity of their maritime
administrations.

The performance of FOC remains in the spotlight because of the stigma of lax
standards, which attract the very same ships that are so despised by the industry as a
whole. It is said that the principal motivating force for ship-owners to register their
ships in a FOC state is commercial, as owners can usually expect low taxes,
minimum bureaucracy, cheaper crewing and registration fees, and a relaxed approach
to regulatory enforcement (Registries, sitting on…, 2003).

At a glance one might concur with the negative image, certainly from the public
perspective, in light of the series of disasters, from the Torrey Canyon in 1967 to the

24 In 2002 the Paris MOU alone had a total of 1,577 detentions (Paris MOU, 2002).
more recent **Prestige** in 2002. In fact an analysis covering the period 1970 to 1983 indicated that the casualty rate for the FOC fleet was substantially higher than for regulated fleets and the world average (Boisson, 1999, p.427). However, some experts agree that criticism of free registers on safety grounds is unfounded. This attitude, according to Boisson (1999, p.428), is based on several arguments: a few of the most modern ships today sail under FOC, in fact many of these registers have taken steps to ban the transfer of registration for old ships\(^{25}\); and the leading open registry States are parties to the main international conventions on safety at sea. In addition, a report published in May 1994\(^{26}\), puts open registry flags into three categories: those with the worst casualty rates, those with fairly close to world average, and those that have the safest fleets in the world.

Cockroft, (1999) also offering his views on the FOC saga, points out that not all FOC ships are substandard and not all substandard ships fly FOC flags, but the existence of the FOC system is central to the problem. It allows operators to choose their own regulators and to escape from those that cause them too much trouble. It also permits states that boast of their national sovereignty and their credentials as developing countries to subcontract their responsibilities to private companies entirely driven by profit motives.

### 4.4 Coastal States Rights and Responsibilities.

It is important to distinguish the fact that not all flag states are coastal states, because UNCLOS Article 90 states, that “every state, whether coastal or landlocked, has the right to sail ships flying its flag on the high seas”. Coastal states do not exert the same regulatory influence on the shipping industry as port states do, therefore they were not considered as major stakeholders. On the other hand, because most port

\(^{25}\) The limit is 20 years for Liberia, Panama and Vanuatu, between 17 and 23 for Cyprus, and 23 for the Bahamas (Boisson, 1999).

\(^{26}\) This is a French Senatorial report which admits that “a lax attitude in applying safety rules is not, it seems most likely, the sole responsibility of States which have an open registry flag” (Boisson, 1999, p.428)
states are in fact coastal states, it is therefore important to be cognizant of the rights and responsibilities of coastal states as provided for by UNCLOS under the various established maritime zones, which is outlined in Appendix 5.

4.5 Port State Control

Once a ship enters the seaward boundary of the demarcated limits for a port its passage ceases to be innocent; it enters the port under the terms and conditions governing access, and in so doing it becomes subjected to the full jurisdiction of that sovereign state. However, if a ship enters a port to seek refuge due to the stress of weather or force majeure, the State should not take punitive action for any infractions committed unintentionally. Within this context, Port State Control (PSC) is the inspection of foreign ships in national ports for the purpose of verifying that the condition of the ship and its equipment comply with the requirements of international conventions and that the ship is manned and operated in compliance with applicable international laws. Port states exercise control based on the principle that it will recognise the international certificates issued by, or on behalf of, the flag states.

4.5.1 Port State Control Jurisdiction

UNCLOS Article 25 empowers States to take the necessary steps to prevent any breach of the conditions to which a vessel is subjected to during a port call. Articles 216 and 218 enable a port state to enforce anti-dumping and anti-pollution measures respectively, while Article 219 enables measures to be taken to control the movement of a vessel whose seaworthiness threatens to damage the environment. These articles provided the earliest means for a State to exercise PSC (Hare, 1999), which has since evolved to become the first line of defence against substandard ships. Consequently, there are more direct and effective powers gained through the relevant conventions. However, a State cannot exercise PSC unless it is party to those conventions and has promulgated the requisite national legislations. The relevant conventions containing provisions that permit port state control are outlined in Appendix 6.
The execution of PSC involves the boarding, inspection, remedial action, and possible detention of ships, only by port state control officers (PSCOs) duly authorised by the port state (Hoppe, 2002b). Certificates, if valid, shall be accepted unless there are clear grounds for believing that the conditions of the ship or its equipment or manning does not correspond substantially with the particulars of any of the certificates or that the ship or its equipment or manning are not in compliance with the provisions (Jensen, 1999).

4.5.2 Memoranda of Understanding

Unilateral port state control had an immediate impact on substandard shipping, despite the negative aspect of the variance of inspection standards and procedures being applied by States, which caused much frustration particularly among owners who consistently practise quality shipping. Fortunately, it was quickly recognised that a more regional approach would even have a more dramatic impact on substandard shipping, whilst somewhat appeasing the frustrated owners. This was underscored by Hoppe (2000b) when he remarked that, “Unless a regional approach is adopted, operators will just divert their ships to ports in the region where no or less stringent PSC inspections are conducted”. The first regional memorandum of understanding (MOU) on port state control was the Paris MOU, adopted on 01 July 1982 with the objective of assisting in securing compliance of ships with international standards regarding safety of life at sea and prevention of pollution of the marine environment.

The success and efficiency of the Paris MOU, with ten years of refinement, became the template for successive agreements, as its efficacy reverberated throughout the industry. Spurred on by the IMO, within seven years there were six other MOUs established globally, with two further agreements, the Persian Gulf region and the Black Sea, under development27. Starting with the Vina del Mar or the Latin-America Agreement on 5 November 1992, the additional MOUs cover Asia-Pasific,

27 This is based on an update on IMO’s work (Hoppe, 2000).
the Caribbean, the Mediterranean, the Indian Ocean including East Africa, and the West and Central African Region (Hoppe, 2002b). Appendix 7 shows that what is emerging is the progressive globalisation of MOUs. Their inherent principles will be enhanced by cross fertilisation, as more States become members of several MOUs.

4.5.3 The Principles of the Regional Agreements

The principles of the regional cooperation on PSC start with the constant exchange of information about ships, their records and the results of inspections carried out, using a secretariat as the focal point for the correlation of data and the formulation of statistics. This enables subsequent ports of call to target only ships that have not recently been inspected. In general, ships inspected within the previous six months are not re-inspected unless there are clear grounds to do so. One of the positive effects of these principles is that identified sub-standard ships can be effectively monitored, particularly ships that have been allowed to sail with certain minor deficiencies on the condition that they are rectified in the next port of call (Hoppe, 2002b). Perhaps the most important benefit is that PSC inspections are carried out in a uniform manner in all states party to the agreement, and that similar standards are applied in respect to detention of ships and the training of PSCOs.

4.5.4 Port State Control in Focus

It is very difficult to be overly critical of PSC when it really is a complement to Flag State Control (FSC), the one with the ultimate responsibility for maintaining standards. However, what is clearly evident is that PSC provides a means for States to preserve their maritime interest whilst effectively complementing other national and international regulatory regimes. This is why many states, despite severe resource constraints, still dedicate time, effort and money in effective PSC.

Regional agreements, though quite effective, have the inherent risk of hampering the economic situation of ports of those States that do conduct proper inspections (Hoppe, 2002b). This is basically a balloon effect, as when pressure is applied to one
end the other end bulges. This highlights the need for inter-regional cooperation, as when the pressure is applied in one region, substandard ships will simply move to other regions taking the economic benefits with it.

This is why it is encouraging to see the trend towards a global PSC, where information will be shared using a standard format, and inspection procedures and training will be harmonised. Also knowledge about sub-standard shipping will be greatly increased as the different PSC secretariats make available statistics and data through a global computer network. This knowledge will facilitate effective analysis of the causes of incidents and casualties, which can then be used for proactive planning in accident prevention28 (Hoppe, 2002b).

4.6 Ship Owners
Ship-owners are the ones that ultimately decide whether a ship will be substandard or not. With the ship being the primary object of the regulatory regime, it is the owner’s response to these regulations, whether he gives full and complete effect or he seeks means of shirking the responsibilities, which decides the fate of the vessels. There appears to be a clear correlation between the structures of ownership, the market the ship operates in, choice of flag, and the response to the regulatory standards.

4.6.1 Structures of Ownership
At one end of the spectrum ship ownership comprises small companies owning anywhere from one to ten ships, with most engaged in tramping, loosely structured and often a one-man enterprise: in such cases, one individual, who does his own chartering and arranges his insurance, usually owns the ships (Young, 1982). At the other end of the spectrum is the large and highly sophisticated company operating anywhere from fifty to one hundred and fifty ships worldwide in the liner trade.

28 This movement is evidently supported by the IMO through initiates such as the passage of Resolution A.787(19) “Procedure for PSC”, as amended by Resolution A. 882(21) among others.
Within this spectrum a company structure varies depending on the type of registry: in the closed registries the beneficial owner is relatively traceable, while in the open registries the beneficial owner is hidden behind holding and management companies (Stopfort, 2000, p.438).

Ship-owners, in an attempt to make up for the decline in the freight rates, started to routinely use old ships, cut maintenance costs to a minimum, recruit cheap manpower, and sub-contract to Management Companies certain expenses that weigh too heavily on the operating costs. However, unbridled competition among management companies in the last few years has led unscrupulous owners to use managers that charge extremely low fees (Boisson, 1999, p. 418). These extremely low fees could very well be the result of cost cutting measures that impact on the safe operation of the vessel.

What is alarming is the number of investment groups that purchase and trade ships for short-term financial gains, with little or no commitment to the operation, safety or crew’s welfare (Patwardhan, 1999). The trading of ships, buying second-hand or even third-hand, is often accompanied by the transfer of flag or class, which have been regarded as flagrant examples of the use of FOC, and very dangerous for safety. Of the 182 ships lost in 1991, 92 had undergone one or more changes of ownership in the previous 5 years; while in 17 cases the exact number of transfers could not be established (Boisson, 1999, p. 419).

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29 The persistent crisis, which began in the mid seventies, led to overcapacity that is responsible for the steady decline in freight rates.

30 By accumulating competence and putting it into the system, and utilizing economies of scale inherent in large scale operations, Management Companies are able to do the job more effectively than owners (Branch, 1998, pp. 251-252). The services provided include: crew management, technical management (ship equipment and maintenance, purchasing, insurance, dry docking, cost accounting) and commercial management (charter prospecting) (Boisson, 1999, p. 418).
4.6.2 Ship-Owners’ Choice of Markets

As previously outlined, not all shipping markets are the same. It appears therefore, that the ship-owners’ choice of market does exert some amount of influence on the owners or managers perspective and commitment to quality shipping. In the passenger shipping market ships are operated at a very high standard because a serious accident could have dire consequences for the entire industry. Similarly, in specialised or industrial shipping markets, where the cost of compliance can easily be absorbed by the parent industry, and where reputation is paramount, there is high compliance, oftentimes with ships operating well above international standards.

In the liner market freight rates are fairly stable because the bulk of the traffic comes from a host of small shippers, which allows ship-owners to estimate how much their customers are prepared to pay and fix their rates accordingly\(^{31}\) (Branch, 1998). Therefore, ships are generally operated at international standards. In the tramp market freight rates are volatile due to the competitive nature of the market. Consequently it is in this market that ship-owners are most likely to find all conceivable means of cutting operating costs to keep their ships employed and increase profit margins. Therefore, the tramp market is most likely to spawn substandard ship-owners, but the reality is that substandard ship-owners are in the minority.

4.6.3 Owners Choice of Flags

Faced with the dynamics of the shipping market and the reality of the interdependence between regulations and ship operating economics, a ship-owner must make choices in the interest of accomplishing the company’s objective. Predominantly, the objective is to reduce operating costs to realise a profit and thwart the threat of bankruptcy (Patwardhan, 1999). One such choice is deciding under what flag he can register his ship, which he executes by weighing-up the relative

\(^{31}\) The liner market is dominated by shipping conferencing, pools, alliances, consortia, et al, which also contribute to freight stabilisation (Ma, 2002, p.100).
advantages and disadvantages of each of the alternatives, each representing the cost of compliance. According to Stopford (2000, p. 434) the principal consequences of his choice are:

1. *Tax, company law and financial law*: These laws will determine the company’s liability to pay tax and may impose regulations in areas such as company organisation, auditing of accounts, employment of staff, and limitation of liability.

2. *Compliance with maritime safety conventions*: Where international standards are rigidly enforced, ship-owners have no alternative but to maintain high standards in the operation of their ships. Conversely, States with a weak regulatory system or no means to enforce it, may allow owners to cut corners to save on equipment and maintenance.

3. *Crewing and terms of employment*: The ship-owner has to abide by the flag state’s regulation on the selection of crew and their terms of employment, which can vary from the employment of only nationals to very open multinational crews.

4. *Naval Protection*: Although the benefits of naval protection seem less of a consideration these days, the war between Iran and Iraq in the 1980s, when ships changed to the US flag in order to gain protection, exemplifies its relevance.

### 4.6.4 Ship Owners in Focus

Substandard ship-owners must realise that the regulatory dragnet is rapidly closing due to the offensive and defensive measures being taken by flag state and port state control. The reality is that the previous economic advantages gained by non-compliance are fast disappearing\(^{32}\), as exemplified in the following hypothetical scenario, where an owner operating a substandard ship manages to get it flagged, classified, and has secure cargo and insurance. The ship then becomes vulnerable to

\(^{32}\) By avoiding international standards, substandard shipping operators can gain a 15-16% cost advantage over their competitors (Morris, 2002).
various pitfalls, which will have serious legal implications, both from regulatory and civil liability perspectives: it may be involved in an accident such as a collision, grounding or an oil spill. It may be detained under PSC or blacklisted by labour unions, or boycotted by stevedores in a port. It may even be refused entry into a port, having appeared on a list of substandard ships. All these eventualities may spell financial disaster for the ship-owner (Mukherjee, 2000).

There are many owners that are members of international associations like Intertanko and Intercargo that are committed to quality shipping, and have taken affirmative action through these organisations to give this effect. In fact some had management policies and systems in place long before the International Safety Management (ISM) Code\(^{33}\) came into being. It is also clear that it is possible for high quality owners, for whatever reasons they might have for their choice, to regard the flag as a convenience or legal necessity, and operate to their own high standards (Grey, 2002).

4.7 The Major Stakeholders in Focus

The emphasis placed on PSC could give the impression that the regulatory regime is all about chasing villains (Stopford, 422). However, PSC provides a defensive action, which would be redundant if the offensive actions of flag control, complemented by the action of ship-owners, were effective. However, even if the system becomes ideally efficient, PSC would still be necessary to serve as a deterrent, should either flag states or ship-owners become complacent and relax international standards.

It is clear that the inability of flag, port and coastal states to hold the beneficial owners of substandard ships culpable, and impose heavy financially and penal sanctions, has added to the complexity of the problem. However, there is hope in the ISM Code as it effectively presents the first licensing scheme without which shipping

\(^{33}\) The ISM Code puts more responsibility on the ship-owner to provide effective, proper and safe management and operation of ships, and for pollution prevention.
companies and their ships will no longer be able to operate (Branch, 1998, p. 260). Nevertheless, a cause for concern is that the existing implementation problems with flag state control can undermine the effectiveness of the objectives of the ISM Code.

The regulatory regime can be far more efficient and effective, but it requires more cooperation among the major stakeholders, which is predicated on a high level of transparency. Transparency is about the group tasked with the responsibly of regulating and enforcing international standards making available all pertinent information on a particular ship so that any one member of that group can use the information to develop an accurate profile on a particular ship or the performance of the other members of the group. In essence, transparency provides a means of checks and balances, and forms the backbone of quality shipping.

The contention is that through effective co-operation, grounded on transparency, these pillars can be strong enough to ensure that quality shipping is truly viable. Addressing the existing weaknesses will take time, but there is another front that can be widened in the attack on substandard shipping, which will not only guarantee short term success, but will also complement the regulatory regime, through a system of self regulation.

This second front involves the minor stakeholders, which in the context of the building, will help to buttress the roof, which is quality shipping. This cannot be done in isolation, but like the pillars of a very strong and structurally sound house, they must be strategically placed, thereby exemplifying the need for effective co-operation and coordination between the market forces and the regulatory forces.

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34 Transparency will be discussed in more detail in a later chapter as it affects the entire shipping industry.

35 It is recognise that Classification Societies also provide vital information on ships through their own regulatory system that is commercially oriented, and necessary for this group. This is examined in a later chapter.
CHAPTER 5

THE INTEREST AND ROLE OF THE MINOR STAKEHOLDERS

5.1 The Market Players
Ship operations provide the engine for the shipping market and involve the input and interaction of key players like classification societies, insurance companies, the financiers, charterers, and shippers; all considered as equal stakeholders from a commercial point of view. Subjected to the regulatory regime of the national and international commercial law, they participate in the market for the sole purpose of making a profit. Except for the classification society, which has a unique role, they have no direct role in regulating the safe operation of ships and the protection of the environment. However, the symbiotic relationship with the vessel’s operation, affords them the privilege of influencing maritime safety, which they should consider an ethical responsibility in so doing proactively.

5.2 Maritime Safety: The Ethical Responsibility
Ethics is about the conviction of doing what is right and making a duty out of its pursuit (Hinman, 2002). This duty may be determined by one’s professional or social role\(^{36}\), but it is the act of reasoning, doing what any rational agent should do, that is the most applicable for minor stakeholders to assimilate in addressing maritime safety issues. As a party to the contract of carriage, cargo owners, charterers, and insurers should be concerned with the safety of the ship since in the commercial contract entered into, the ship-owner gives the undertaking to provide a safe vehicle of carriage, normally couched in the form of an implied warranty of seaworthiness. However, the word “seaworthy” is used in relation with commercial undertakings, whereas the wider notion of “safety” is applied in maritime penal law (Hodges, 1999, p.64).

\(^{36}\) The professional role is like a physician’s duty to care for the sick, while the social role is like a parents’ duty to care for his or her children.
The hybrid model\textsuperscript{37}, shown in Appendix 8, explains how causalties in transportation are caused. The system is based on the discovery that accidents are not usually caused by the mistakes of the frontline operators alone; very often persons not directly involved, such as management, also contribute to an accident. This is possible because a unique combination of latent and active failures creates the environment for an accident (Schröder, 2003, pp.9-11). It therefore stands to reason that since the relationship between minor stakeholders and ship’s management is symbiotic in nature, then by extension any latent failures that exist in these organisations when combined with latent failures in management, could help to create the environment for an accident.

The aforementioned argues well for an ethical stand against substandard shipping; but this is underscored by the fact that most accidents at sea may result in serious loss of life and property; causing severe pollution of large areas of the sea and coastlines, with disastrous effects on marine life, local fishing industry, and coastal amenities (Jensen, 1999). The fact is that all voyages are, and should be seen to be joint ventures for all the stakeholders involved.

5.3 The Interest and Role of Classification Societies
Classification societies were established at the beginning of the 18\textsuperscript{th} century to meet the needs of the hull and cargo underwriters who were deprived of any reliable data on which to base their premiums. By the second half of the 19\textsuperscript{th} century, the societies were very successful in supplying all the basic information on ships needing insurance, bringing appreciable economic benefits to marine insurers now able to bring the risks under control (Boisson, 1999). Today, classification has evolved to represent the process through which the principal standards for constructing ships and their essential engineering systems are developed. Compliance with these standards is certified through design appraisal, and surveys during construction and

\textsuperscript{37} The hybrid model was introduced by James Reason in 1990, and is used by the IMO Code for marine casualty investigation to determine the occurrence sequence of an accident (Schröder, 2003).
periodically throughout a ship’s life\(^{38}\) (Bradley, 2000). A society therefore has complete records of all ships classed with it, and because the vessels are multinational, the data are extremely valuable.

Classification is really about protecting the ship as a piece of property, consequently it has become a very important tool in the marine industry: All ships must be classed, and so maintained, to ensure the validity of marine insurance policies; anyone about to charter a vessel would insist that it be in full classification; a shipper would want to be assured that the ship transporting his goods is classed; and, in case of a sale, the prospective buyer would want to know that the ship is classed without any outstanding recommendations against it (Young, 1982). Classification therefore provides a mechanism for self-regulation\(^{39}\) of the marine industry by the key market players, the minor stakeholders.

The technical skills possessed by the classification societies, and their international network of surveyors have led to the performance of statutory certification services on behalf of many governments. Flag states, particularly open registries, delegate such powers as a means of coping with the complexities of inspections associated with the regulations contained in the many conventions on safety and the protection of the environment (Boisson, 1999). This puts classification societies in the unique position of playing a vital role under the regulatory regime, as they are now agents of the regime’s principal pillar.

In 1950 fewer than ten clearly identified societies were engaged in classification. Today there are more than fifty, many of whom do not meet the minimum conditions for performing their role properly (Boisson, 1999). In addition, most are profit-making organisations, operating in a billion dollar market, where they derive income

\(^{38}\) Because of this explicit and direct role in approving ship design Ship Builders were not considered as *minor stakeholders*. Clearly they come under the direct influence of class, but it is important to note that a ship that is poorly built will be difficult to maintain at the highest standard.

\(^{39}\) The concept of self-regulation will be discussed in the next chapter.
by assessing fees for their services. They range from the smallest, employing only a few surveyors concentrated in determined geographical regions, to the largest, with a network of surveyors extending over all five continents. Recognising the high level of inconsistency in applying safety standards, the largest societies have joined forces in the International Association of Classification Societies (IACS), in an effort to regulate the procedures for classification.

5.3.1 Focus on Classification Societies.

It is clear that classification societies play a key role in the elimination of substandard ships, but the competitive climate of operation, allied to the overall lack of cohesion, except for the IACS members to some extent, often questions the credibility of their performance. It is not so much possible loopholes in classification rules that are in question, but it is the way these rules are being applied (Boisson, 1999, p. 421).

Societies today solicit business from ship-owners, representing a dramatic shift from the previous state of affairs where they acted on behalf of insurers. In addition, when acting on behalf of the flag states, it is the ship-owners that also pay. This has created the potential for a conflict of interest, where a society that is rigid about standards may lose a ship-owner to another society that is willing to compromise standards. Threatened with the ship-owners freedom to change class at will, many societies do indulge in the dangerous act of flexibility in the interpretation and application of rules40 (Boisson, 1999). This is done primarily to retain ships of dubious quality, but has the overall effect of creating an environment for substandard shipping41. However, quality societies, particularly IACS members, have established a “Transfer of Class Agreement” to discourage such “class hopping”.

40 Indulgence was shown in granting term extensions, and where dry-docking surveys were postponed without real justification (Boisson, 1999, p. 421).

41 Under the Paris MOU alone in 2002, classification societies were held responsible in 312 cases for class related detainable deficiencies, which is 20% of the total 1,577 detentions (Paris MOU, 2002) This clearly supports this argument.
One of the solutions posited is that class surveys and statutory surveys should not be undertaken by the same society on the same ship, or surveys carried out by one society be attended by another society (Bradley, 2000). However, the class societies argue that such an approach offers little benefit and creates a more cumbersome and costly system of certification; which also from a practical perspective, means increased work load and pressure on finite technical resources, leading to inefficiency and greater scope for conflict and abuse.

All these concerns and arguments really put the spotlight on the character and integrity of the surveyors, for just like a PSC inspector their appraisals validate the standard of a ship. It is recognised that external pressures, such as commercial, financial, and time available to conduct the surveys, may bias the decision and action taken by a surveyor (Bradley, 2000). Again IACS has taken the lead to allay these fears by including ethical behaviour within the scope of its programme of quality audits, to the extent that it can be detected. Impartial behaviour is also reinforced by the obligation of each member society to respect the IACS Code of ethics.

There have been calls also for societies to sever all contact with flags having the worst PSC records for vessel deficiencies in an effort to get them to be more responsible. However, this argument according to Bradley (2000) is illogical, since there is no sense in denying technical support and assistance to those flag states in greatest need of help or to the many quality ship-owners who decide to register their ships with a flag having a relatively poor PSC record. However, according to J-Å Jönsson (Personal interview, 11 July, 2003), there is a certain level of hypocrisy to this issue, in that since flags delegate these duties, then it is the efficiency and

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42 One would expect that a ship ten times as large, would spend ten times as long in the dry dock or ten times the surveyors to inspect it. In reality, it is the same number of surveyors doing as much in the same time lest the days off hire are too much to stomach for the owners (Grey, 2003).

43 All IACS auditors, who are independent from member societies, frequently accompany surveyors so as to ensure conformity with IACS quality and ethical standards (Bradley, 2000)
effectiveness of class in their execution of these duties that ultimately reflect on the credibility and performance of the flag states.\textsuperscript{44}

IACS has taken other initiatives that include the automatic suspension of class for delayed response to class requirements, and broadening the scope of classification and statutory works to include concerns for the human element in shipping (Payer, 1999). The efforts of IACS and its members are both appropriate and highly commendable\textsuperscript{45}, but while IACS may be influential and relatively powerful, these only represent a fraction of the total number of class societies, some of which have diverse rules and ethical standards to those championed by IACS. This lack of solidarity clearly leaves room for substandard shipping to operate, and the very stringent rules for membership and associate membership to IACS raises questions as to the possibility of ever bridging this divide. The situation is further complicated when IACS members compete with each other for a share of the market, and there are probing questions about cohesion and credibility when there are internal squabbles among its members. One such dispute concerns the secrecy of a group of three members that had a go-it-alone approach concerning new rules aimed at improving fatigue, corrosion and coating, which resulted in charges that they were looking to gain a commercial advantage through the new rules (McLaughling, 2003b).

\section*{5.4 Marine Insurance}

Marine insurance generally applies to the ship and its operation, along with the risks associated with the transportation of goods by sea, and consists of three basic types (Encarta 2000):

1. \textit{Hull and Machinery Insurance} (H&M): affords protection to owners of all types of ships for loss or damage to their water borne property;

\textsuperscript{44} The present state of affairs could very well be a refection of classification societies applying different standards depending on the flag state concern (J-Å. Jönsson, personal interview, 2003).

\textsuperscript{45} IACS points out that the societies “are in the business of securing the safety of life and property at sea, and the natural environment”, and are organised managed and audited “with this purpose as their chartered goal” (Grey, 2003)
2. **Cargo Insurance**: usually covers the movement of goods by ship from “warehouse to warehouse”, and therefore includes exposure to those risks that are associated with land transportation as well; and

3. **Protection and Indemnity (P&I) Insurance**: protects the vessel owners against their liability for damage to cargo in their care and custody; death or injury to passengers, crew, cargo loaders, and others; damage caused to piers, docks, underwater cables, and bridges; and damage caused by pollution.

The history of marine insurance closely parallels that of merchant shipping, and were it not for the insurance coverage against the perils of the sea in the early days, many more ship-owners and shipping companies would have gone bankrupt than actually did (Young, 1982, p. 15). Ship-owners also had to contend with pirates, privateers, and enemy warships that also threatened the safety and security of the ship, its crew, passengers, and cargo.

Most of the major insurance companies, for example Lloyds of London, are not single insurance companies but a syndicate of individual underwriters and insurance companies, whose strength lies in its ability to spread the risk (Young, 1982). Post WW II saw many developing states passing laws to facilitate the insurance of their own ships, however, in order to cope with the risk of major losses, most of the business was still rewritten in London or New York.

H&M insurance is a profit making business, while P&I insurance is mutuality that exists not for profit, but for the mutual benefit of all its members, therefore members bear the losses jointly. The P&I Clubs provide the widest third-party liability cover available for ship operators, where the cover is without financial limit, except for oil pollution (Bull, 1999). The premium paid by the ship-owner for both P&I and H&M coverage comes with a “deductible clause”, where the first layer on every claim or

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46 The term “underwriter” came about when a syndicate member, having agreed to take a certain percentage of the risk of another member’s client, would sign at the bottom of the page under the terms of the contract (Young, 1982, p.16).
voyage is deducted before an eventual recovery from the underwriters (Luddeke, 1999).

In addition, whatever is paid out in claims and reimbursed by the P&I underwriter is counted against the record and the statistical performance. For an owner it is critical not to have a loss record of more than 70%, since when it is time to renew the coverage, a loss record of over 70% will attract an increase premium adjusted for inflation and general increase for the record of the Club; whereas a loss record of 70% or lower stands a reasonable chance of the rate remaining as is, or lowered, or in exceptional cases, a refund of the premium (Luddeke, 1999). This in theory provides for a means of self-regulation of this segment of the industry.

There are other methods employed to discourage negligence among ship-owners: the largest clubs having set up their own inspection system in order to establish the real level of quality of the ships they insure; whilst both the clubs and H&M insurers have been increasingly using the classification clauses in insurance policies, which allows direct access to the records of the society that classes a particular ship; the hull and cargo insurers have also attempted to differentiate premiums on the basis of an overall quality assessment of a ship-owners fleet: but most important is the “reinforcement of surveys and inspections”47, which has shown positive signs where nearly 80% of these surveys have led to major repairs (Boisson, 1999).

It is ironic that despite ship-owners’ cognizance of the fact that the cost of accidents will of necessity increase insurance premiums, and thus the ship’s operating costs, which will ultimately affect the viability of their business, they still continue to operate sub-standard ships. This supports the notion that not too much care is really necessary, as owners will not suffer unduly because they are insured (Ludekke, 1999).

47 The reinforced surveys and inspections was introduced in 1993 and included as a “Structural Condition Warranty” in the British hull policies. It forces ship-owners to have their ships inspected by the Salvage Association, which provides technical advice to the London insurance world, and discloses the reports and recommendations to the insurance company (Boisson, 1999).
5.4.1 Focus on Marine Insurers

The prevailing view is that underwriters are in a privileged position to take decisive measures to eliminate substandard ships: a ship cannot sail, enter a port or raise a loan unless it is insured. However, it is the short-term commercial considerations that often prevail over long-term goals for quality shipping, creating deficiencies that facilitate sub-standard shipping (Boisson, 1999).

The H&M insurance market has been tough over the last decade with rates hitting rock bottom because of over-capacity and fierce competition, which has transformed it into a cost-driven market, where proper risk assessment\textsuperscript{48} is neglected for fear of losing business (Nieuwoort, 2000). Without proper risk assessment and price differentiation the insurers are invariably providing incentives to substandard shipping: reinsurance or higher deductibles or spreading the risk through syndication, will only conceal the problem. It gets more complicated when the insurers are not able to systematically include the classification clause in all contracts that would provide more transparency by allowing access to the records of classed ships (Boisson, 1999). Certain hull insurers have even admitted that they earned far less by insuring good operators than bad ones, for whom competition was less, and premiums higher\textsuperscript{49} (Herlofson, 1993).

The P&I Clubs have also been subjected to commercial pressures from ship-owners seeking undemanding insurers. However, what is of concern is the reluctance to exclude bad clients, which illustrates the contradiction that exists between the political will displayed by ship-owners on the boards of such clubs and the standards their employees apply in reality or try to have respected (Boisson, 1999). What is encouraging is that clubs now realise that amassing more tonnage brings with it increased risk, so unless new members have good records, growth is perilous (Insight & Opinion, 2003). Just as inciting is the new international hull clauses introduced by

\textsuperscript{48} Risk assessment means a systematic approach to evaluating and measuring each client against defined quality standards (Nieuwoort, 2000).

\textsuperscript{49} A summary presented by Boisson, (1999, p. 422).
underwriters in November 2002, which effectively deny coverage to any vessel that
does not comply with the ISM Code (Paying the price, 2002/2000).

5.5 Charterers and Shippers

It is the demand for shipping, created by charterers and shippers, which stimulates
ship-owners to supply the vessels to the market. The activities and role of brokers
acting on behalf of either party is recognised, but their purview is purely
transactional; therefore the ultimate responsibility of any perceived influence on their
part in the market, lies with the party they represent.

There are a number of circumstances under which ships are chartered; some of these
are: by cargo merchants with grain, oil, etc., requiring vessel for a single voyage; by
fleet operators wishing to cover additional needs of peak seasonal activities; by an
operator wishing to launch a new service with chartered tonnage; to cover a survey
period or during an accident situation; as part of a strategy to operate a business with
chartered tonnage or a mixture of chartered tonnage and outright ownership; by a
marketing board for cotton, fruits, etc., for the carriage of seasonal crops; and by a
company engaged in the oil, chemical or gas industries (Branch, 1998, p. 212).

There are several types of charters commercially available that a charterer will utilise
depending on the particular need, these are (Australian Parliament, 1992):

1. **Bare Boat Charter**: where the charterer has the use of the vessel for a set
   period of time, usually a number of years, for an agreed price. During
   this time the charterer is responsible for the operation of the ship, crewing
   and insurance;

2. **Time charter**: where the vessel is chartered for a specific period of time;
   which can be short-term, generally for less that a year, or long-term,

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50 The focus here is on the chartering brokers. Shippers and charters usually use their own brokers.
The owner’s broker represents the interest of the owner by trying to get the highest possible freight
rates or hire, and the best possible contract conditions; while the charter’s broker is trying to do the
opposite in the interest of the charters (Ma, 2002, p. 61).

51 The terms will be spelt out in a Charter-Party Agreement.
which may run from one to twenty years. Under this system the operation of the ship may be the responsibility of either the owner/operator or the charterer depending on the terms of the agreement;

3. **A single voyage charter or spot charter:** where a vessel is chartered for a specific voyage. Under this system the owner/operator is responsible for the ship’s operation, while the master remains under an obligation to undertake the voyage as the charterer instructs. The freight rate for voyage charter are usually higher than the other types of charter.

### 5.5.1 Focus on the Charterers

In the past the general view of the charterers was that the condition of ships were deemed satisfactory, if they were offered on the market with valid certificates, as required under all applicable international conventions (Australian Parliament, 1992, p.21). Over time this presumption had been increasingly questioned, therefore some charterers have been taking steps to independently confirm that ships considered for charter are in a satisfactory condition. However, what is very clear is that substandard ships can only stay in business because there is a charterer willing to employ them (Paniguian, 1999).

The general view is that shippers are convinced that one must not pay more than is necessary to transport goods, which has raised several voices against the irresponsible practices of certain shippers using old or substandard ships in order to boost their profits (Boisson, 1999). However, this insatiable appetite for cheap rates will have to be curbed because of the increased security implication of such rates, as exemplified by the recent case where a Lebanese gang hijacked a ship and earned millions by offering cheap rates (Gang making millions…, 2003). To be fair to this segment of the industry, it is recognised that shippers really consist of a mixed bag. There are those with a general apathy towards maritime safety, which will go as far as to manipulate the market by taking maximum advantage of the benefits arising from available tonnage, in order to force freight rates down (Boisson, 1999); whilst others show little interest in participating in the industry’s affairs, giving the
impression that they are only concerned when cargo is lost or damaged, or even have no interest at all: after all, the insurance will pay! (Farthing & Brownrigg, 1997)

On the other hand there are charterers that have taken reasonable steps towards eliminating poor quality vessels, even with the general problem of insufficient information about the quality of the ships available for charter. These are primarily the large charterers, principally but not exclusively the oil majors. They recognise that a major oil spill will not only damage the environment, but can also impair their public image as well as spell financial disaster. Some of the steps taken include (Boisson, 1999):

1. **Revision of Charter Parties**: where an environmental protection clause has been included in most charter-parties involving oil transportation. This translates to the owners having to meet imposed requirements regarding the age of their ships and their safety management systems.

2. **Vetting**: several procedures have been introduced, including a risk analysis method, physical inspection of ships, and shipping company audits. For example, Elf inspects 800 to 1000 ships every year. In order to discourage the disparities in the quality of inspection, the Oil Companies International Maritime Forum (OCIMF)\(^\text{52}\) has issued standardised inspection procedures to its members.

3. **Development of database**: In 1993 OCIMF established the Ship Inspection Report Exchange programme (SIRE), a databank strictly reserved for its members. It is used to centralise information collected separately by each member, and serves to limit duplication of inspection and improve the objectivity of the survey reports, and to make oil tankers safer by tracking down substandard shipping. The Chemical Distribution

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\(^{52}\) The OCIMF was formed in 1970 at a meeting of some 18 oil majors in London as a response in part to public concern about oil pollution following the Torrey Canyon, and to have representation to governments and intergovernmental bodies. It has a membership of some 40 oil companies with the primary objective of promoting and maintaining safety standards in all aspect on the ships operation, and the protection of the environment from pollution (Farthing & Brownrigg, 1997, p. 52).
Institute (CDI) has taken a similar approach in dealing with the transportation of noxious or dangerous products.

5.6 The Financiers

The shipping industry is a very capital-intensive industry where capital payments dominate a ship-owner’s cash flow and important financial decisions. The history of ship financing mirrors that of the history and evolution of ship ownership structures. As the world economy grew in the 1950s and 1960s there was a long phase of charter-backed financing: with the rapid growth of the industrial economies in Europe and Japan, industrial shippers seeking new and cheaper raw material sources overseas would offer long time charters as an incentive, which the owner would use as cash-flow collateral for a loan to buy the ship. This was followed by new forms of asset-backed finance during the very volatile markets of the 1980s: here the shipping market cycle bottomed out in the mid-1980s, the distressed sales created opportunities for “asset play”, that is buying ships cheaply and selling them at a higher price. Financing in the 1990s shifted to public offerings and corporate lending as shipping companies shifted to corporate ownership structures (Stopford, 2000).

Equity, debt, mezzanine financing, and leasing are the four different financial structures that can be adopted to finance shipping; with the money coming from three markets, the money market (short-term debt), the capital market (long-term debt), and the stock market (equity). With equity, the company seeks investors who will take a stake in the company, sharing the risk and receiving the rewards. Debt financing is basically a loan of some form, which is attractive to borrowers because it is a flexible way of financing a shipping company, while retaining full ownership of the business. When there is a combination of equity and debt financing it is called a

53 A container ship or a tanker can cost up to $125 million each, while most LNG tankers will go up to $250 million each. The tankers carrying the oil imported to the United States alone have a replacement cost of $150 billion. In the early 1990s the bulk shipping industry alone invested about $20 billion each year on new and second-hand ships (Stopford, 2000, p. 194).
mezzanine. Finally there is lease financing with its basic principle borrowed from the property business, in that the owner of the ship (the lessor: a ship yard, etc) hands it over to the lessee who, in return for a rental stream, is free to operate it as if it was his own: at the end of the lease the ship reverts to the lessor (Stopford, 2000). Appendix 9 shows the various financing categories along with a breakdown of the various types of finance with their typical features.

5.6.1 Focus on the Financiers
Debt is the most widely used form of ship financing today, which is available in several forms as shown in Appendix 9, but it is bank loans that are by far the most popular. Bank loans are granted by a number of different financial institutions such as: export-import banks; development banks; banks specialising in shipping; and commercial banks. These institutions deal primarily with one major risk, that is “credit risk” or “default risk”, which is the uncertainty over the repayment of the general loan and payment of interest in full on the promised date (Grammenos, 2002). It is primarily the manner in which these risks are managed that gives banks the greatest potential to have a powerful influence on the safety of ships in general and the operation of substandard ships in particular.

Default risk is created primarily due to the volatility of the vessel’s income, which is the main source of the loan repayment; and in most cases, the main security for the loan. To control this risk the banks in principle employ a comprehensive credit policy and credit risk analysis on the prospective borrower. These can be supported by other means of strengthening the soundness of the loans such as: securities, which are dominated by mortgages, and include cash flow and financial guarantees; then there are covenants\textsuperscript{54}, which translate to banking vigilance through the monitoring, where information regarding a particular loan is collected, processed and analysed, including annual and possible semi-annual loan reviews (Grammenos, 2002). In

\textsuperscript{54} Covenants are contractual obligations of the borrower to the lender, which are included in the loan agreement and those referring to the vessel in the mortgage, and refer to certain actions that the borrower should and should not undertake.
addition, insurance coverage is required as an additional security should the vessel be damaged, lost, or subjected to claims from third parties.

There is no doubt that ships operated in a substandard manner are most likely to create circumstances that will cause the default risk to increase dramatically; but despite the arsenal available to bankers to control this likely phenomenon, substandard ships are still able to get and maintain finance. One recognises that the banking sector is very competitive, with shipping loans forming a substantial part of the banks revenue, but with the volatility of the market coupled with the clear and present danger of substandard shipping, it is hard to fathom why the elaborate measures that are in place are not having the desired effects. One possible solution is to include a safety clause in the covenant, because in the final analysis, it is the banks that are likely to lose.

5.7 The Concept of Self-Regulation
The market players, except for the ship-owners, exist outside the governmental regulatory regime concerning maritime safety, consequently self-regulation describes measures taken by the industry to proactively shape the safety aspect of the environment in which they operate. According to Sommerville (1999), self-regulation is a way for the market players to participate in setting and enforcing practical, achievable and desirable standards for safety…it will demonstrate to regulators that they have embraced a safety culture with identifiable results…and serves as a means of curtailing further well intentioned but imperfectly realized knee-jerk legislative responses to the inevitable incidents of the future.

The concept of self-regulation is nothing new, in fact the mechanisms already exist in the industry: classification is the oldest and most widely recognised form; within the insurance sector, premium differentials also serve this purpose; for the ship-owner the recently introduce ISM Code was specifically tailored with this intent;

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55 Self-regulation can also be achieved through, for example, codes of conduct, codes of best practices, and total quality management (Nieuwpoort, 1999).
finally, the credit risk analysis employed by the banks can also serve as a means of self-regulation. Clearly what is needed is the conviction and willingness to embrace the concept fully.

Whilst most welcome, the renewed thrust towards self-regulation as a complement to the traditional compliance and survey-based system to ensure maritime safety, it is seen by some as a replacement. Self-regulation as a replacement rather than a complement represents an extreme condition that would drastically change current working practice in the industry. For example, class would no longer be the leading provider of third party inspections, although its core functions would remain, as the onus would now be on companies to schedule inspection and ensure regular performance. This would translate to an increased role for PSC and societies to provide independent spot checks (Prayer, 1999). This extreme would obviously create chaos and give substandard operators the freedom to devise ingenious means to subvert the core principles of quality shipping, considering the existing inherent weaknesses of the major stakeholders. Clearly, what is needed is synergy and harmony between the regulatory regime and self-regulation of the industry.
CHAPTER 6
THE REALITIES AND PERFORMANCE OF THE MINOR STAKEHOLDERS

6.1 Minor Stakeholders and Sub-Standard Shipping
The connection between substandard shipping and the major stakeholders has already been established. This therefore leads to one very pertinent question: are brokers, shippers, insurers, classification societies and bankers oblivious of the fact that they are colluding in the employment of a substandard ship? In many cases substandard shipping is facilitated by the unwillingness of some of the minor stakeholders to take meaningful counter-actions. They are driven by the lure of cheapness and the fight for market share to employ, insure, and finance vessels of poor quality (Netelenbos, 1999). They know that when a vessel is detained under PSC, it is the owner that suffers, they suffer no penalty: the vessel’s cargo will be discharged and no action will be taken against the charterer, the insurer or any other user of the vessel. The reality is that substandard shipping is unfair competition and catastrophic in the long run. It harms the interest of respectable parties in the shipping trade, it endangers the lives and well-being of ship crews, and threatens the marine environment (Netelenbos, 2000).

6.2 Quality Shipping
It is generally understood that maritime transportation is definitely not risk free. It is not possible to mandate an error-free operating environment or an unsinkable ship. There will always be a degree of risk associated with navigating the uncertain and often turbulent waters of the world’s oceans (Iarossi, 2003). Despite this inherent risk, it is possible to minimise the likelihood of a catastrophe with the universal employment of the concept of quality shipping.

There has been much discussion as to the true definition of quality shipping, but the most widely accepted is: shipping that is in accordance with the applicable
international standards of the day, as well as any related or additional standards set and adopted by others (Winbow, 2002). It therefore embraces the wider notion that all the stakeholders, both major and minor, must perform at the highest level, whether based on the explicit responsibility under the regulatory regime or from an economic perspective, with an ethical conviction.

The question of how to achieve quality shipping on a global level is not new, nor is it an easy one to address. It involves not just technical and operational issues, but also political and economical considerations (Cheow Tong, 2000). Quality shipping therefore requires a very efficient regulatory regime that serves the interest of all stakeholders in the shipping industry, which is best achieved by having an amalgamation of the regulatory regime and the concept of self-regulation, creating a mezzanine regulatory regime. However, the success of the regime is only possible if there is a safety culture that permeates the entire industry, requiring a shift from the present multi-culture, characterized by secrecy, blame, compliance, and evasion. All this in turn translates to a harmonized global approach that will close the dragnet on substandard shipping. Unilateral and regional measures will only be detrimental to the quality shipping campaign (Lyras, 2000).

The required paradigm shift will have to be predicated on transparency and will require incentives to jump-start the process. This new paradigm is highly desirable as a means of ensuring greater accountability and credibility, considering the current status quo of complex ownership, management and operation. Take for example the 1976-built obo Cerda56: it flies the Liberain flag and is classed with Italy’s Rina with its ISM certification issued by DNV. The vessel is managed by Swiss-based Acomarit, is owned by CTGM (Compagnie pour le Transport et Gestion Maritimes), a Swiss based, but very Italian operation, forming part of the Euroceanca group (Tankers in the spotlight, 2000)

56 The UK’s Maritime and Coastguard Authority detained the Cedra under PSC with 26 hardware deficiencies on a voyage charter delivering 80,000 tons of jet fuel (Tankers in the spotlight, 2000).
6.3 The Safety Culture

The Encarta dictionary describes safety as the condition of being safe; freedom from danger, risk, or injury, whilst culture is defined as the totality of socially transmitted behavior patterns, beliefs, institutions, and all other products of human work and thought. It is therefore appropriate to describe safety culture as that behavior pattern and belief adopted by an individual or institution that will safeguard against danger, risk or injury, in their work pursuits. Commitment, style, and proficiency are the qualities at the heart of a safety culture (IMO, 2002).

There is no reason why the safety culture should not become the mantra for all the stakeholders in the shipping industry since a catalytic structure already exist. This structure is provided by: the ISM Code; the improved International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) 1978; the FSA; PSC; and the increased emphasis on the human element (O’Neil, 1999). O’Neil, (1999) also echoes the general sentiments of the industry when he says, “the culture of secrecy which has characterized shipping for centuries needs to be consigned to history… in its place we should foster a culture of safety and environmental conscience which makes sure nothing is introduced into shipping until we are certain that it is safe and environmentally sound”.

The existing multi-cultural industry lacks the sense of collective responsibility and is without proper and effective checks and balances: features indicative of a market that is cost-driven instead of quality driven, which without a safety culture will make it increasingly difficult to effectively enforce existing and new regulations (Nieuwpoort, 1999). In addition, for it to be effective, it must progress beyond merely following externally imposed rules, emphasizing the need for every company and individual within the industry to be responsible for taking appropriate action to constantly improve safety. The task of changing the culture is enormous and the only stimuli that the majority of the stakeholders respond to readily are those that are financial in nature, consequently it will require attractive incentives to defeat the inertia and propel the new paradigm of a safety culture forward.
6.3.1 Incentives

It is the general consensus that the vast majority of stakeholders are responsible people doing a great job, applying high standards, improving their economic performance with an integrated concept for safety and care for the environment. However, the said majority are forced to bear much of the exasperating regulatory and inspection burden that are imposed because of the minority (Payer, 2000). This has spawned a recurring call for the development of incentives that will reward the best operators and encourage others to emulate them (Grey, 2000). Incentives therefore broadly provide a framework that employs market and regulatory mechanisms to bring about a reversal in the status quo making quality shipping, rather than substandard shipping, profitable.

Some of the major stakeholders, under the regulatory regime, have already taken the initiative to create an incentive scheme. The US Coast Guard (USCG) for example, has implemented the Qualship 21 program, which is a procedure to identify and reward foreign flag quality ships, and provide them with incentives to become and remain quality vessels. The performance criteria are based on: a lack of detentions for the owner over a specified period; the ship not being classed with a targeted society and not registered with a flag that has a high detention ratio; as well as a good performance history and degree of transparency of the flag state (Qualship 21, 2003). This results in a reduction of inspections for qualifying vessels, which facilitates better utilisation of resources and enhancement of the targeting system.

The present prescriptive regulatory regime generally, however, does not provide the kind of tangible economic incentives that are likely to have the desired dramatic effect on complying with the rules; consequently it is the minor stakeholders that will have to bear the responsibility of providing these stimuli. Many believe that self-regulation provides such a stimulant (Payer, 2000), but other stimuli have to be realistic and can take the form of, but not limited to; insurance coverage at lower rates, more and cheaper financing, and higher chartering rates (Lyras, 2000). All these are feasible because quality ships translate into lower risk and less liability. In
the past many of the minor stakeholders, particularly the insurance companies, have argued that their market did not provide for such discrimination, which was compounded by the prevalence of the culture of secrecy and evasion (Grey, 2000). However, the present trend towards greater transparency supported by the advent of the EQUASIS\textsuperscript{57} database will abate existing deficiencies if utilised properly as a modern tool for the assessment of risk\textsuperscript{58}, making it possible for the creation of realistic incentives.

The general view was that a freedom from regulatory scrutiny represents one of the practical incentives that would be appreciated by the best owners (Grey, 2000), but this has been countered by the very manner in which the incentive scheme is employed, that of a \textit{carrot and stick} system, which clearly connotes an incentive scheme, the \textit{carrot}, in harmony with a very potent accessible regulatory regime, representing the \textit{stick}.

\subsection*{6.3.2 Transparency}

Transparency in the maritime industry is about the availability in the public domain of all pertinent data concerning all ships, their ownership, operation, and the nature of their interaction and business transaction with all stakeholders in the industry. This information must not only be available, but should be easily accessible by all stakeholders to be used to enhance the concept of quality shipping.

Several stakeholders have already taken steps to make transparency a reality. These include such efforts as:

1. Some PSC organisations and MOUs now publish lists of ships that have been detained, complete with details of flag, classification society and owner (Mitropolous, 1999).

\textsuperscript{57} The EQUASIS database is defined and examined later in this chapter.

\textsuperscript{58} Risk assessment means a systematic approach to evaluating each client against defined quality standards (Nieuwpoort, 2000).
2. The American Bureau of Shipping (ABS), is making available on their website, for public scrutiny, information on all transfers, withdrawals, and cancellations (Classification; Its time to…, 2003).

3. IACS is placing information about its technical work programme in the public domain by publishing it on the Association’s website (Classification; Class won’t be…, 2003).

4. Lloyd’s Register, through its Class Direct Live, provides its classed owners with information on ships, shipboard equipment, classification status, statutory certification status and increasingly ship plans and other related documents. In addition, it also publishes information on its port state detention performance on its website (Classification; Class won’t be…, 2003).

5. DNV, as of February 2003, is making available on its website all overdue conditions of class or statutory recommendations and overdue surveys leading to class suspension or withdrawal (Olaisen, 2003).

The information provided has enormous potential: take for example the data on PSC detentions; because it is updated on a real time basis, specific aspects can be measured against prior performance. These include the number of PSC detentions, detention against ship types, detentions related to flag state; detentions by age and country, and league tables of the most prominent and recurring detention items (Classification; Class won’t be…2003).

Transparency, therefore, enables stakeholders to determine the pedigree and quality of a ship, as well as that of its affiliates. This means that stakeholders “can hold those who employ substandard ships accountable for their actions, as they will no longer be able to hide behind the cloak of ignorance” (Netelenbos, 1999). In addition, stakeholders will be able to better target ships for inspections or other stakeholders for closer scrutiny, in the quest for quality shipping. To boost the campaign for greater transparency, a global introduction of a unique numbering
scheme for the ready identification of ship owning and ship management companies has been agreed upon in principle by the IMO\(^59\) (Lloyds List, 2003).

Many heralded transparency as a panacea to the ills of substandard shipping, but this must be approached with caution and tempered by the fact that the success of the system is highly dependent on timely, reliable, accurate, and continuously updated data. This is conditional to absolute commitment to the process by all the stakeholders, which reflects their assimilation of, and commitment to, the new safety culture, a true chicken and egg dilemma\(^60\). Despite this potential shortcoming, transparency in its purest form will certainly improve accountability and credibility, two highly desirable but elusive characteristics, particularly in the aftermath of an incident. It will also enhance and add credence towards the concept of self-regulation and aid in its general acceptance and survival.

### 6.3.3 The EQUASIS database

The European Quality Shipping Information System (EQUASIS) forms the backbone of the transparency concept\(^61\). Established in June 2000, it is an international database covering the world’s merchant fleet, and serves to promote the exchange of unbiased information and transparency in maritime transport. It therefore allows persons involved in maritime transport to be better informed about the performance of the ships and maritime organisations with which they are dealing (Equasis, 2003). Equasis should also be recognised as a step towards the introduction of the wide-ranging ship-related information system, which is needed to ensure effective self-regulation by industry players (Doi, 2000).

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\(^59\) This ID Code is expected to have both safety and security benefits, and will become mandatory through amendments to SOLAS and its inclusion in the ISM Code certificates (Lloyds List, 2003).

\(^60\) The chicken and egg dilemma refers to the concept of what comes first, the chicken or the egg.

\(^61\) This represents a joint venture between the European Union, France, the Paris MOU, and the Tokyo MOU to provide a single source of information on the quality of commercial shipping (North, 2000).
The bulk of the data available in equasis is generated by PSC inspections around the world, which is currently being accessed by about 1,500 users a month with 6,000 registered users in total, and data for 60,000 vessels. In an effort to expand the information available, hyperlinks have been established with four prominent classification societies and there are hopes to include all IACS members in the future, given their commitment to a policy of greater transparency and accountability. This will allow a user consulting a specific ship on equasis to access the class society’s website page corresponding to that ship in a single click (Digital Ship, 2003).

Equasis is a fledgling database that is expecting the input of insurers, private inspections such as SIRE and CDI, and others in the near future. Despite limited input sources, it is estimated that the user base is 11% charterers, 10.5% government administrations, 9% shipmanagers, 7.5% insurers, 7% shipowners, 7% surveyors, 5.5% consultants, 5% classification societies and 4% brokers (Digital Ship, 2003). Initially there was scepticism about the database, and a reluctance to release data held confidentially. However, the data is now considered reliable; the acceptance of equasis by a range of marine organisations, such as the International Chamber of Shipping, Intertanko, and Intercargo being a clear sign that it is now part of the maritime landscape (Grey, 2003).

6.4 Mezzanine Regulation

Quality shipping is dependent on a regulatory environment that will stimulate and sustain all stakeholders in taking action that will make quality shipping an integral part of their organisations’ ethos. At the Mare Forum Conference (1999), there was a unanimous agreement among participants representing a wide cross-section of the industry, that a better balance could be achieved between regulation and self-regulation. A mezzanine regime would represent a formidable challenge to

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62 These societies are Lloyd's Register (LR), American Bureau of Shipping (ABS), Class NK (NKK) and the Korean Register of Shipping (KRS).
substandard shipping by combining the positive and effective aspects of the regulatory regime and self-regulation. The ideal balance is achieved when companies have enough flexibility and control in all operational aspects within the limits for safety and environmental protection (Nieuwpoort, 1999).

In a mezzanine regime, over regulation, implementation problems, and the prescriptive nature of the regulatory regime are tempered by self-regulation that allows the minor stakeholders to set standards where the regulatory regime is silent, and ensure that they have the desired impact on the economic factors that create the climate for substandard ships (Mitropoulos, 2000). In fact, the mezzanine regime would serve a critical role in creating a redundancy, that is a system of “double-checks” on each stakeholder, which in effect translates to defence in depth against substandard shipping (Moore, 2000). In effect the mezzanine regime could act as a force multiplier in the process of eliminating substandard shipping, as through effective coordination, governments can influence the economic rationality within the industry.

6.5 The Propeller Principle on Quality Shipping

It is clear that the quest for quality shipping represents a dynamic process that requires a synergistic interaction between all the stakeholders in the maritime industry. It therefore means that quality shipping represents a process and not a destination. In fact, the day it is perceived and accepted as a destination, is the day the industry will recede to the old *modus operandi*, which for substandard shipping would mean business as usual.

It is the author’s view that a ship’s propeller aptly symbolises the process and collaboration required to be employed towards quality shipping. Figure 6.1 shows the propeller principle for quality shipping, which represents a transition from the current view as illustrated in Figure 2.2. One of the distinct changes that has been

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63 Defence in depth means that if something unexpectedly goes wrong, then there are several layers of defence mechanism that should prevent really bad things from happening (Moore, 2000).
made is the reclassification of the class societies from being *minor stakeholders* to what is now defined as *mini-major stakeholders*; because of its emerged prominence as an agent of the regulatory forces whilst maintaining its principal role as a market player.

![Propeller Principle Model](image)

**Figure 6.1** Wayne Mykoo’s propeller principle model for achieving quality shipping

The propeller principle illustrates that the only way to defeat inertia and give momentum to the quality shipping process is to have the propeller turning, meaning that all the stakeholders taking simultaneous action within their domain to enhance quality shipping. The effectiveness and efficiency of the propeller is dependent on the balance and pitch of the propeller, meaning that there is optimal cooperation and coordination between all the stakeholders on each blade respectively. In addition,
the energy from the shaft is transmitted via the hub, the strength and focus of the propeller blades, which represent the ship-owner, the ultimate responsibility for a quality ship. Finally, the progress of quality shipping will depend on the density of the water that the propeller is operating in, meaning the prevailing public opinion on the shipping industry.

The propeller principle in essence is about checks and balances/cooperation and coordination, necessary for obtaining a better equilibrium between the quest for profits and continuity by the industry on the one hand, and the necessity to reduce the social cost of sea transportation on the other (Neiuwpoort, 1999).

6.5.1 Balancing the Blades
For the major stakeholders blade, effective cooperation and coordination between all the stakeholders is paramount to achieving the desired balance and pitch, but it must be predicated on the optimal efficiency of every single organisational unit. This means that all the deficiencies that have been highlighted in the previous chapters, like flag state implementation problems, will have to be addressed; while simultaneously pursuing the drive towards global PSC. The recent measures by the Paris MOU to ban high-risk ships will serve to enhance the balance, especially if similar policies are adopted by the other MOUs.

Probably the most effective means of achieving and maintaining balance and pitch would be to give the IMO enforcement powers. This move is certainly supported by the incumbent Secretary General of the IMO who remarked that the white list provisions of STCW pointed the way forward, and that other conventions should have similar performance benchmarks and sanctions, with penalties available (Osler, 2003b). In the absence of this solution, the recently proposed IMO voluntary model flag audit scheme, which will be made compatible with a new Code addressing flag,

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64 Under the banning policy, ships deemed “very high risk” or “high risk” will be banned from all 19-member States if they are detained twice in three years. Ships with the lower-risk flags will be banned if they are detained three times in two years (Osler, 2003a).
port and coastal state responsibilities, is certainly a step in the right direction (Lloyds List, 2003).

With the **minor stakeholders blade**, it recognised that all the stakeholders are linked together through risk. Consequently, proper balance and pitch is achieved when all units, through mutual cooperation and coordination, give priority to risk minimization and safety optimization, as the driving force to improve their performance and become more efficient, productive and profitable (Papoutsis, 2000). A basis for such cooperation is already provided by the Maritime Industry Charter\(^\text{65}\), which was signed by many parties in 1999 (Netelenbos, 2000). A recent positive development has been the news that the marine insurance industry representatives are to work with the OECD on a study of ways insurers can contribute to the elimination of substandard ships (Spurrier, 2003). This move will undoubtedly contribute to the balance.

For the **mini-major stakeholders**, effective harmonisation of classification rules right across the board is essential in achieving balance and pitch. With harmonisation and the eradication of divisive problems between societies, it will be difficult for shipyards and owners to exploit existing weaknesses to build ships cheaply, with the chance of having “difficult to maintain ships” from the beginning (McLauglin, 2003a). The emerging threat of increased liability for class, as evident in the case where Spain is threatening to sue ABS with respect to damages caused by the *Prestige*\(^\text{66}\), should spur this effort. In addition, because class is funded by shipowners, to remove the stigma surrounding the issue of conflict of interest, other options for funding will have to be explored in earnest (ten Hoopen, 2000).

\(^{65}\) The Charter lays down five basic principles that each signatory should conform to, for example the first principle states that, “each link in the maritime responsibility chain shall make safety considerations an integral part of its business transactions” (Boisson, 1999).

\(^{66}\) Spain is threatening to sue ABS for $5bn over the *Prestige*, alleging that the classification society’s negligence, reckless, wilful and wanton conduct led to the lost of the *Prestige* and the massive environmental damage that followed (McLaughlin & Reyes, 2003).
Balancing the blade will be enhanced by the implementation of the new plan agreed upon by the members of IACS\textsuperscript{67}, where a team of experts from IACS would visit a particular administration and draw up a programme of technical assistance designed to improve performance (Blacked flags…, 2003). Already there have been suggestions that the IMO should be the one to set prescriptive structural standards presently within the remit of class societies, but this would only stifle creativity and innovation, a role that class performs well. Others have sought to temper this position by offering the option that IMO should set the goals and allow class to devise its own means of achieving these goals (Grey, 2003d).

In reality, what is critical is that class societies should compete on quality, not on price. The affirmative move by Germanischer Lloyd that threw 245 ships off its registry last year because of missed surveys or inadequate standards (Classification society expels…, 2003), will only have a positive influence on balance, if such a move becomes universal, with other flags suppressing the urge to readily accepting these declassed vessels without proper remedial action having been taken. It is encouraging to see other societies like DNV, taking similar action.

6.5.2 The Propeller Blades’ Overlaps

Where the propeller blades overlap at their bases near the hub also bears important significance. The overlaps of the major stakeholders blade and the two other blades represents the mezzanine regulatory regime: it is strengthen when governments refrain from knee-jerk reaction, and all other stakeholders are allowed to implement systems with the knowledge of the implicated costs, and take steps to cater for this, in the spirit of the FSA, implemented by the IMO. Focusing on the overlap with the class blade illustrates the societies’ consultative role in the IMO and flag state supervision of class; whilst the overlap with the minor stakeholders blade symbolises the role the industry’s various associations play in the law making process at the IMO, and the commercial regulations that govern their economic pursuits.

\textsuperscript{67}A pilot programme has apparently already taken place with encouraging results (Blacked flags..., 2003).
In addition, the overlap between the mini-major and the minor stakeholders blade again symbolises the concept of self-regulation. The strength here is based on the commitment to the fundamental principles that already exist between class and insurance; where only class can tell the insurance companies the difference between a ship that barely meets the required standards versus one that far exceeds the standards; and between insurance and finance, where all should refrain from the temptation to compromise standards. Even though they compete in their respective sectors on price it should not be at the expense of safety standards.

6.5.3 The Propeller Hub
The hub of the propeller symbolises the ship-owner as the centre of the quality shipping campaign. The overall strength and efficiency of the propeller relies on the level of commitment and compliance to international standards. It is only a minority of ship-owners that employs evasion tactics to reduce operating costs (de Ruiter, 2000). The epitome of a quality ship-owner is the one who will not only be fully aware of all the applicable international standards, but will apply these standards, in addition to any other related standards adopted by others, without being told or coerced into doing so (Mitropoulos, 2000).

With the hub of the propeller being at the desired strength, and the blades properly pitched and balanced, then the stage is set for the entire propeller to operate effectively and efficiently. This will eliminate vibrations and minimize cavitations, which are both irritants to the general public. It is then possible to achieve a high level of quality, a high degree of excellence, ensuring safe, secure, competitive, and environmentally responsible shipping (North, 1999). The propeller principle therefore vindicates the hypothesis posed by O’Neil (1999) when he says, “Just as war is too important to be left to the generals, so shipping safety is too important to be left to the ship-owners alone, or any other section of the industry”.

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6.5.4 Public Opinion

It is a recognized fact that every new maritime catastrophe is increasingly more unacceptable both politically and economically, and the level of losses and damage to the marine environment arouses greater and growing public anxiety (Boisson, 1996). Public opinion has the most dramatic influence on the decision-making process and issues that are given the highest priority by governments. Consequently, it is the regulatory regime that is usually most reactive to changes in the public’s perception of maritime safety and environmental protection concerns. However, recently there has been a greater awareness of marine environmental issues, particularly in Europe, where several disasters have had catastrophic consequences. This has led to a positive emerging trend where market players are becoming more discriminating in choosing quality ships, in order to protect their reputation in the market place. As long as the mezzanine regulatory regime assesses public opinion accurately and takes a proactive approach in allaying any fears, and where necessary only takes well calculated reactive measures, then the propeller will always be at the most desired level of efficiency.
CHAPTER 7

CONCLUSION

Substandard shipping presents a clear and present danger to people, property, and the fragile marine environment. Substandard ships have been operating from the earliest time, when shipping was seen primarily as an adventure, the legacy of which still haunts the industry even when there has been a distinct transformation, to a structured business with well-defined rules and regulations. Eradicating this scourge is the primary tasks of governments worldwide who have expressed their collective will through the instruments produced at the IMO, a course of action necessary because of the international nature of shipping.

The IMO has produced a profusion of international regulations that have been tailored to promote quality shipping, which forms the basis for the regulatory regime where flag and port states (major stakeholders) have very prominent roles. However, there are several impediments to achieving this goal. The first impediment to the process is the manner in which most of these regulations are established. They are often “knee-jerk” reactions on the part of governments in the wake of a disaster, caused by real or perceived public pressure. However, the FSA initiative by the IMO should see an abatement of this occurrence.

The second impediment is the variation in quality and efficacy of flag state implementation, which contributes to the problem of lack of proper accountability. Many States do operate competent maritime administrations, but these are undermined by the few States that confer nationality on vessels for the sole purpose of the economic benefits to be derived, forsaking the inherent obligation of ensuring strict compliance with international standards. The existing flag state self-assessment form and the proposed IMO voluntary model flag audit scheme, as well
as the move by class societies to offer technical assistance to poorly performing flag states, are all positive developments.

The next impediment relates to the prevailing attitude of secrecy and lack of proper accountability in the industry. These problems are fostered by the variation in the types of registries and interpretation of the concept of genuine link, which affords the beneficial owners opportunity to hide behind corporate veils. This creates a very serious deficiency in the regulatory process, as flag, port and coastal states are unable to hold them accountable for culpable acts. This is compounded by the owners and operators of substandard ships involved in accidents rarely being called to account for their negligence by virtue of the protection afforded by their insurance cover. This is the one impediment that lacks a direct solution.

Present international laws are very prescriptive, specific, and detailed, which to some extent also creates additional impediments. This is because they result in an increasing cost in an industry that is averse to such repercussions, as the focus is on cost reduction to ensure profit maximization; a product of the free market system. These legislations can only be successful if supported and implemented by the industry as a whole. Therefore it is the market players in the industry that offer the greatest potential to accelerate the process of quality shipping, and the eventual demise of substandard shipping.

The industry’s market players, classification societies, insurers, charters, and financiers (minor stakeholders), whilst lacking direct responsibilities under the regulatory regime, should exercise an ethical responsibility towards quality shipping because their existence depends on ship-operations. It is understandable that they operate in a very competitive environment, and are often pressured by substandard operators to be lenient, but they should never compromise on principles and standards that will result in a breach of the fundamental protective mechanism for quality shipping. In fact, they should strive to compete on quality, not on price, as the latter only provides a breeding ground for substandard shipping.
Again this segment of the industry is afflicted with a divergence in performance levels, where the majority of the players do take the initiative and fervently exercise core principles in each sector (for example insurers and financiers through proper risk assessments), to enhance quality shipping. It is the few that wantonly disregard these principles in their quest to capture and maintain a market share that taints the entire sector. Each of the sectors has a mechanism for self-regulation, which if employed to the fullest can have a dramatic effect on the elimination of substandard shipping. However, its effectiveness is predicated on transparency and accountability, within a safety-oriented culture. All that is lacking is the will and commitment of all the players.

The efforts and effectiveness of PSC supports this “safety culture”, and the prospect of a virtual global policing network, through inter-MOU cooperation, is very encouraging. In addition, the ISM Code and STCW both lay the foundation for the safety culture to permeate the entire industry. However, the ultimate success of the quality shipping campaign rests with an appropriate regulatory regime, which can be provided by a mezzanine regulatory regime: an amalgam of the regulatory regime and the concept of self-regulation.

The discussions throughout this paper demonstrate that the goal of quality shipping can be a reality, but it requires a holistic approach on the part of all stakeholders in the industry. The proposed propeller principle therefore symbolises the way forward, using the dynamics and characteristics of a ship’s propeller to illustrate that only through effective and efficient cooperation and coordination can the ultimate demise of substandard shipping be realised. However, it does not stop here, because quality shipping is a process not a destination, therefore just like a ship requiring the propeller to be turning to overcome inertia, so does the maritime industry require vigilance and innovation to keep the industry free of substandard shipping. Having the same universal interpretation of what constitutes a substandard ship still remains a major challenge, since States’ surveyors are influenced by standards of education, experience, culture, et al, a subject matter worthy of further examination.
REFERENCES


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## APPENDIX 1

Summary of the status of conventions as at 30\textsuperscript{th} June 2003

<table>
<thead>
<tr>
<th>Instrument</th>
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## APPENDIX 2

### IMPORTANT IMO CONVENTIONS

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<td>96.20</td>
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<tr>
<td>Tonnage 1969</td>
<td>118</td>
<td>97.51</td>
</tr>
<tr>
<td>MARPOL 73/78</td>
<td>102</td>
<td>93.48</td>
</tr>
</tbody>
</table>

APPENDIX 3

UNCLOS ARTICLE 94

The following are some of the key duties outlined in Article 94, where a State shall:

1. Effectively exercise its jurisdiction and control in administration, technical and social matters over ships flying its flag;
2. Maintain a register of ships containing the names and particulars of ships flying its flag;
3. Assume jurisdiction under its internal law over each ship flying its flag and its master, officers and crew in respect to administrative, technical and social matters concerning the ship;
4. Take measures necessary to ensure safety at sea with regards to:
   a. The construction, equipment and seaworthiness of ships;
   b. The Manning, labour conditions and the training of the crew; and
   c. The use of signals, the maintenance of communications and the prevention of collisions.
5. Ensure that each ship, before registration and thereafter at appropriate intervals, is surveyed; and
6. Ensure that there is an enquiry or an investigation into any reports that may reflect its own non-compliance, maritime casualties or incidents of navigation on the high seas.
APPENDIX 4

Profile and Characteristics of the Different Types of Ship Registries

**Closed Registries:** The closed registry is based on the traditional system of conferring nationality only on ships owned by nationals of that State, commonly referred to as Traditional Maritime State (TMS). However, there is a degree of tightness reflective of how rigid the perception of genuine link is taken. This degree of tightness varies from considering only natural born citizens as nationals to systems where a national may include a domicile; a permanent resident or a subject who may not be a citizen (Mukherjee, 1993). Additionally, in the case of corporate owners, the entity must be a corporate body established under the laws of the flag state and must have its principal place of business in the flag state. In essence the shipping company is treated the same way as any other business in that state, even with regards to incentives and subsidies (Stopford, 2000, p.434).

**Open Registries:** The open registry basically is somewhat the opposite of the closed registry system. It permits the registration of ships in its jurisdiction without the severe restriction imposed by the closed registry, reflecting a far more relaxed perception of the concept of genuine link. Its establishment is specifically aimed at offering ship owners a registration service, often as a means of earning an income. Therefore the terms and condition may vary considerably depending on the policy of the state concerned (Stopford, 2000, p.434).

**Secondary Registries:** The secondary registry or international registry, owes its existence to the deliberate action on the part of TMS to counter the effects of the open registry system that was causing mass migration from their flags. Located offshore, they afford their ship owners the opportunity of flagging out, and operate within a more favourable economic environment without sacrificing maritime safety.
However, by flagging out, ships cease to be entitled to subsidies and other financial incentives that might be afforded by the state (Mukherjee, 1993, p.34).

**Hybrid Registries:** The provisions of the 1986 United Nations Convention on the Conditions for the Registration of Ships (UNCCROS)\(^1\), not yet in force, appear to have been taken as the fundamental principles in the establishment of the hybrid registry. For example, a corporate ship owner must be established and/or have its principal place of business within the territory of the state of registry. Failing this, there must be a representative or management person, natural or juridical, who or which must be a national of the flag state and must be available to meet all legal, financial and other obligations of the ship owner (Mukherjee, 1993, p.35). It is important to note that these Hybrid registries have regulations pertaining to maritime safety that mirrors the standards typical of closed registries.

**Bareboat Charter Registries:** The provisions of UNCCROS also provides some procedural guidance for the registration of bareboat chartered-in vessels, which basically involves two parties, the owner and the charterer; and two states, the state of registration of the owner and the flag state of the charter. The involvement of two registries in the context of bareboat charters has created a regime of dual or parallel registration, which is accompanied by considerable advantages for everyone involved: the owner earns charter revenue without having to operate the ship, the charterer acquires a ship without having to purchase one and enjoys the benefits offered in a flagging-in state, and the flagging-in state enjoys economic gains from more tonnage added to its national fleet (Mukherjee, 1993, p.35).

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\(^1\) UNCCROS attempted to articulate in definitive terms, the meaning of genuine link, and a number of aspects relating to its requirements.
APPENDIX 5

Coastal States Rights and Responsibilities in the UNCLOS
Established Maritime Zones

A Coastal State is any State that has a coastline and as such UNCLOS provides certain provisions that entitles States to exercise varying rights and a hierarchy of jurisdiction base on the established maritime zones. These zones are:

1. **Internal waters**: waters landwards of the baseline\(^1\), which consist of ports, roads, bays and inland seas. Here the State sovereign powers to promulgate and enforce laws governing maritime activities, including terms and conditions governing access to its ports.

2. **Territorial sea**: waters extending 12 miles seaward of the baseline. Here the State still exercise sovereignty but it is subjected to the right of innocent passage\(^2\) of foreign ships. The same jurisdiction and condition are also applicable in **archipelagic water**. States may however take action against acts by ships that violate the principles of innocent passage, in addition, UNCLOS Article 21, allows states to adopt laws and regulations which may limit the right of innocent passage in order to regulate maritime traffic, protect navigational aids etc.

3. **Contiguous zone**: waters having a breadth of 12 miles that are immediately adjacent to and seaward of the territorial seas. Here States are empowered to exercise the necessary control in respect to drug smuggling, illegal immigration, customs and tax evasion, sanitary offences, and pollution offences.

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\(^1\) The baseline is the line form which the breadth of all the zones seawards (territorial seas, contiguous zone and the exclusive economic zones) are measured.

\(^2\) Passage is innocent so long as it is not prejudicial to peace, good order or security of the coastal state (UNCLOS 1982 Article 19).
4. **Exclusive economic zone (EEZ):** under UNCLOS Article …States may claim an EEZ of 200 mile from the baseline. Here the State has sovereign right, which is the right to explore, exploit, develop, manage, and conserve the resources found in the water, on the ocean floor, and in the subsoil of this zone.

5. **High Sea:** that body of water that is not included in the aforementioned maritime zones, which according to Article 89 UNCLOS, “No State may validly purport to subject any part of the high seas to its sovereignty”. However, coastal states may, according to Article 1 of the International Convention Relating to the Intervention on the High Seas in Cases of Oil Pollution Casualties Act, 1987, take such measures on the high seas as may be necessary to prevent, mitigate or eliminate grave and imminent danger to their coastline or related interests from pollution or threat of pollution of the sea by oil, following upon a maritime casualty or acts related to such a casualty.
APPENDIX 6

Relevant Instruments for Port State Control

4. International Convention on Standards of Training, Certification and Watch keeping for Seafarers 1978, as amended (STCW 78, article X and regulation I/4); 
5. International Convention on Tonnage Measurement of Ships 1969 (Tonnage 69, article 12); 
6. Convention on the International Regulations for Preventing Collisions at Sea 1972, as amended (COLREG 72); and 

Source: Paris MOU’s booklet on Port State Control and Hoppe, 2002b.
APPENDIX 7

Global MOUs on Port State Control

Source: Mediterranean MOU
APPENDIX 8
JAMES REASON’S HYBRID MODEL

The figure above shows the basic elements of production in an organisation. These constitute the necessary and benign components of any production system, on which the hybrid model below is based, where the various human contributions to the breakdown of complex systems are mapped onto the basic elements of production. It is assumed that the primary systemic origins of the latent failures are the fallible decisions taken by top-level plant and corporate managers. These are then transmitted via the intervening elements to the point where system defences may be breached.
# APPENDIX 9

## OPTIONS FOR FINANCING MERCHANT SHIPS

<table>
<thead>
<tr>
<th>FINANCE CATEGORY</th>
<th>TYPE OF FINANCE</th>
<th>TYPICAL FEATURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>EQUITY</td>
<td>OWNER EQUITY</td>
<td>Finance provided by owner from own funds and retained earnings.</td>
</tr>
<tr>
<td></td>
<td>LIMITED PARTNERSHIP</td>
<td>Funds provided by partners e.g. Norwegian K/S</td>
</tr>
<tr>
<td></td>
<td>SHIP FUND</td>
<td>Shares in company bought privately by individuals or listed on stock exchange.</td>
</tr>
<tr>
<td></td>
<td>PUBLIC OFFERING</td>
<td>Shares sold by subscription on public stock exchange.</td>
</tr>
<tr>
<td>MEZZANINE</td>
<td>PRIVATE PLACEMENT</td>
<td>Debt with high interest rate and possibly equity rights.</td>
</tr>
<tr>
<td>FINANCE</td>
<td>BOND ISSUE</td>
<td>Security issued in the capital market.</td>
</tr>
<tr>
<td>SENIOR DEBT</td>
<td>COMMERCIAL BANK LOAN</td>
<td>Loan provided by bank. Large loans may be syndicated between several banks.</td>
</tr>
<tr>
<td></td>
<td>SHIPYARD CREDIT</td>
<td>Loan provided by government or agency to assist domestic shipyards.</td>
</tr>
<tr>
<td></td>
<td>PRIVATE PLACEMENT</td>
<td>Debt finance arranged privately with pension fund, insurance company etc</td>
</tr>
<tr>
<td>LEASE</td>
<td>FINANCE LEASE</td>
<td>Long term tax effective finance based on sale of ship to company which uses depreciation benefits. May be leveraged.</td>
</tr>
<tr>
<td></td>
<td>OPERATING LEASE</td>
<td></td>
</tr>
</tbody>
</table>

Adopted from: