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REGULATORY ISSUES IN INTERNATIONAL MARTIME TRANSPORT

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Summary

This report focuses on regulations governing international liner and bulk shipping. Both modes are closely linked to international trade, deriving from it their growth. Also, as a service industry to trade international shipping, which is by far the main mode of international transport of goods, has facilitated international trade and has contributed to its expansion. Total seaborne trade volume was estimated by UNCTAD to have reached 5330 million metric tons in 2000.

The report discusses the web of regulatory measures that surround these two segments of the shipping industry, and which have a considerable impact on its performance. As well as reviewing administrative regulations to judge whether they meet their intended objectives efficiently and effectively, the report examines all those aspects of economic regulations that restrict entry, exit, pricing and normal commercial practices, including different forms of business organisation.

However, those regulatory elements that cover competition policy as applied to liner shipping will be dealt with in a separate study to be undertaken by the OECD Secretariat

Many measures that apply to maritime transport services are not part of a regulatory framework but constitute commercial practices of market operators. Both formal regulations and commercial practices (a clear distinction between them being difficult to draw at times) have existed in the liner and bulk shipping sector for a long time, and have had a considerable impact on the development of these segments of the shipping industry.

The report recognises that, in spite of a multitude of regulations and practices, the liner and bulk shipping sectors appear to be less regulated than many other service sectors; particularly other transport sectors. However, there is still scope for improvements in regulatory frameworks to improve economic efficiency to serve broad public interests, and desirable reform areas are pointed out in this report.

REGULATORY ISSUES IN INTERNATIONAL MARITIME TRANSPORT

Table of Contents

REGULATORY ISSUES IN INTERNATIONAL MARITIME TRANSPORT

OBJECTIVES, EXECUTIVE SUMMARY AND POLICY RECOMMENDATIONS

Objectives

1. This study seeks:

   a) to provide an overview of the liner and bulk shipping sectors and to discuss briefly the performance and structural features of these two modes of transport;

   b) to identify the major regulatory regimes applied in the OECD to liner and bulk shipping;

   c) to examine the effects of such regulatory regimes on the industry and its performance; and

   d) to discuss to what extent, if at all, certain deregulation could be brought about.

2. Its coverage includes international and coastal cargo trades involving OECD Member countries in the liner shipping (containerised cargo) and bulk shipping industries. However, the report explicitly *excludes*:

   a) regulatory developments in non-OECD Member countries;

   b) all passenger ship types;

   c) cargo-carrying vessel types other than those that operate in the containerised liner shipping and the bulk shipping sectors and non-containerised liner trades (although the regulatory framework applied to these segments of the shipping industry is broadly similar to the one applied to liner and bulk shipping as investigated in this report);

   d) land-based aspects of the shipping industry, i.e. port services, auxiliary functions such as cargo handling and storage, plus the carriage of cargoes to or from their port of shipment; and

   e) competition policy as applied to liner shipping.

Executive Summary

The liner and bulk sectors

3. The cargo shipping industry is not a homogenous entity. It consists of several discrete sectors, each of which is served by different types of purpose built vessels. Each sector is marked by specific performances and structural features, and they are governed by a complex array of national and international regulations responding to specific issues that have arisen as the international trading system has evolved.

The operations within liner and bulk shipping differ greatly

4. Liner services are provided for numerous shippers by shipping companies operating (mostly) containerships on a regular basis between scheduled, advertised ports of loading and discharge. On the other hand, bulk shipping operations are undertaken by vessels designed to carry homogeneous unpacked dry cargoes (for example grain, iron ore and coal), or liquid cargoes (such as oil, liquefied gas or chemicals). Bulk shipping operations are ordinarily carried out for individual shippers on non-scheduled routes.

5. While in bulk shipping collaboration between shipping companies is uncommon, in liner shipping it is traditionally of great importance, and takes place mainly in the form of *liner conferences*. Around 1990, new forms of co-operation emerged, such as *consortia* and *strategic alliances*. This structure also influences the setting of freight rates, as these charges are based on the shipping company's tariff or, if the company is a member of a liner conference, the tariff of that conference. On the other hand bulk shipping freight rates are determined by the interaction of vessel demand and supply on an open market. Economic expansion and contraction, seasonal fluctuations and unforeseen political events can affect the performance of bulk sectors.

Overall growth of the fleet but at divergent speed

6. In both bulk and liner shipping the growth of the fleet, as well as its cargo carrying capacity, increased significantly over the last ten years. However, while in this period bulk shipping experienced a relatively steady growth in carrying capacity of about 20%, that of the container ship fleet tripled over the same period, with growth accelerating since the mid-1990s.

7. A pronounced upward trend in average vessel size was also evident in the last decade for container vessels, with new orders focusing on bigger ships of 3000 TEU and above. By contrast average bulk vessel size showed little variation.

Global traffic expanded rapidly in volume, but freight rates have declined recently on most major liner trade routes and have been unstable in bulk shipping

8. Economic expansion and trading has led to a rapid expansion of global traffic in both containerised cargoes (more than 9% per annum) and bulk cargoes (around 2% per annum) in the 1990s.

9. In liner shipping, in spite of efforts by conferences to achieve (from their perspective) some kind of rate stability, a significant decline of rates has been experienced since the mid 1990s on most major trade routes. This resulted from the introduction of large ships, growing competition from non-conference carriers, an increase in carrier alliances on some routes and the financial crisis in Asia.

10. In bulk shipping, freight rates continued to fluctuate significantly, reflecting changed patterns of demand for bulk commodities as well as growing availability of modern bulk tonnage

11. Overall, in both sectors, largely due to a net fleet growth that emerged in the 1990s and freight rate developments, vessels earnings have stagnated or even declined.

Beneficial ownership remains largely in OECD Member countries

12. While there has been a drift in the registration of vessels away from OECD flags to lower cost open registries, the majority of beneficial (or economic) ownership still remains within the OECD countries.

13. Due to its capital intensive character, container shipping shows a substantial, and growing, degree of concentration whereas both the tanker and dry bulk sectors contain a very substantial number of small owners with fleets of only one or two vessels.

Vessel safety a serious problem in bulk but not so much in liner shipping

14. Despite the inception of rigorous vessel inspection programs in Member and non-member countries, vessel casualties and crew fatalities within the shipping industry remain unacceptably high. This is largely due to the continued operation of substandard vessels, as substantial financial benefits can be gained by deliberately avoiding compliance with international rules and standards that govern safety and pollution prevention. There are heavy costs associated with ship losses, especially those that involve oil.

15. On the basis of ship safety, the containerised liner trades have been the most satisfactory sector of the industry due to the trend towards greater containerisation of cargoes which necessitated the almost complete replacement of a large number of aged general cargo vessels by modern container vessels. In contrast, poor safety conditions prevailed in the carriage of dry bulk cargoes. In the 1990's around 200 dry bulk carriers were lost, resulting in over 800 seafarer fatalities.

The regulatory framework and its impact

The shipping industry operates within a web of legal, technical and economic regulations

16. The shipping industry is subjected to a number of regulations, which in the area of safety and the environment are basically motivated by the scale of external costs and imperfections in information. There is a clear rationale for governments to establish and maintain adequate standards in maritime safety as well as the protection of the marine environment, which represents a genuine public good. However, beyond this certain maritime transport operations are substantially affected by a number of regulations that restrict competition. Here, reforms are basically needed to correct for government failure. It is particularly important to strive for reforms that can be effective in providing unrestricted market access for all flag vessels. In light of the international character of the industry, regulations are reliant on a broad degree of consensus between nations, without which any such regulations would be of limited use. Most existing international regulations have thus been developed via international, intergovernmental organisations.

Safety and environment related regulations

17. The basis of national and international regulations involving the safety of ships and the protection of the environment are a series of international conventions agreed at the International Maritime Organization (IMO). These conventions reflect the agreement of the international community on acceptable measures necessary to try to maximise the safety of ships and persons on board and minimise the cost of losses and damage associated with ship incidents.

18. This report has concluded that safety regulations would largely meet their objectives if they were effectively and consistently enforced. However, safety remains a continuing problem. Also, existing and new safety related regulations should be continuously tested to ensure that they achieve their purpose, and that public benefits can be expected to exceed the cost of their implementation. There is a need to balance the stability and credibility of regulatory frameworks against the need to adjust these to meet changing circumstances, such as technological and environmental factors.

Regulation related to commercial operations and practices

a) Bulk shipping

19. With respect to bulk shipping, the report concludes that it operates in a substantially open environment, and that services and freight rates generally respond to market developments and supply and demand pressures. While bulk shipping pools are occasionally created, these are relatively crude instruments to control the market and generally fail to survive for long periods. Therefore, their potential impacts on the bulk market are limited. Also, because these pools are not automatically covered by exemptions from competition policy laws, they are dealt with by competition agencies in the same way as other commercial activities.

b) Liner shipping

20. While a high degree of liberalisation has also been reached as regards market access in the liner shipping sector, there still remain a number of regulations which continue to restrict and distort entry.

21. Within the OECD, the *Code of Current Invisible Operations (CLIO) and the Common Principles of Shipping Policy* provide the basic framework for the regulation of liner shipping between OECD countries.

22. The *Code* contains specific provisions for the maritime sector which are intended to give residents of one Member country the unrestricted opportunity to avail themselves of, and pay for, all services in connection with international maritime transport which are offered by residents of any other member country. They also stipulate that the basis of Member countries' shipping policies should be the principle of free circulation of shipping in free and fair competition. The Code is binding and constitutes the major barrier to the introduction and maintenance of discriminatory or preferential legislation in favour of national flag vessels. While some exceptions exist, the application of the Code has by and large served as an effective underpinning of the OECD's approach to liner shipping.

23. The *Common Shipping Principles* complement the provisions of the Code, and these lay down a common approach to international shipping policy and practices between OECD members. They also provide a means with which to counter the restrictive flag-discriminatory practices of certain non-OECD countries. Overall these instruments encourage and facilitate an open approach to international shipping, and would underpin any reform in this sector.

24. In respect of general regulatory practices, such as cargo reservation, cabotage, ship registration policies and others, the report concludes that many of these are clearly market distorting. These should be addressed by national administrations, and ideally removed or minimised. It should be noted, however, that these measures affect only a very small proportion of the liner market, and they are generally strongly supported by national governments for national interest or security purposes. Nevertheless, there would be benefits from reforms in these areas.

25. In respect of the application of competition policy to the liner shipping sector, this remains a controversial and active aspect of the regulatory framework, and is an area where the OECD is continuing to undertake some work.

Recommendations for reform

Safety and environmental regulations

i) A critical question is to what extent the existing system can be expected to deliver satisfactory results in terms of standards for shipping world-wide, and whether these standards can be achieved without imposing excessive costs on the industry. The alternative would be a radically different approach to regulation.

ii) It is important to evaluate the operational aspects of current regulatory requirements to ensure that they are working as intended, and that their enforcement is as effective as it could be. Also, the following alternative approaches, which are not mutually exclusive, deserve exploration:

a) adoption of a Formal Safety Assessment as an alternative to prescriptive regulation. This is an attempt to take a holistic view of the risks associated with the operation of a particular vessel.

b) changes in the institutional framework for safety regulation to create by international agreement, new powers for IMO to intervene directly with Member States who fail to live up to their treaty obligations. This could range from enabling IMO to maintain a universal ship data base, to authorising the Organization to "license" national ship registers. The role of classification societies could also be further strengthened.

c) creating new mechanisms within the shipping industry for self-regulation, to ensure that all players -- including brokers, insurers, financiers and cargo generators -- work together to raise standards, thus gradually eliminating the need for heavy regulation by governments.

iii) In practice, safety and environmental regulations are formulated on the basis of the collective judgement of the international community at the IMO and by national administrations. In principle, they can be assumed to reflect a net public benefit, as these institutions are the most suitable agents to make those judgements. However, it is important that all regulations, existing and new, are subjected to regular scrutiny to ensure they meet their objectives, and that reforms should be considered whenever there is a lack of plausible evidence that the public benefits of these regulations exceed their cost.

Regulations affecting commercial operations and practices

OECD instruments

iv) While no specific changes to the OECD's instruments (that is CLIO and the Common Principles of Shipping Policy) are necessary, the US should be encouraged to review its position in respect of its reservation to Note 1 of CLIO.

Bilateral cargo access regulations

v) While recognising that in practice bilateral agreements of this kind only affect a very small proportion of the world's liner cargoes, it is nevertheless recommended that wherever possible such restrictive agreements should be rescinded, or at least their application reduced. However, withdrawal from the UN Liner Code is not recommended, as such a move is likely to create some unnecessary North/South political difficulties, without the likelihood of any substantial benefits.

Cabotage

vi) Cabotage is recognised as being important to many countries. However, the effectiveness of cabotage in preserving employment and national fleets has been questioned, and cabotage regulations have been relaxed within the European Union and elsewhere without obvious downside costs. Therefore, in view of the benefits that followed domestic liberalisation in other economic sectors, it is suggested that those countries that restrict cabotage should consider removing those provisions. Even if it is not politically feasible to achieve full liberalisation immediately, serious consideration should be given to setting a time frame for such liberalisation, with access initially given to OECD member countries. Full liberalisation may then follow at a later stage.

Other regulations

vii) Of the remaining regulations, only those cargo reservation laws affecting security or national cargoes have any real impact on the maritime sector, and then only in very few instances. As a general rule, it is suggested that overall the efficiency of the sector, its overall quality of service and the net public benefit would be enhanced by the removal of such restrictions.

No specific regulatory initiatives for bulk shipping

viii) All regulations governing the dry and liquid bulk trades concern ship safety and the protection of the marine environment as laid down by national and in particular international rules and standards. There is no regulatory framework for bulk vessels as such, and their activities are exposed to normal anti-trust or competition policy laws.

REGULATORY ISSUES IN INTERNATIONAL MARITIME TRANSPORT

I. SECTORAL OVERVIEW

1. Introduction

1. The shipping industry is not homogeneous, but consists of several discrete sectors, each of which operates in different commercial and regulatory regimes, whose needs are served by different types of purpose-built vessels. Broadly speaking, shipping can be sub-divided into three main categories:

- passenger shipping services;
- liner cargo services; and
- bulk cargo-carrying services.

2. *Passenger shipping services* are a very specialised sector which include cruise ships and ferries, and are outside the scope of this review.

3. *Liner cargo services* operate on regular scheduled services between advertised ports ("liner" trades). Liner trades also operate on the principle of *common carriage*[1], and cargoes are transported for several shippers simultaneously, rather than the single contract which is the norm in the bulk sector.

4. The liner sector is subject to a wide range of regulatory constraints, both of a safety and commercial nature. In particular, in most countries certain liner shipping practices enjoy conditional exemptions from the application of anti-trust laws. This ability to engage in co-operative practices has in part also dictated the shape and organisation of the sector.

5. *Bulk cargo services* cover several key sub-divisions based on specific vessel types. *Liquid* cargoes are carried in chemical tankers, liquefied gas tankers, crude oil tankers and refined petroleum product tankers. *Non-liquid* cargoes are carried by dry bulk carriers and other (multipurpose) carriers.

6. Vessels operating on bulk trades generally *do not* operate on scheduled services, but on specific voyages in fulfilment of short or long term contracts, where the entire cargo shipped on a particular voyage belongs to one owner. Additionally, carriers may ply variable routes according to local demand in particular ports, and can transport a variety of bulk cargoes. These are customarily identified as a separate sector of the industry, known as tramp shipping. This unscheduled, open market mode of operation, is one of the major differences between "liner" and "bulk" shipping.

7. From a regulatory point of view, bulk vessels operate in a generally free market, and are subject only to international and national safety requirements, although because of the relative hazard of many bulk commodities (e.g. oil products and chemicals) these regulations are strictly enforced.

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1. A common carrier is obliged to carry without discrimination goods for all those who are willing to pay the price.

8. The lack of commercial regulatory constraints on this sector of the shipping industry means that it is not a particularly fertile area to examine in respect of further deregulation, even though, as already noted maritime safety regulations impose substantial obligations on this sector

9. Collectively, the different branches of the global shipping industry are subject to a wide variety of regulations, reflecting administrative, economic, political or technical objectives. Each regulation reflects a response to specific issues that have arisen as the international trading system has evolved. These regulations may have international multilateral or bilateral origins, or may be applied on a national basis. They may cover flag state obligations, cargo liability regimes, restrictions on access to cargoes, commercial conduct, vessel design/construction and ships' equipment. They may also cover conditions for ship manning and operation.

10. Maritime transport is inherently international in character, and on most voyages vessels operate under the regulatory requirements of many jurisdictions. It is therefore not unexpected that the evolution of regulations governing the maritime transport industry has been reliant on a broad degree of consensus between nations, without which any such standards would be of limited value. Most existing international regulations have thus been developed via international intergovernmental organisations such as the International Maritime Organization (IMO), the International Labour Organization (ILO) and the United Nations Conference on Trade and Development (UNCTAD).

11. Traditionally the regulation of maritime transport operations by seafaring countries has been motivated by the desire to establish and maintain:

i) standards as regards maritime safety and the protection of the marine environment;

ii) participation of national fleets in the transport of its trade (although by and large in the OECD there exists unrestricted market access);

iii) commercial regulations aimed at facilitating the orderly conduct of business; and

iv) the ability of sea carriers to operate traditional co-operative liner services despite the presence of laws in many countries aimed at preventing anti-competitive behaviour.

12. This paper will examine the first three of these cases, and will analyse their continuing applicability in order to establish where opportunities may exist for reform to reduce or remove regulations which may constrain the effective future development of international maritime transport.

13. The OECD is also continuing to address the fourth item (competition policy) and the results of this examination will be reported in a separate report.

2. The liner shipping sector

2.1. General

14. Liner services describe that part of the shipping sector which transports non-bulk commodities on vessels that operate to tightly fixed schedules. Liner cargoes can be carried individually as general cargo (e.g. motor vehicles), or unitised into containers. The various forms of liner services that operate globally are described in detail in Annex A, Sections 1 and 2.

15. Several different vessel types are engaged in the liner trades - general cargo ships, container carriers, reefers (refrigerated vessels), "multipurpose" ships, roll-on/roll-off ("ro-ro", where trucks and trailers are driven into the ships) and special purpose ships such as motor car transporters. Until the 1960s, general cargo vessels predominated on liner trades, but the advent of unitised cargoes was followed by massive expansion of containerised trade, and in many developed countries container traffic now accounts for over 75 percent of liner trades by volume.

16. As container traffic has expanded this has encouraged the construction of increasingly larger container vessels in order to maximise economies of scale. A side effect of this move to larger vessels has been a consolidation of shipping companies into larger entities, and the tendency for cargo movements to focus on major transhipment or "hub" ports, at the expense of direct services to smaller ports and the servicing of "thin" trade routes (in terms of cargo volumes). Both of these developments may affect the regulatory regimes in which liner vessels operate.

2.1.1. Fleet development/ownership

17. There are important factors related to the development of the international liner fleet and the composition of the ownership of that fleet.

18. Not only has there been a sharp increase in the world fleet of fully cellular container vessels (at the end of 1999 this stood at around 2400 vessels with a total carrying capacity of 4.2 million TEU(Twenty Foot Equivalent Units), up from 1.25 million TEU ten years earlier), but more importantly the size of the vessels themselves has also increased substantially. For example in 1999 container vessels in the 2-4 000 TEU range accounted for 40% of total capacity, while around 23% of capacity was accounted for by vessels over 4 000 TEU[2]. Container vessels have now reached 7 000 TEUs, and there are plans for vessels up to 10 000 TEU.

19. The importance of this is that such vessels can only be operated by large companies, which will encourage further consolidation through mergers, consortia or alliances. Also, very few ports can handle such ships, leading to a concentration of major services to a limited number of major ports, implying an increase in feeder and transhipment services to other terminals.

20. In contrast to the data for fleets by flag of registry, statistics for ownership by country of domicile show a far higher share for OECD Member countries in general. Based on owners' country of domicile about 65% of the world's container and bulk carrier fleet are beneficially owned by OECD nationals, whereas only around 25% of the world's bulk carrier fleet and about 40% of the container fleet were registered under OECD flags. This reflects the widespread tendency by owners in the industrialised economies to re-flag their vessels to non OECD registers for cost-saving reasons. It also demonstrates that, although open registry countries have attracted much foreign tonnage to their flags, they still possess very few domestic shipowning interests of their own.

21. More importantly, the capital intensive nature of the container shipping industry means that in mid 2000 the top twenty container service operators accounted for over 60% of the world container capacity[3]. The importance of this factor is that again there is pressure on liner operators to exploit economies of scale, and that through various consolidations it is likely that ownership (and therefore control) of the world's liner shipping fleet will drift to an increasingly smaller number of - hands. Additional information on fleet development and ownership can be found in Annex A, Section 3.

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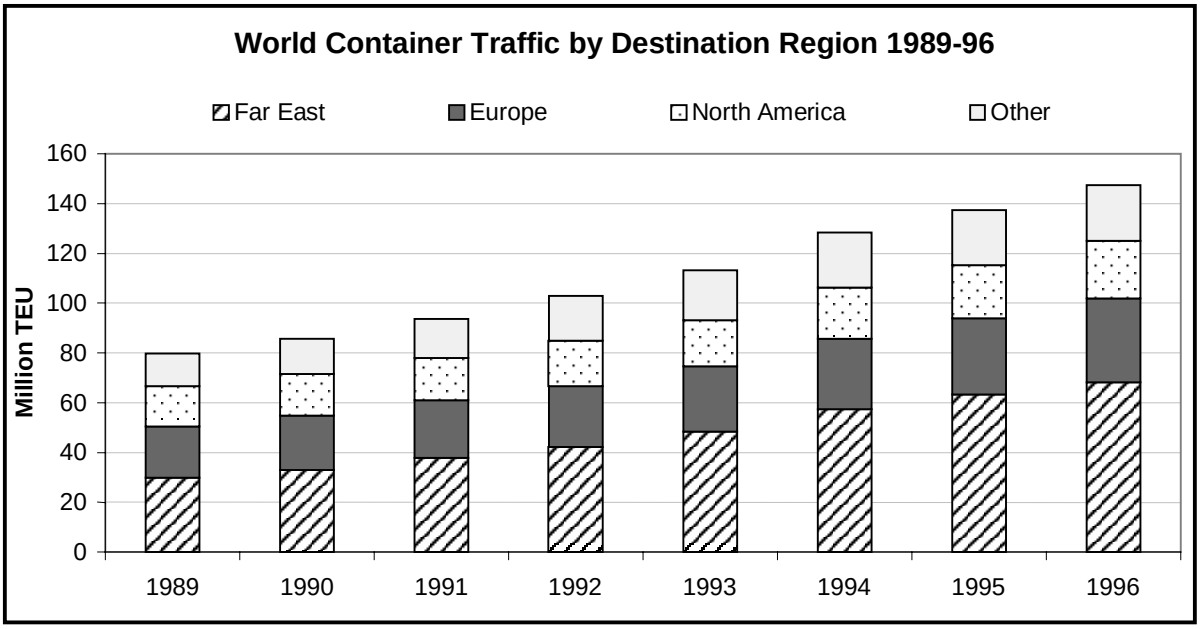
2 . Containerisation International, February 2000

3 . Sources: Barry Rogliano Salles and Containerisation International

2.1.2. Growth in container trade

22. Global traffic in containerised cargoes has expanded rapidly since the late 1980s, rising from an estimated 80 to 185 million TEU between 1989 and 1999[4]. This equates to an average growth of about 10% p.a. Such a gain has been closely associated with the industrialisation of the Asia-Pacific economies, with traffic in that region increasing by over 160% to around 80 million TEU over the same period. This destination thus accounted for 44% of total container traffic in 1996, against 22% for Europe, 16% for North America and 18% for other regions. This data is partially shown in Graph I-1. By 1999 the quantities were: Far East-80 million TEUs, Europe-41 million TEUs, North America-30 million TEUs and Other-34 million TEUs.

Graph I-1



Source: Containerisation International Yearbooks, see also note in Paragraph 22.

23. Among other areas, container traffic also grew in absolute terms to Europe (up by 97%, to 41 million TEU) and to North America (rising by 86%, to 30 million). This was despite the uneven economic performance apparent in parts of Europe in this period. More detailed regional breakdowns can be found at Annex A, Section 4.

2.2. The organisation of the liner industry

24. The principal, and crucial, organisational feature of the liner sector is the ability of operators to enter into a variety of co-operative arrangements and agreements which in most industry sectors would contravene laws intended to ensure competitive behaviour,

25. This co-operative behaviour has historic origins going back to the 1870s, and is based on the international nature of shipping services. The general view of governments has been that for liner shipping services arrangements such as conferences are necessary to ensure stability and certainty in the movement of freight.

[4] "Containerisation International," Yearbooks and UNCTAD Review of Maritime Transport, 2000.

26. Therefore, governments of all major trading nations have provided exemptions, subject to a range of conditions, from the application of their anti-trust or competition laws. These arrangements are continuously under review in OECD member countries, and although there has been tightening of these provisions in a number of jurisdictions, no member country has yet removed these exemptions.

27. While these organisational arrangements in liner shipping have traditionally taken the form of liner conferences, with the advent of containerisation, new forms of co-operation, such as consortia, strategic alliances, capacity accords and discussion agreements have also emerged.

2.2.1. Liner conferences

28. The term "liner conference" is generally applied to formal or informal private arrangements between carriers or between shipping lines to utilise common freight rates and to engage in other co-operative activities on a particular route or routes. There is great diversity in the contents and practical effects of conference agreements. Some have written agreements and secretariats responsible for their day-to-day operation. A few may have no written agreement at all, although they are still called conferences. Others may be called "associations" or something similar, although they are universally regarded as being conferences in the accepted sense of the word, at least for the purposes of anti-trust legislation. Conferences consisting of different members may be present on both directions of a given route. There are a few single-nation conferences, all the members of which are of the same nationality; however, the vast majority are international in composition.

29. The institution of conferences is more than 120 years old. Today, there are well over 300 liner conferences operating throughout the world, with membership ranging from two to as many as 40 separate lines. They operate only in the general cargo field (liner trades), as conferences do not transport bulk cargoes, or cargoes suitable for shipment in entire vessel loads. Typical cargoes carried by liner operators have a relatively high unit value, even though they tend to be diverse in both type and lot size.

30. Importantly, conferences do not carry the totality of available liner cargo, as a large number of regular lines operate outside conferences, and they are able to exert a balancing competitive effect on the operations of conference operators. A proportion of general cargo is also transported by tramps, i.e. ships not operating on scheduled services.

31. Statistics of world general cargo liner trade are not complete, nor is it known precisely what share of such trade is carried by conferences. However, it is generally assumed to be shared approximately equally between conferences and non-conference lines; the conference share having been steadily eroded in recent years.

32. The growing participation of non-conference operators can be attributed to a number of large, independent carriers that are substantial enough to duplicate the capacity, frequency and level of equipment which has generally been the province of the conference carriers. Also, there are “niche” markets available to smaller or lower cost operators, who can offer lower standards of service for cargoes that are low value and/or not time sensitive.

33. The United States is alone in demanding that conferences be “open” because of that country’s antitrust legislation. New members may join at short notice providing services as and when they please, and sometimes remain members without operating at all for some considerable period. On the other hand, the “closed conference” regimes permitted or tolerated by all other OECD countries, means that the right of admission and withdrawal is prescribed, and other specific - and varying - conditions must be met.

34. In this context, it should also be recognised that while closed conferences exist on trade routes outside the USA, in practice entry has not been difficult, and since the early 1980s there have been few cases where membership to closed conferences has been refused to applying parties. In part this reflects the falling influence of conferences, as independent operators have captured increasing shares of the market. Also, the growing range of looser, co-operative arrangements available to liner operators has tended to reduce the incentive to enter into the tightly controlled conference agreements.

35. Although there is a great diversity in the details of individual conference agreements, the common thread running through them is that they make provision for the fixing of freight rates to be charged for at least the main cargoes carried on the route. Apart from this, individual agreements may include, *inter alia*, one or more of the following major provisions; rebates to shippers; allocated sailings; pooling of the trade; joint services, and door-to-door services.

2.2.2. The UN Convention on a Code of Conduct for Liner Conferences ("UN Liner Code")

36. The UN Convention on a Code of Conduct for Liner Conferences was adopted by a Diplomatic Conference held in Geneva in April 1974 and entered into force on 6 October 1983. The Convention applies only to liner conferences in trades between contracting States, and embraces a self-regulatory philosophy for "closed" conference shipping operations. The Code established a framework within which conferences should operate in trades between contracting states, and grants certain rights to those conferences; but at the same time imposes certain obligations upon them, thereby protecting shipper interests. There is no common view on the acceptability of the Code among OECD Member countries on the UN Convention. At present there are 78 contracting parties of which 16 are OECD Member countries: Belgium, Czech Republic, Denmark, Finland, France, Germany, Italy, Korea, Mexico, Netherlands, Norway, Portugal, the Slovak Republic, Spain, Sweden, Turkey and the United Kingdom., A detailed description of the Code is contained in Annex C.

37. While the Convention covers a large number of issues, it is best known for its cargo sharing formula (known colloquially as the 40/40/20 Rule) applying to conferences. This suggests (but does not mandate) that cargo be divided 40% each to vessels of the originating and destination country, and 20% to other vessels. The purpose of this formula was to ensure that vessels of developing countries had an opportunity to participate in the carriage of their trade. While potentially very significant (as well as enormously trade distorting), in practice the UN Liner Code has had little effect on the organisation of the liner sector or in the relatively free participation by vessels of all flags in the carriage of world trade.

38. Particularly significant was the adoption of the "Brussels Package" by the EU Member States, that are parties to the UN Liner Code and Norway. This renders the cargo sharing provisions of Article 2 of the Code inapplicable in conference trades between EC Member States and, on a reciprocal basis, between EC Member States and other OECD countries. It also makes subject to redistribution, among the conference lines of the Member States and of other OECD countries offering reciprocity, the shares of the national lines of the Member State concerned. The effect of this package has been that the UN liner Code has only been practically applied in trades with a number of West African trades, and appears to have been overtaken by time and events. Its impact on world shipping has been minimal. However, the Convention remains in force, and if circumstances were to change it could be a major influence in the future development of liner shipping.

2.2.3. Consortia

39. Consortia are agreements/arrangements between liner shipping companies aimed primarily at supplying jointly organised services by means of various technical, operational or commercial arrangements (e.g. joint use of vessels, port installations, marketing organisations, etc.). In many cases, members of a consortium are also members of a conference.

40. The development of consortia was a response to the technical requirements needed to launch container services. For example, member lines of the same conference (whether all or only some of them) usually formed a consortium at the beginning of containerisation to smooth the way for the introduction of rationalised conference services Consortia arrangements also offer advantages to participating shipping companies through cost reductions derived from economies of scale.

41. These agreements take a considerable variety of forms, given that the degrees of co-operation and the extent of the common activity that they envisage are different, depending on the needs and the circumstances of the trades in question. For example a consortium can be composed entirely of otherwise independent lines, or, they may be members of the same conference. In some instances conferences have members that participate in several consortia, and there are consortia composed of both conference and non-conference lines.

42. The principal difference between consortia and conferences is that the former addresses the rationalisation of container shipping service operations, whereas conferences extend their co-operation to uniform or common freight rates.

43. The treatment of such consortia under competition policy is variable. For example, in Australia, Canada, Japan, New Zealand and the US, consortia agreements seem to be entitled to immunity from anti-trust law, without reference to whether the agreement provides that ship operators should operate under uniform or common freight rates.

44. In the European Union only certain categories of consortia, based on the share of the trade which they cover, profit from a block exemption from the prohibition of restrictive arrangements contained in Article 81(1) of the EC Treaty. Therefore, a consortium which has a trade share higher than 50% will not automatically benefit from the group exemption and would require an individual exemption.

45. Where the consortium has a market share of between 30% or 35% and 50% (the second level) the consortium will come within a simplified procedure in accordance with which it will benefit from the group exemption unless the Commission opposes it within six months of its notification.

46. On the other hand, a consortium having a trade share below the second level (30% or 35% depending on whether or not it operates within a conference) it will automatically benefit from the group exemption.

47. In Norway, there is no legislation related to joint activities of shipping lines whose activities go beyond the definition of a conference as defined in its legislation. As the core element of that definition is that shipping lines operate under uniform or common freight rates, a consortium agreement, if it satisfies this condition, would be treated as a conference. However, if it does not it would be directly subject to the general competition rules. It might be appropriate to say that the treatment of consortium is not clear in Norway.

2.2.4. Strategic/global alliances

48. The purpose and intent of the participants in strategic/global alliances, which became operational at the beginning of 1996, is to establish co-operative agreements *on a global basi*s among a group of companies. These agreements apply not to one trade route, and not with different carriers on different trade routes, but with the same carriers over certain major routes which can be described as global.

49. In these terms, a strategic/global alliance embraces at least two of the major east/west trade routes (Europe/Asia, Asia/US, or US/Europe) served either by combined services on each route or in a round-the-world service. In some jurisdictions global alliances are treated as just another consortium or carrier agreement, and would be covered by the general definition of "conference" (and therefore be covered by general exemptions from competition policy laws). However, in terms of operation and commercial implications, strategic/global alliances are an entirely new form of operation.

50. Because of differences in the regulatory regimes or transportation conditions on each route, parties have thus far implemented these new alliances by a series of route agreements. These agreements cover the employment and utilisation of vessels, including joint vessel route assignments, itineraries, sailing schedules, the type and size of vessels to be employed, additions and withdrawal of capacity, ports and port rotations, and operations over the whole global system. They can and do agree on charters, space charters, the use of joint terminals, co-ordination of containers, pooling of containers and establishment of container stations, vessel feeder routes and co-ordination (where permitted) of inland services. The parties may agree on information exchanges and procedures. In other words, they look to full operational integration of each participant's services into one whole.

51. An agreement may place restrictions on a participant's use of third party carriers on the route in question without prior consent of the members, it may impose provisions for withdrawal, including notice and penalties, and may contain provisions with respect to ownership changes during the agreement. The initial duration of the agreement is normally up to five years.

52. The participants in these alliances include both national and cross-traders and may include both conference and non-conference lines. Asian, European, and US flag lines are parties to various alliances.

53. However, strategic/global alliances do *not* cover:

- joint sales, marketing, or joint maritime/multimodal pricing;
- joint ownership of vessels or maintenance or insurance;
- joint or common bill(s) of lading;
- common tariffs or the sharing of profits/losses;
- joint management and executive functions;
- revenue pools or cargo pools.

54. Each member retains its own identity and the agreements do not create mergers. However, the absence of a common tariff is unlikely to lead to substantial differences in the tariff prices of the parties. First, by the more efficient use of capacity the parties will better control, among themselves, the "supply side." The carriers argue that this has a stabilising effect on prices, which can assist shippers by providing certainty for their own contractual obligations. Second, the agreements generally permit the members to discuss and agree on common positions in alliance matters, and where there is no conference or an open rate, they are permitted to discuss and voluntarily agree on rate and service matters. Third, if any of the parties attempt to capitalise on circumstances by "dumping" freight rates, this would be considered as an inherently destabilising factor in the alliance, and would be acted upon. Finally, it should also be observed that the more the services become integrated, the more difficult the task of marketing and sales would be to establish qualitative differences.

2.2.5. Agreements between conference and non-conference members

55. These include Capacity Stabilisation and Discussion/Talking Agreements, and this is the area where the greatest divergence exists in their treatment under competition policy laws.

56. In Australia, Japan, New Zealand, Norway and the United States, conferences or individual members of conferences are allowed to enter into agreements with non-conference shipping lines; and no special provisions for such agreements are laid down. In Australia, however, if these agreements have anti-competitive provisions, they must be registered to obtain the exemptions available under Part X of the Trade Practices Act 1974. In the US, such agreements are subject to the regular oversight procedure by the FMC which is applied to every form of agreement between carriers.

57. In Canada, agreements between conference members and non-conference operators are not exempted by the Shipping Conference Exemption Act, 1987, although inter-conference agreements are.

58. In the case of EU, agreements between conference and non-conference members do not benefit from a block exemption and the Commission scrutinises these agreements with great attention. This is because the Commission considers that it is clear from Ref 4056/86 that external competition to conferences is an essential factor so far as the question of group exemptions is concerned.

59. Such agreements between conference and non-conference operators may occur when efforts by conferences to regulate capacity are ineffective due to the presence of a large number of non-conference operators or where conferences are open. Such situations have sometimes resulted in "stabilisation agreements" across a trade or a region, or to looser agreements such as "discussion/talking agreements." The first attempts to control freight rates and regulate capacity by a binding agreement covering all or most operators of the trade or a region have appeared in two forms: either under the label of a separate stabilisation agreement between conference and non-conference ocean carriers or as a provision in a single conference limited to conference members. Discussion/talking agreements attempt to reach an "understanding" among operators (conference and non-conference) about these topics, but are not binding.

60. While the application of competition policy to liner shipping is a very important and topical regulatory issue, this is not covered in this report, but will be addressed as a separate issue by the OECD. This approach resulted from a Workshop on Regulatory Reform in International Maritime Transport held in Paris on 25/26 May 2000.

61. At that Workshop, proponents and opponents of anti-trust immunity for the liner shipping industry exchanged views on whether all of those immunities should continue to apply. The results of those discussions were inconclusive, and the Workshop Chairman advised that the OECD would undertake further work on the positive and negative effects of common pricing, as well as the impact of discussion and stabilisation agreements. This work would include and assessment of the effects of removal of antitrust immunities.

3. The bulk shipping sector

3.1. General

62. Bulk shipping (see Annex B for more details) refers to that sector of the industry that carries (generally) single cargoes in large volumes. Four principal groups of commodities are carried in this way:

- dry bulks (industrial raw materials, e.g. coal, iron ore and bauxite/alumina, plus foodstuffs such as grain and sugar);
- petroleum (crude oil, condensates and refined products);
- liquefied gases (LNG and LPG);
- liquid chemicals.

63. A feature of this sector is that to a large degree ships are purpose built for particular types of cargoes, and they are generally unsuitable for other commodities. This encourages the creation of fleets composed of classes of vessels for specific purposes (e.g. oil tankers). Therefore the availability of specific types of vessels, and not bulk vessels overall, will determine the supply of shipping and therefore charter rates. This is quite different to the liner sector, where containerised and general cargo can be carried on a variety of ships (including, in some instances, bulk cargo vessels).

64. Because of this, and because the supply of bulk commodities is tied to long term contracts, the bulk sector is itself characterised by long term contracts of carriage. Very few vessels operate in the spot charter market, and these tend to be older vessels offering carriage at reduced rates, generally for shippers whose trades are insufficient to enable them to negotiate attractive long-term contracts.

65. A significant feature of the bulk sector is that all regulations governing these trades are concerned with ship safety and the environment, and there are no specific regulatory frameworks for bulk ships to parallel those which exist in liner shipping. This is very significant, because it means that bulk ship operators are much freer to compete, and bulk freight rates over a long period have demonstrated their responsiveness to market conditions. Of course, this is more likely to be counteracted by shippers attempting to lock shipowners into long term contracts in an effort to add a measure of certainty and stability into their own long term contracts (as the majority of bulk commodity contracts generally are).

3.1.1. Fleet development and ownership

66. The main world bulk fleets have undergone collective growth in the past decade, with a rise from 456 to 573 million dwt between 1988 and 2000, an average growth rate of just over 2% per annum[5].

67. An important feature of both the tanker and dry bulk sectors is that they contain a large number of small owners, with fleets of only one or two vessels. However, many of the single ship companies are beneficially owned by larger groups; the legal separation helping to safeguard the rest of the fleet in the event of significant losses.

68. This structure is quite different to the liner cargo sector, which is dominated by a relatively small number of large owners. This means that in the bulk sector there is:

- limited scope for concerted action by owners to eliminate or control tonnage, and thus underpinning rates (i.e. no conferences);

- intense competition for cargoes, leading to competitive freight rates;

- a virtual absence of a “scrap-and-build” fleet renewal strategy, as undertaken by some larger companies in other sectors of the shipping industry, resulting in much higher average vessel age (this impacts on vessel safety).

5 . Source: Lloyd’s Shipping Economist, August 2000

69. The profile of bulk carrier ownership (see Annex B, Section 4) shows that in parallel with the situation in the liner sector, OECD members beneficially own the majority of vessels (around 65% on average). Also mirroring the liner sector experience, a substantial proportion are flagged out to open registers, to take advantage of lower costs associated with those flags.

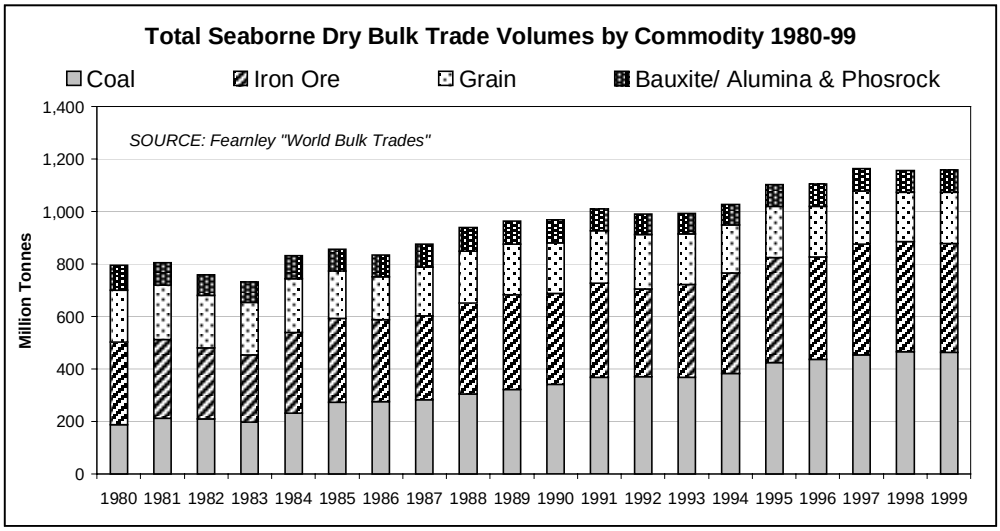
3.1.2. Growth in dry bulk and liquid bulk trades

70. Total seaborne trade in main bulk commodities (coal, iron ore, grain, bauxite, alumina and phosphate) increased continuously during the recent decade, and reached a peak of 1.2 billion tons in 1997, up by 33% as compared with the 1987 total (see also Graph I-2). Within the sector, coal grew the fastest, with an increase of over 62% over the period.

71. This growth is remarkable in view of the significant declines in real oil prices between 1973 and 1987, which should have encouraged a greater use of oil in some applications, at the expense of coal. However, this was counteracted by the desire by major economies to reduce their dependence on oil following the oil crisis of the early 1970s, as well as the development of "clean coal" technology, which has helped to allay environmental concerns.

72. Elsewhere in the dry bulk trades, the only other commodity to demonstrate significant expansion of seaborne shipments has been iron ore, which increased almost 22% between 1988 and 1997. By comparison, trade in grain has fluctuated from year to year, in accordance with regional harvests, and with little evidence of significant long-term growth.

Graph I-2



Source: SSY Consultancy and Research Ltd.

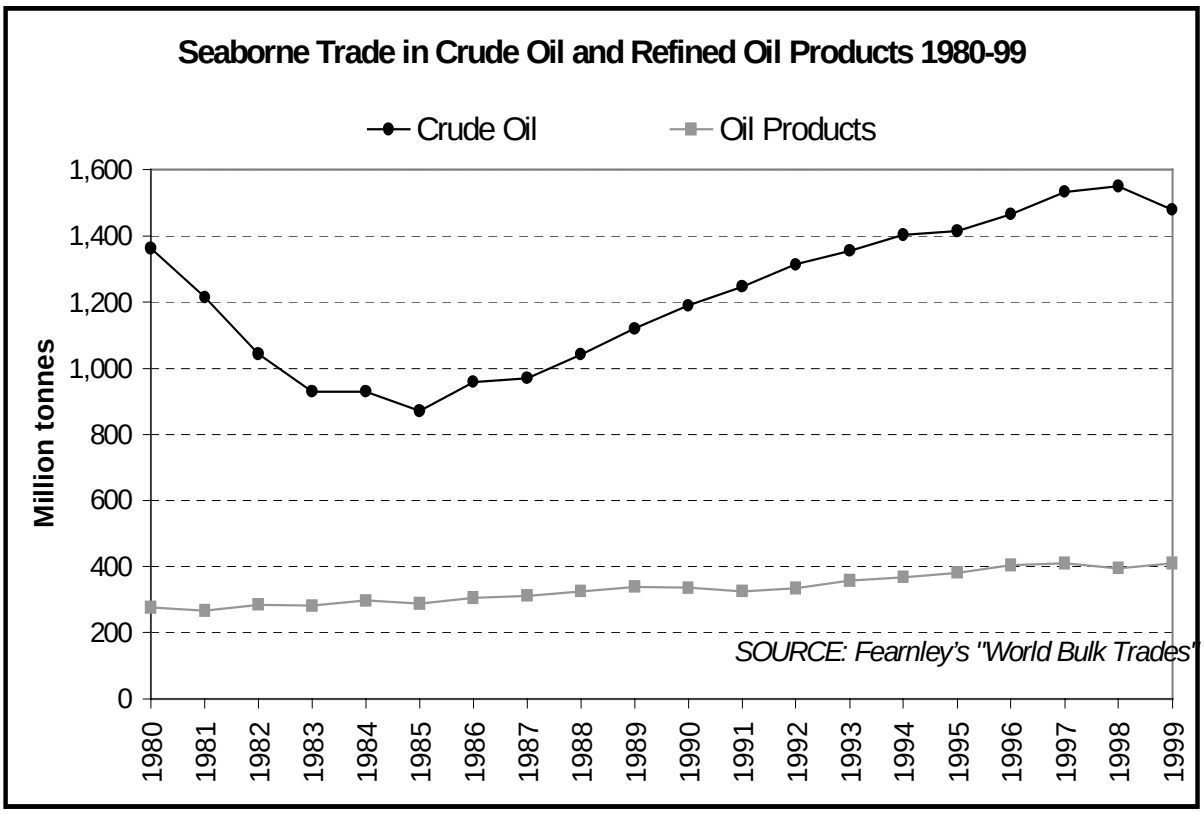
73. Like the dry bulk trades, the tanker industry's performance in the past ten years has been successful from a purely *quantitative* perspective: more cargo has been moved on international trades than ever before, and has been carried a greater aggregate distance. Furthermore, until three years ago, freight rates had been comparatively low. Other positive developments since 1988 have included:

- Greater availability of modern tonnage than existed in the late 1980s, following renewed interest in construction of new tankers in recent years.

- The greater importance now accorded to vessel condition and environmental factors, as manifested in the ship vetting programs now undertaken by many charterers. Likewise, the insistence by various port authorities that ships should be of a specified quality makes it easier to exclude substandard tonnage from prospective employment on some trades.

- The speed with which double-hulled tanker designs became recognised as the future standard for the industry: virtually all new oil carriers built since 1993 have been of this specification. This very high degree of compliance contrasts with the customary time lags that usually occur before new regulations are fully observed.

Graph I-3



74. Despite the above, in qualitative terms, the industry's performance has left much room for improvement, with several major accidents involving oil carriers taking place off North America, Europe, Korea and Japan.[6] From a regulatory viewpoint, the most significant was the grounding in Alaskan waters in 1989 of the "Exxon Valdez" as this was directly responsible for legislation from the US and the IMO

[6] These included significant oil spill incidents involving the "Aegean Sea," the "Braer," the "Diamond Grace," the "Haven" and the "Sea Empress" and the "Erika".

that will ultimately require most oil-carrying ships to be fitted with double hulls. Admittedly, a debate continues within the industry regarding the merits of other cargo containment systems, but it is generally agreed that double-hulled tankers pose less threat of oil pollution than their single-hulled counterparts.

3.1.3. Growth in LNG and LPG trades

75. Elsewhere in the bulk shipping industry, a notable feature of the past decade has been the expansion of global trades in *LNG*. Available data indicate that these increased by around 6%.. The appeal of LNG as an environmentally friendly fuel, plus the increased availability of supplies, have both contributed to the rise in seaborne shipments. Cargo supply is currently poised for significant expansion following the commissioning of new projects, both in established exporter nations and in other countries. Shipments have risen from such traditional sources of supply as Indonesia and Australia while, in early 1997, exports commenced from Oman. A series of further projects that are due on stream in the next few years could see the development of noteworthy exports from Canada, Nigeria, Trinidad, Venezuela and Yemen.

76. Asia remains the principal destination for *LNG* trades, with Japan retaining its pre-eminence among importer nations. Prior to the region's financial crisis in the late 90s, trades to Korea and Chinese Taipei had been increasing to significant levels, but these countries' prospective import needs have been revised downwards in view of slower economic growth. The uncertainty that this has caused is demonstrated by the difficulties that prospective exporters have encountered in securing sales contracts for the new LNG supplies currently under development. One problem that they face is the limited scope that exists for finding alternative buyers in other regions – as Europe, for example, meets much of its gas requirements with supplies that are delivered by pipeline, rather than as LNG.

77. *LPG* trades have also grown steadily in recent years, with Drewry Shipping Consultants reporting an average rise in seaborne cargo volumes of 5.2% p.a. in the 1990s, to 43.7 Mt in 1996 – the last year for which data are currently available. LPG shipping is mainly dominated by long term contracts of carriage as well as time-charters although, in contrast to LNG trades, spot chartering accounts for a reasonably significant share of total cargo movements – reputedly around 20%.

3.2. Organisation of bulk shipping

3.2.1. Bulk shipping pools

78. Formal co-operation between owners in bulk shipping markets is far less common place than in the liner trades, nonetheless, some bulk companies do enter into pooling agreements (whereby they share the profits and losses made by their respective fleets) or undertake joint ventures. Examples of this include the pool between Norwegian, Chinese and Russian interests, and pools formed between the dry bulk shipping interests of the UK and Japanese groups. There have also been various pooling arrangements in recent years between Greek companies and shipowners from Eastern Europe. The purpose of such agreements include:

- increased ability to control the market and improve earnings via joint negotiation with charterers;

- enhanced opportunity to achieve a position of prominence within a given market, and/or to penetrate new markets by harnessing the expertise or commercial contacts of other member companies (the bulk shipping equivalent of strategic alliances);

- greater logistical flexibility by giving pool members opportunities to interchange their respective ships; for example, this may enable a member to take advantage of chartering opportunities that would not otherwise exist if he needed to reposition his own tonnage in order to lift a particular cargo;

- improved bargaining strength for pool members in the ordering of new tonnage, as a pooled operation may be able to secure more favourable pricing terms from shipyards. The exchange of information between members of the pool may also be used by them to avoid the potential over-ordering of tonnage within a given size sector.

3.3. Application of competition policy to the bulk sector

79. Bulk shipping activities are generally not covered by specific regulations in the same way that liner shipping is. However, neither does bulk shipping enjoy the immunity from anti-trust and competition policy legislation. Therefore, it may be possible that some of their activities (for example some potentially collusive actions such as the bulk pools described above) could be in breach of those regulations.

80. While it is possible that these pooling arrangements by vessel owners could offer prospective benefits to some charterers (for example by enabling them to deal with just one shipowner, rather than a range of companies) their status would be for competition authorities to determine.

81. In practice it is rare for bulk shipping to be captured by such legislation, principally because experience has shown that many such agreements tend to be relatively short lived; possibly reflecting the considerable potential that exists for discord between pool members, and the long history of open, competitive competition that has characterised the bulk shipping sector.

II. THE REGULATORY FRAMEWORK

1. Introduction

82. As an international activity, the shipping industry encounters a web of regulations and practices, both national and international. These are described in some detail in Annex C. Some of these have considerable impact on the performance of the shipping industry.

83. However, when analysing the regulatory environment it has to be recalled that the shipping industry is not a homogeneous entity, and not all regulations have the same impact on all segments of the industry. Overall these regulations and practices can be classified under two broad headings:

Regulations related to the rights and obligations of states and to safety and the protection of the environment:

- the Law of the Sea - rights and obligations of flag states;
- international safety and environment regulations;
- national environmental and safety regulations;
- flag state and port state inspections;
- international labour regulations.

Regulations related to commercial operations and practices:

- shipping specific economic policy regulations;
- ship registration conditions;
- cargo reservation/cargo sharing provisions;
- cabotage laws;
- cargo liability regimes;
- national security measures;
- competition legislation.

84. It should be recognised from the beginning that the genesis, purpose and application of the regulations under each of these broad headings are fundamentally different, and measures under each heading will have different susceptibility to reform.

85. The first category, which covers regulations on safety, environmental protection and the rights and obligations of states in respect of vessels flying their flag or the flag of another state, are generally based on international conventions that carry the authority and force of the United Nations. These regulations reflect the judgement of the international community that the social benefits associated with these regulations outweigh the cost to the operators and users of shipping services.

86. On the other hand, the economic and commercial regulations under the second heading reflect a more pragmatic rationale, aimed at giving effect to government policies, the achievement of economic or national objectives, and ensuring national participation (even if this entails substantial cost) or simply regulating commercial activities. While some regulations (such as competition or anti-trust laws) are intended to free up the market, the majority probably distort or interfere with the market to some degree. The judgement of the worth of any given regulation hinges on its overall economic or social benefit.

2. Rationale for regulatory action

87. Without embarking on an *'a priori'* defence of regulatory regimes, it is nevertheless worthwhile discussing briefly why some regulatory intervention may be necessary in the maritime sector.

88. From a pure competition policy perspective, the basic starting point is that any interference with the market is inherently undesirable, and most likely will produce negative net benefits. Therefore, any interference should be considered only to correct a market failure, or to achieve some clearly definable objective in which the benefits can reasonably be expected to exceed the cost of the regulatory action.

89. In respect of *safety and environmental* regulations, the rationale is that interference is necessary because the market has clearly failed to ensure levels of ship safety and environmental protection that are acceptable to the international community. Such failure can be attributed to a number of reasons. First, commercial imperatives can be met by ships that can carry freight from point A to Point B. There is really no inherent benefit for shipowners, whose principal concern is generally the bottom line, to give extensive regard to safety, nor to the consequences of a ship failure. Experience over a long period has shown that while there are many high quality shipowners there are also a great number who are not, and these could be expected to rise rapidly if all mandatory safety and environmental regulations were to be removed.

90. The savings that can be achieved by those shipowners by shaving down safety standards and environmental safeguards can be substantial (see Section IV). While it is possible that in a perfect market those savings could be passed on to shippers, and through them to consumers, most are in fact retained by the unscrupulous shipowner. Also, the potential consequences of ship failures (the risk of which increases as vessel quality, maintenance levels and crew skills fall) can result in public costs that are out of all proportion to the savings made by operating vessels at lower standards. This is also covered in Section IV.

91. Second, shipowners who simply wish to maximise profits are helped both by the international nature of shipping and marine insurance arrangements, which make it difficult to bring to account those responsible for incidents, especially if ships are registered in flag states which have little interest in effectively managing vessels carrying their flag. It also means that those responsible for the operation and use of substandard ships rarely bear directly any costs resulting from their actions.

92. Also, the potential costs associated with (say) a major oil spill would be out of reach of all but the largest corporations, and therefore losses and damage under a totally free market may go largely uncompensated. This is a very powerful argument to firstly limit the risk of those incidents occurring, and secondly to provide some internationally enforceable way of adequately compensating for loss or damage.

93. Regulations can enhance safety and environmental protection, and while they cannot guarantee that ship incidents will not occur, they can, if rigorously enforced, reduce risks. However, meeting these regulations is not without cost, and it is important to ensure that regulatory requirements do not become counterproductive by adding costs which may exceed their benefits. Additional regulations, even though they may improve safety, would not be justified if they do not meet this test. The IMO and its members states have an important role in making such judgements by drawing on available information and analysis.

94. In respect of *commercial operations and practices*, the issue is more complex, as these lack the strong moral underpinning (let alone other public benefits) of regulations which deal with safety, human life and the environment. Nevertheless, there are both public benefit and competition policy aspects that can be drawn upon as a rationale for their continuation.

95. From the perspective of public benefit, the role of effective regulation is to provide a framework for the orderly management of maritime transport services. Administrative requirements, such as ship registration requirements and (relatively) uniform cargo liability regimes would fall into this category.

Less clear cut from a public benefit perspective are regulations intended to favour national participation in the maritime sector, such a cargo reservation and cabotage laws, and national security measures that frequently distort markets, rather than liberalise them. Such measures are usually justified on narrow national priorities which place national participation above efficient and competitive markets.

96. On the competition policy side, the capital intensive nature of international liner shipping means that there are substantial entry barriers to potential operators. This is especially the case in long distance routes with limited cargo volumes (commonly called long, thin routes, for example Europe to Oceania). Service providers on such a route would require the deployment of multiple ships in order to provide reasonable frequency, reliability and specialised equipment (such as reefer containers).

97. For example, on a long route such as Europe-Oceania, where the round trip can take up to eight weeks, an operator needs to deploy at least eight vessels to maintain regular weekly services. This would require a very large investment, and would only be undertaken by the largest operators. Such conditions could easily lead to a monopoly or duopoly situation, which would seriously restrict competition. More seriously, it could result in vessels being at times repositioned to higher yield routes, which could seriously affect shippers and trade flows. This is a situation which governments have tried to avoid by allowing conferences, which brings together a number of operators without any of them necessarily having to make the individual kind of commitment just discussed, and with a lower risk of vessels leaving the trade.

98. Therefore, while allowing conferences to operate will restrict competition (but not necessarily completely remove it, especially if non-conference operators also service the route), it will allow operators to participate with smaller numbers of vessels (perhaps even with only one ship), with shippers benefiting from their cargo moving on the conference's "next available" vessel.

99. Supporters of the conference system have long argued that by allowing co-operative arrangements carriers have been able to offer more reliable (greater number of vessels to draw on), and more frequent services (schedules maximise the available conference fleet) as well as better equipment (greater access to capital for investment, and greater confidence in making those investments) and greater price stability (often sought by shippers as an input in their own contractual obligations).

100. On the other hand, opponents of conference arrangements cite the fact that markets are generally very good at finding the optimum equilibrium, and that such exemptions prevent the most efficient delivery of international liner services. In their view, while some circumstances may exist where conferences (or a mixture of conference and non-conference lines) can perform better than the market, these should be the exception rather than the norm, and should be permitted only where there is a reasonable expectation that the public benefit would exceed the cost of regulation.

3 Regulations and practices relating to the rights and obligations of states and to safety and the protection of the environment

3.1. The Law of the Sea - rights and obligations of flag states

101. The UN Convention of the Law of the Sea of 1982 (UNCLOS - see Annex C) is the most basic legal instrument, and provides the basis for the regulation of ships and the provision of maritime transport services. This establishes a comprehensive set of regulations governing the world's seas and oceans, and spells out the basic rights and obligations of states over vessels which fly their flag.

102. Briefly, the Convention recognises that each state has a right to fix conditions for the granting of its nationality to ships. Essentially, regulations covering these conditions would address administrative, technical and social policy matters, including the seaworthiness of vessels and the manning and training of crews.

103. However, this right is coupled with a number of obligations, including ensuring that a vessel meets all conditions for the granting of nationality, and the right to fly that flag.

104. A key element of the UNCLOS, as well as an earlier 1958 Convention on the High Seas, is that there should be a genuine link between the state and the ship. However, this *genuine link* is not defined and this has allowed various interpretations to prevail. One interpretation is that the link can be purely *economic*, rather than social or national, and this has led to the creation of a number of *open registers*, which will issue flag registration on the payment of a fee. In these instances the genuine link is reduced to one of client and service provider, and the associated obligations of the flag state (such as ensuring that a vessel and its crew are fit for their tasks) may suffer.

105. While not all open registers are guilty of lax supervision of their vessels (indeed a number of non-open registers would also fit into this category) the opportunity for unseaworthy vessels, operated by ill-trained crews to legitimately fly the flag of a sovereign state exists.

3.2. International safety and environment regulations

106. The international community has responded to the perceived failure by some flag states to adequately enforce internationally agreed safety standards by putting in place parallel regulations enabling port states (i.e. those whose ports are visited by ships flying other flags) to ensure that applicable international requirements for the safety of vessels are being met.

107. Applicable Conventions are made in the International Maritime Organization (IMO), a United Nations specialised agency responsible for improving maritime safety and preventing pollution from ships. The IMO currently has a membership of 158 states.

108. The IMO's Conventions, once ratified and in force, form the basis of national and international regulations covering all aspects of vessel standards and crew requirements, aimed at improving safety and protecting crews and the environment. See Annexes C and D for more information on the IMO.

3.3. National environmental and safety regulations

109. The IMO's conventions are agreed following negotiations involving the organisation's members. Because these represent different regions of the world, and straddle the entire spectrum of national development, members bring widely differing views on what represents appropriate technical standards for vessels safety, crew requirements and pollution prevention. These standards are therefore frequently compromises, and may not meet the expectations of all countries. In some circumstances, these differing views may culminate in specific national requirements designed to meet a particular problem.

110. Such alternative standards, though important to the country that promulgates them, can create serious problems for ship operators, who have to meet the (generally) higher standards associated with these one off national regulations. Some national regulations may require considerable investments to meet them, and in some instances can become a *de facto* international standard. The US requirement for double hulled oil tankers is an example of such an instance.

111. On other occasions, national requirements may seriously affect shipping operations, by requiring that activities be undertaken by the shipowner that may not normally be part of a strictly commercial service. For example, Australia's voluntary guidelines (that will become a requirement in July 2001) recommend that all ballast be replaced in deep water before discharge at an Australian port, and this may add to the cost of services. These guidelines are aimed at preventing the spread of harmful organism that may have been collected in shallow waters at the port where the vessels took on ballast.

112. For more details on a number of national requirements, see Annex C.

3.4. Flag state and port state inspections

113. *Flag states* are supposed to exercise effective jurisdiction and control in administrative, technical and social matters over ships flying their flags. To achieve this, flag states require a competent and adequate maritime administration which is subject to its jurisdiction and control, and whose mandate is set by duly legislated laws and regulations conforming to applicable international rules and standards. However, not all flag state administrations are in a position and/or willing to fulfil their responsibilities as conferred by the UN Convention of the Law of the Sea of 1982 (UNCLOS). Flag states' annual surveys and pre-registration inspections are not always conducted, and deficiencies once detected are not always followed up. This is largely due to the fact that in some flag states ship registration remains primarily a source of income, where commercial considerations often override safety matters.

114. In the absence of flag state inspections, classification societies often act on behalf of flag states. The evidence that a ship is seaworthy is generally taken to be the certification issued by its classification society. This document is awarded on the basis of the regular inspections undertaken by the society and must be kept aboard the vessel. However, in the absence of flag state supervision and control some societies are known to have accepted ships that have been in breach of regulations, meaning that the certification issued may not be an accurate indicator of a ship's seaworthiness. This has meant that even if the administrative conditions of certification in the course of registering a vessel have been fulfilled, this may not ensure that the vessel has been adequately maintained. The International Association of Classification Societies (IACS) has sought to overcome the latter problem via self-regulation.

115. While flag states have rights and obligations to ensure that vessels carrying their flag meet registration requirements (which should be consistent with the IMO's technical standards), *port states* (i.e. those countries whose ports are visited by vessels flying the flag of other states) have exercised their own rights to ensure that vessels in their national waters meet their own safety and other standards.

116. While there is no specific international convention to underpin the actions of port states, their right to apply appropriate safety standards to vessels that visit their waters has not been challenged, and a rigorous port state control regime has the endorsement of the IMO and its member states. The standards applied by port states are generally those contained in the same IMO conventions which form the basis of flag state registration environments, although there are some inevitable differences.

117. Also, while the standards used may be relatively consistent, the way in which these standards are applied are not, and this has led to widely diverging quality of vessel inspection in various parts of the world. This, as well as providing an opportunity for unsafe vessels to slip through both the flag state and port state nets, may also create problems for high quality shipowners, who may have to meet a variety of different requirements in the course of any given voyage.

118. While the proliferation of regulatory requirements can produce complications for the shipping industry, and will drive up their costs, the view shared by many countries (and certainly all OECD members) is that as long as flag states cannot guarantee that their vessels will meet all international requirements, a solid port state control system is necessary to ensure that safety standards are met.

119. To ensure the effective operation of these port states, in 1982 member states of the European Union signed the "Paris Memorandum of Understanding on Port State Control", which at present covers 19 maritime administrations. Through this regional administrative agreement, based on a number of international conventions[7], signatories exercise their rights to control foreign ships within their ports on the basis of the provisions of these conventions. Similar co-operative arrangements also cover certain Latin American and Asia Pacific regions, all of them actively promoted by the IMO.

120. As an example of the active involvement of port states, Graph II-1 summarises the inspection record of the Paris Memorandum group of countries for the period 1991-1999. These show that the number of inspections in recent years have hovered between 17-18 thousand per year, and that while the number of deficiencies has been slowly rising, the ratio of ships detained has fallen, perhaps indicating a declining incidence of serious defects.

121. Apart from targeting ships on the basis of criteria that targets those that have unfavourable safety records, certain OECD Members also inspect vessels on the basis of other criteria. For example, in Japan, *all* very large single-hulled tankers navigating the Bay of Tokyo are now subject to onboard inspections. This provision was introduced following the grounding of the "Diamond Grace" in July 1996.

122. In the tanker sector, the relevance of port state inspections to vessel quality - and hence to environmental protection/ship safety – sometimes tends to vary according to vessel size. As a consequence, very large vessels (because of their greater potential to cause widespread damage) are sometimes subjected to such frequent and stringent vetting by charterers that poorly maintained vessels struggle to find employment.

123. In dry cargo trades, shipbrokers advise that port state controls are currently being enforced most rigorously in the United States, Australia, Canada and certain European states, such as Norway. There is evidence that in Australia, for example, the rigorous stance taken by the maritime authorities in recent years means that very few vessels of questionable quality now attempt to enter ports in that country.

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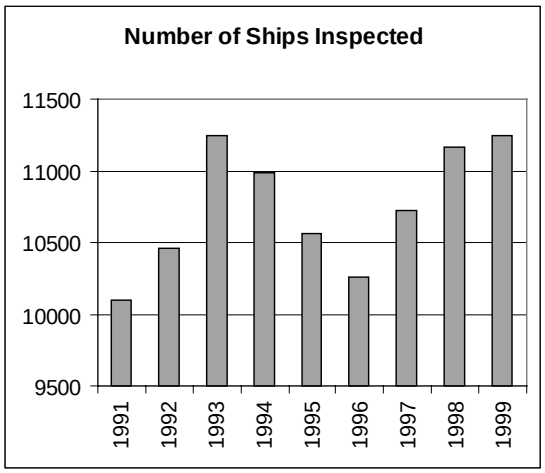
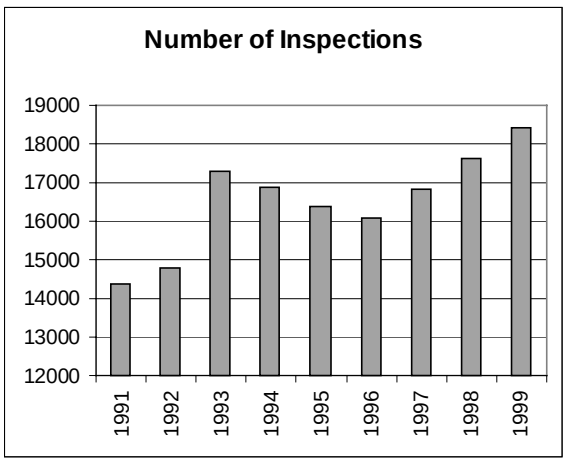
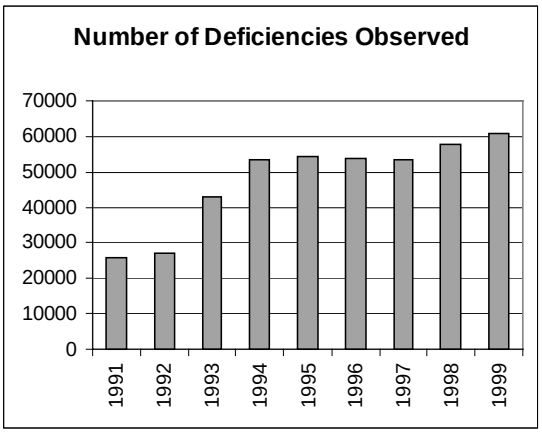
[7] The relevant instruments for the purpose of the Paris Memorandum of Understanding on Port State Control are the:

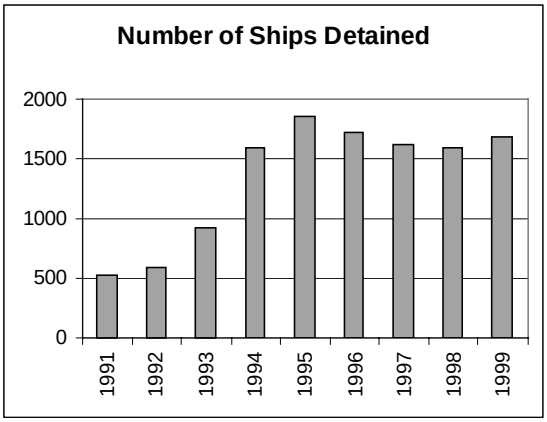
- International Convention on Load Lines 1966;
- Protocol of 1988 relating to the International Convention on Load Lines 1966;
- International Convention for the Safety of Life at Sea, 1974;
- Protocols of 1978 and 1988 relating to the International Convention for the Safety of Life at Sea, 1974;
- International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto;
- International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978;
- Convention on International Regulations for Preventing Collisions at Sea, 1972;
- International Convention on Tonnage Measurement of Ships 1969
- Merchant Shipping (Minimum Standards] Convention, 1976 (ILO Convention No.147).

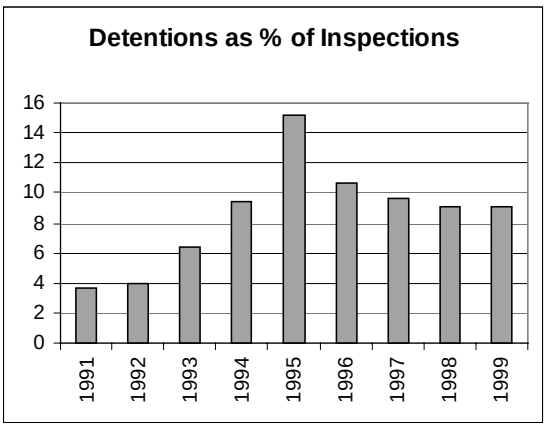
Graph II-1
Paris Memorandum of Understanding on Port State Control:
Summary of Port State Control Results 1991 - 1999











Source: Paris MOU Annual Reports (various years)

3.5. International labour regulations

124. Manning levels and crew skill requirements have already been mentioned several times. Associated with, but separate to, these requirements are a range of international regulations on crew welfare which are based on conventions made at the International Labour Organisation (ILO) in Geneva. However, these "social" standards are not as clear cut as the more technical standards of the IMO, largely because only a limited number are in force internationally, and many conventions have not been ratified by the main maritime nations. A comprehensive listing of these ILO Conventions can be found in Annex C, Section 1.

125. Despite their patchy implementation, these labour regulations remain important regulatory requirements which affect both the welfare of crews and the cost of ship operators. As crew costs remain a major cost component in the operation of ships, operators constantly look for ways of reducing those costs, generally by employing ratings from lower cost countries such as the Philippines, Myanmar and China. However, further reductions in crew pay and conditions (sometimes to below subsistence levels) are not unknown.

126. On a positive note, three factors should help to achieve more effective application of labour regulations:

- the ISM Code, which is being widely enforced;
- wider inspection of ships under port state control measures. (It is reported that the onset of the ISM Code in July 1998 was followed by increased evidence of port state control inspections, to ensure that vessel safety procedures are being followed);
- the IMO's revised STCW Convention, which includes provisions for the working hours of watch-keepers that are very similar to those of ILO Convention 180.

127. Labour regulations remain the most ephemeral of the requirements that must be met by ship owners and operators, and because this remains the least unregulated sector, it offers the greatest opportunity for these owners and operators to make savings, or abuse their position, depending on one's point of view.

4. Other regulations and relevant practices

128. The regulations and practices covered in this section are those which affect the shipping industry's commercial activities, and form the basis of both efforts to free up the market (to level the playing field) or distort it (to meet national commercial, economic or social objectives). This section does not cover competition policy and the operation of liner conferences, as these issues were briefly covered in Part 2 – The Liner Shipping Sector.

4.1. OECD instruments

4.1.1. The OECD Code of Liberalisation of Current Invisible Operations (CLIO)

129. During the 1950s the forerunner of the OECD, the Organisation for European Economic Co-operation (OEEC), drew up its Code of Liberalisation of Current Invisible Operations. Promulgated by the OEEC in 1957, and retained by the OECD upon its establishment in September 1961., It was formally adopted by the Council of the Organisation in December 1961.

130. By subscribing to the Code of Liberalisation (including Note 1 which specifically covers maritime transport) OECD Member countries have obligations and commitments under it covering, *inter alia*, the maritime transport area. Under the Code, members are obliged to eliminate restrictions between each other on current invisible transactions and transfers relating to maritime transport operations.

131. All Member countries have accepted the general definition of the Invisible Code's obligations concerning maritime transport, although some countries have lodged reservations (these, along with details of CLIO are listed in Annex C).

132. Also, the obligations under the Code do not prevent Member countries from taking action in the maritime transport sector, as well as in any other sector they deem necessary, for the maintenance of public order, the protection of its essential security interests or the fulfilment of its obligations relating to international peace and security (Article 3 of the Code).

133. In summary, the maritime provisions of the Code, including Note 1, being a binding charter for OECD Member countries (except as noted above) constitute a major, if not totally impervious, barrier to the introduction and maintenance of discriminatory or preferential legislation in favour of national flag vessels within the OECD. In other words the Code contains principles that are required to be, and generally are, reflected in Member countries' shipping policies as a guarantee of adequate and economic shipping services.

4.1.2. The OECD Common Shipping Principles

134. While there was some liberalisation between the late 1960s and the early 1980s in general trade, the reverse was the case in shipping, notably in non-OECD countries. Realising this, and recognising that certain countries maintained barriers for transportation of specific cargoes, and that no individual Member country could fight protectionism and malpractices alone, the Organisation's work over a number of years focused on harmonising the policies of individual Member countries, both amongst themselves and with respect to their relations with third countries.

135. This work resulted in 1987 in a Council Recommendation [(87)11(Final), 13 February 1987] Concerning Common Principles of Shipping Policy for Member Countries (See Annex C), which complemented the commitments they had already entered into under the CLIO.

136. By adopting the Recommendation, which was formally updated in September 2000[8] [C(2000)124/FINAL], Member countries agreed to complement their previous commitments by pursuing a common approach to international shipping policies and practices based on the following elements:

- the maintenance of open trades and free competitive access to international shipping operations, maritime auxiliary services and multimodal transport involving a maritime leg;
- co-ordinated response to external pressure, based on full consultations between Member countries;
- the role and recognition of governmental involvement by Member countries to preserve free competitive access and the provision of choice to the shippers;
- a common approach to the application of competition policy to the liner shipping sector;
- Measures relating to safety, the environment and substandard shipping.

8 . Greece and Turkey have placed partial reservations on new Principles adopted in 2000, Please see Annex C.

137. These elements, together with Note 1 to Annex A of the CLIO, form a coherent and common approach to international shipping policy among OECD Member countries and between Member and non-member countries. However, it should be noted that the elements contained in the Council Recommendation are less binding than those contained in the Code, and that their effectiveness is essentially dependent on the will of Member countries to implement the elements contained in the principles.

Impact

138. Shipping, as a service industry to trade, is governed by the CLIO. As a Decision of the OECD Council, the obligations arising under the Code are binding upon Member countries. Member countries have respected their obligations and refrained from actions contravening their obligations under the Code.

139. The thrust of these instruments is to promote liberalisation of the sector, and to ensure freedom of choice. Principally, the instruments try to guide governments (both member and non-member) to less, rather than more involvement, and in that respect, to the extent that they are applied by OECD member governments, they act as regulation inhibitors. Even where it is recognised that government regulation may be necessary (such as anti-trust or competition policy legislation) efforts are made to ensure compatibility, if not uniformity, of those regulations in order to minimise negative impacts on international shipping services.

140. One of the roles of the OECD's Shipping Policy Principles was to provide a clear and firm foundation to underpin the shipping policies of Member countries. In this respect the Principles appear to have been helpful, and a number of references can be found to the Principles being used by Member countries to review their own policies. For example, Australia, New Zealand, Norway, Spain, Belgium and Italy, all reported that the Principles had been taken into account in reviews of national legislation, and this is not an exhaustive list. It is also true to say that current shipping policies of Member countries (including new Members) reflect strongly the basic principles adopted in 1987.

141. In respect of new Members of the OECD, their shipping policies and practices (amongst other requirements) were subjected to close scrutiny by the Maritime Transport Committee during their application phase, and were judged through the application of the Principles. New OECD Members were generally required, as part of the obligations assumed on becoming Members, to adhere to the Principles.

142. Beyond that, in 1992 it was reported that Latvia had revised its shipping policies following a meeting with the OECD Maritime Transport Committee (MTC), in order to be more consistent with the Principles. More recently, Bulgaria revised its laws to secure conformity with EU requirements and the recommendations of the OECD Shipping Policy Principles.

143. Finally, there is the active consultative role of the Maritime Transport Committee with the NIS/CEECs and the DNMEs. These consultations, which began in the first half of 1991 with a meeting with the NIS/CEECs, and were followed by a meeting with Dynamic Asian Economies (DAEs), formally exposed these countries for the first time to the Principles adhered to by the MTC members. In the case of the NIS/CEEC this dialogue culminated in 1993 in an Understanding on Common Shipping Principles which embodies, and is consistent with, the MTC's own Principles. A similar Understanding was also concluded in 1999 with a number of the Dynamic non-Member Economies (DNMEs), specifically Chile, Hong Kong (China), Malaysia, Singapore, Chinese Taipei and Thailand.

144. In summary, the Principles have exerted a disciplinary effect on Member countries by ensuring the consistency (even if not the harmonisation) of their individual shipping policies. Also the Principles have acted as a "ruler" against which Member countries have tested their own maritime practices, and those of non-Member countries, for consistency with the agreed common policies.

145. It can reasonably be assumed that the Principles have acted as a powerful common reference point to determine good practice in international maritime transport. While some of the individual elements may be a little dated, it would seem that a clear and concise enunciation of policy principles by Member states still plays a valuable role in guiding their internal relationships, as well as interactions with non-OECD economies.

4.2. Bilateral cargo access regulations

146. OECD Member countries are parties to a large number of bilateral maritime agreements as well as certain treaties of friendship, commerce and navigation with other countries. The majority of these do not contain clauses concerning cargo allocation or equal access rights, but some do include clauses providing for national or "most favoured nation" treatment to the ships of each partner in the other's port. These are usually subsidiary to the main purpose of the agreements which is to regulate such matters as mutual recognition of documents, repatriation of seamen, assistance in case of wreck or accident, legal authority, imposition of taxes, etc.

147. Existing bilateral agreements, which contain provisions regulating access to cargoes, and to which OECD Member countries are at present party, can be grouped into the following categories:

- cargo sharing agreements;
- equal access agreements to governmental and/or government-controlled cargoes;
- agreements stipulating equal rights in trade movements.

148. These agreements concern solely the liner sector, as in the bulk sector free and non-discriminatory access to cargoes generally prevails.

4.3. Equal access agreements

149. Reciprocal agreements by which the contracting states agree that ships flying their flag should carry equal shares of the governmental and/or government controlled cargoes generated in their mutual trade, constitute another form of bilateralism. The importance of such agreements depend on the definition of government cargoes (and hence the share that such cargoes constitute of trade), as well as what provisions they make concerning third-flag carriage. Of the OECD member countries, only the United States, Germany and Portugal are currently parties to equal access agreements.

150. The agreements signed by Germany and Portugal do not contain any cargo access clause but state only that the contracting parties agree to promote the equitable participation of their shipping companies. An additional protocol signed by Germany and Brazil, which provides for government cargo to be carried by the regular shipping companies of both countries, is limited in its effect by being restricted to cargoes associated with the peaceful use of nuclear energy and financial aid. Furthermore, in conformity with EC Council Regulation 4055/86, this agreement is open for free and non-discriminatory access by all Community shipowners.

4.4. Agreements stipulating equal rights to participate in trade movements

151. In addition to the above agreements which contain specific cargo clauses, there are some agreements which state that both parties should have equal rights to participate in trade, foster significant and balanced participation, participate in equal shares etc. However, these agreements are not known to lead at present to cargo-sharing practices and thus do not seem to prevent third-flag participation in trade movements between signatories to the agreement.

Impact

152. Existing bilateral agreements regulating access to liner cargoes are of little overall economic significance. This is due to the approach embodied in the existing EC Regulations and the very few rather exceptional agreements, where liner shipping companies would not otherwise have any effective opportunity to ply for trade to and from a third country concerned.

4.5. Cargo reservation

153. Cargo reservation regulations often reflect the belief of governments that the sea carriage of a certain share of their imports and exports should be undertaken by national carriers. This belief is usually based on the argument that the national flag fleet has to be promoted and maritime know-how has to be maintained. Turkey and the United States are the only OECD Member countries known to have cargo preference laws in place. These provisions (described in greater detail in Annex C) concern access to commercial cargoes as wells as government, government-financed or government-guaranteed cargoes.

Impact

154. Overall, only a very small proportion of the OECD's trade is affected by unilateral cargo reservation measures, primarily due to their very small number. However, it is not so much the overall amount of cargoes shipped under these measures, nor the fact that it is probably considerably more expensive to ship cargoes on national flag vessels which may cause concern[9], but that such restrictive measures should be in place at all, as they could encourage others to distort the market in similar ways.

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9 In September 1994, the General Accounting Office (GAO) published a report about cargo preference in food aid programmes. It concluded that cargo preference in food aid programmes did not meet the objectives of supporting the US merchant marine as a naval and military auxiliary in time of war or national emergency or for the purpose of domestic or foreign commerce. The report stated that US food aid programs had paid $600 million in excess costs over the previous three years in order to transport goods on US flag ships. (This equated to 34% of total transportation costs in US food aid programs).

In October 1994, the US Department of Defense (DOD) also produced a report to Congress comparing the cost of shipping their supplies on US vessels under the various cargo preference laws against the cost of transporting them on a commercial basis. It concluded that there were substantial extra costs ($476m out of a total DOD transport bill of $1.15 billion) arising from compliance with the cargo preference laws. The report stated that, without these laws, almost all US Government cargoes would be transported by foreign-flag vessels and that US-flag operators would have little incentive to stay on the US register.

In November 1994, the GAO produced a second report on the cost to the Federal Government of cargo preference provisions. It found that, in the absence of preference cargoes, the equivalent of up to two-thirds of the 165 US-flag vessels engaged in international trade could leave the US fleet, either to reflag to save costs or cease to operate if they were not competitive. If cargo preference laws were abolished, up to about 6 000 US mariners would lose their jobs. There would, though, be only a minimal impact on the US shipbuilding industry.

In March 1995, Nathan Associates carried out an analysis of the US merchant marine and its cargo preference and operating differential subsidy schemes; this was undertaken as a consultancy study funded by the American Maritime Congress, representing US-flag ship operators. It produced conflicting evidence to the earlier reports and concluded that the economic benefit of cargo preference substantially exceeds its cost.

155. None of these restrictions are in breach of obligations under the OECD Code of Liberalisation. Turkey placed a general reservation on CLIO, and the United States does not subscribe to the second sentence of Note 1 to CLIO .a Therefore, neither has any obligation concerning the cargo reservation measures specifically mentioned by that sentence.

156. In all, only the restrictions maintained by the United States could be considered as being of some economic importance. Except for US Public Law 104-58 of November 1995, these restrictions are supposedly designed to support national flag carriers carrying cargoes that would not exist unless ordered by the US government (e.g. foreign aid or military cargoes).

4.6. Registration conditions

157. Registration under a national flag grants that vessel nationality of that state, with the consequence that national legislation is applicable. Each country imposes conditions on companies and persons seeking to register ships under its flag, or to invest in such ships – especially if such investment is to be undertaken by foreign interests. Reasons for imposing such conditions may include:

- *legal considerations*; in some cases, in recognition of the country's flag state obligations, although some non-OECD nations have proven very lax in fulfilling such commitments;
- *national security factors;* e.g. the desire to prevent such investment by parties from potentially hostile foreign states;
- *national interest;* to promote the development of the national fleet, by encouraging vessel ownership among domestic companies.

158. The restrictions that apply on ship registration within OECD Member states are detailed in Annex C. In general, these set:

a) maximum permitted stakes in a ship permitted for foreign nationals/corporate bodies; or

b) minimum levels that must be owned by domestic interests.

159. Many OECD Member states also require that the person or organisation owning that ship should have its principal place of business located within their country, or that certain senior management posts within the owning company be filled by nationals

Impact

160. The impact of registration conditions has to be examined under two different aspects:

i) do they constitute market access restrictions; and

ii) do they influence to a significant extent the choice of the flag; that is have they led to vessels being re-flagged from OECD to open registers?

161. While discriminatory eligibility measures for the national flag are in themselves not incompatible with existing international instruments, it is considered that such conditions do constitute restrictions whenever certain maritime activities are reserved to national flag vessels, or when conditions required to perform such activities are more favourable for national flag vessels than for non-national flag vessels.

162. As to the second issue, ever since the late 1950s OECD countries have been concerned with problems posed by a continuous flagging out to open registries. By the end of 1999 around 48% of the world fleet was under open flag registries, compared to about 31% in 1980. This represents the equivalent of about 170 million dwt moving to open registers. At the beginning of 2000 about 57% of the open registry fleet were owned by Greek, Japanese, United States, Norwegian and United Kingdom interests[10].

163. This trend to out-flagging led to a detailed examination in a large number of Member countries as to whether existing registration conditions could be held responsible for such movement. However, these examinations came to the conclusion that modifications of existing requirements for ship registrations, such as national ownership requirements would have little, if any, influence on the flagging out process.

164. Indeed, manning, taxation and safety, are considered to be far more important in the choice of flag than registration conditions.

- *Labour*: with a large proportion of open registry fleets still unrestricted in their choice of crew and use of labour, these operators have an advantage with respect to total labour costs over those operating under OECD flags, although the ability of owners to operate with low cost crews depends to a large extent on the type of trade and vessels involved.

- *Taxation:* in most open registry countries, no income taxes are levied on the company under which the vessel is registered if a certain percentage of the equity is owned by non-nationals, and if corporate income is derived from offshore sources.

- *Safety:* difficult economic circumstances and lack of supervision by a number of flag states have led some shipowners flying the flag of open registry countries to take advantage of their freedom to set operating standards that fail to conform with rules and standards for shipboard safety and the protection of the environment. These shipowners can reap financial advantages that can amount to a substantial proportion of the running cost of a vessel.

165. Overall, registration conditions have a limited impact on the choice of flag. Manning and taxation conditions are of prime importance for registration. The availability of more favourable manning and taxation regulations than those that prevail in the OECD, have been the prime reasons for an increasing number of OECD shipowners deciding to register their vessels under non-OECD flags.

4.7. Cabotage

166. "Cabotage" is defined as "the reservation of a country's domestic shipping trades to ships flying the national flag of that state," and applies to coastal and deep-sea voyages, as well as shipments on inland waterways. Traditionally, most nations have applied some controls on commercial shipping engaged on their domestic trades. Ships engaged on cabotage trades have variously been required to be:

i) manned by the country's own citizens;

ii) wholly or majority owned by domestic nationals;

iii) built at domestic shipyards; or

iv) registered under the country's national flag.

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10 . UNCTAD Review of Maritime Transport, 2000

167. In return for meeting such requirements, owners operating ships on cabotage routes have not had to compete with foreign flag vessels, and some countries have provided fleet subsidies or other financial benefits.

168. Some Member governments have already deregulated, or partially deregulated, the provisions that previously existed, or do not rigorously enforce the laws that still apply. For example, New Zealand has relaxed its cabotage laws and now permits foreign flag ships that are engaged in its international trades to operate for up to 28 days on domestic coastal routes. Like various other OECD Members, New Zealand also waives cabotage laws when specialist ships are needed and no suitable domestic-flag tonnage is available

169. The EC (through EC Regulation 3577/92) has partially relaxed its cabotage laws by requiring that European Union countries liberalise among themselves their prevailing cabotage laws, and all cargo-carrying trades within these states are now open to vessels owned by companies based in fellow EU Member nations.[11] However, this law does not open EU cabotage to non-EU members.

170. The cabotage measures which are most worthy of note within OECD Member countries are those of the United States, and to a lesser extent those of Japan, Australia, Canada, Korea and Turkey. For example, for a ship to be eligible for US domestic trades, the following conditions must be fulfilled:

- Built without construction differential subsidies at shipyards in the US.
- Majority owned by US interest (at least 75% shareholding is required).
- Registered under US Flag and manned by US nationals.
- Trade without operating differential subsidies.

171. Recently, a strong lobby has emerged in the United States that seeks major reform of the Jones Act. However, so far this has not led to any relaxation of existing legislation.

Impact

172. While a degree of deregulation has taken place, there are still significant cabotage restrictions in OECD Members' domestic trades. One of the principal rationales given for cabotage provisions is the preservation of the national flag fleet. Yet this objective has not been fulfilled even by the United States, where such measures are more onerous than in almost any other state. Furthermore, alternative means of achieving this goal have already been devised, i.e. the creation of second registers such as the Norwegian International Ship Register. These enable shipowners to reap the financial savings that would otherwise be available from transferring their vessels to open registers, without abandoning the national flag.

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11. Beneficiaries of Regulation 3577/92 are shipowners, nationals and companies who have their ship registered in, fly the flag of, a Member State and comply with all conditions or admission to cabotage in that Member State. This requirement limits market access for companies controlled by third country residents in those Member States which limit access to cabotage only. Also beneficiaries of Regulation 3577/92 are nationals of a Member State established outside the Community or shipping companies established outside the Community and controlled by nationals of a Member State, if their ships are registered in and fly the flag of a Member State in accordance with its legislation. The requirement implements provisions already existing under universally accepted international law (Art. 91 UNCLOS). There are no limits to cabotage in Belgium, Denmark, Ireland, Luxembourg, Netherlands, and the United Kingdom, so that the limitations of Regulation 3577/92 do not apply to these countries.

173. Moreover, the total volumes of cargoes that move on some of the domestic shipping trades (for example Australia, Canada and Turkey) are quite small in relation to these nations' foreign trade. Hence, even a total repeal of present cabotage regulations would at most probably affect only particular niches of the shipping markets, rather than having a large impact on overall vessel demand. The situation, however, is rather different in respect of the United States, Japan Korea and Europe, where substantial amounts of cargoes are moved under existing cabotage legislation.

174. Overall, cabotage laws attract considerable domestic attention, and generally are jealously guarded by domestic shipping lines. However, the reality seems to be that they probably do not protect a country's shipping "capability", but may simply act to increase the costs of domestic shippers.

4.8. National security measures

175. Within the OECD, the only substantive controls that are imposed on commercial shipping for reasons of national security are those enacted by the United States as part of wider sanctions against certain countries. Under these measures the US prohibits vessels that fly the flag of various countries from visiting its ports and territorial sea. The list of states concerned is subject to revision, but currently consists of Cuba, Iran, Iraq, Libya, North Korea, Sudan and Syria.

176. For vessels from some other countries, access to US ports and territorial waters is conditional on prior approval being granted. These are currently: Armenia, Azerbaijan, Cambodia, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan and Vietnam.

177. By comparison, other OECD Member states generally grant unrestricted access to their ports and harbours to all vessels, regardless of their flag or nationality, provided that these ships satisfy the standards contained within international conventions.

Impact

178. In the absence of similar stringent controls by other OECD Member states, the impact of national security measures on commercial shipping have been very small. Furthermore, even for the United States, the measures it enacts have provided little impediment to its foreign trade. Of the countries to which the outright ban applies, only Iran has many ships that engage in international trades. However, in the past decade, the US has operated a total embargo on trade with Iran. Even if this was relaxed in future, cargoes could be carried to the United States in non-Iranian vessels or could be delivered by Iranian ships to Caribbean transhipment terminals for onward shipment in other tonnage.

4.9. Cargo liability regimes

179. The International Convention for the Unification of Certain Rules of Law relating to Bills of Lading, 1924 (the "Hague Rules") was the first attempt to harmonise international cargo liability rules; i.e. minimum standards of legal responsibility which apply to carriers in respect of cargo loss or damage. The Hague Rules were subsequently amended by the "Visby" Protocol of 1968 (the "Hague-Visby Rules"). Criticism subsequently arose that the Hague-Visby Rules did not reflect modern developments in containerisation of sea transport and favoured ship owning interest over shipper interests. Hence, a further attempt to make international cargo liability rules more widely acceptable was made in 1971, through the auspices of the United Nations Commission on International Trade Law (UNCITRAL). This resulted in the adoption of the UN Convention on the Carriage of Goods by Sea 1978 (the "Hamburg Rules").

180. Ratification of these different forms of cargo liability rules has been patchy, leading to a lack of international harmony. The Hague-Visby and Hamburg Rules each apportion liability for the loss or damage of goods at sea between the carrier and shipper interest. However, the burden of proof as regards liability differs between the set of rules.

181. Under the Hague-Visby Rules, the shipper bears the cost of lost/damaged goods if he cannot prove that the vessel was unseaworthy, improperly manned or unable to safely transport and preserve the cargo. In other words, the carrier can avoid liability for risks resulting from human error provided that he exercises due diligence and his vessel is properly manned and seaworthy.

182. Conversely, the Hamburg Rules make the *carrier* responsible for the loss of or damage to goods whilst in their charge, unless he can prove that all reasonable measures of avoidance were taken. The Hamburg Rules took 14 years to gain enough support for entry into force, and came into force in November 1992 for the 26 countries that have ratified it (mostly developing countries with little involvement in international shipping). Three OECD countries (Austria, Czech Republic and Hungary) have ratified the Hamburg Rules.

183. The US stands apart from all other OECD countries in basing its cargo liability regime (the Carriage of Goods by Sea Act, 1936) on the Hague Rules *without* the Visby protocol. However, at the time of writing there was an expectation that draft legislation would be introduced into Congress that if passed would amend the US COGSA to produce a hybrid regime with elements of both Hague-Visby and Hamburg Rules.

184. Also, other international organisations, principally the Comité Maritime International (CMI) and UNCITRAL, are comprehensively reviewing these regimes. The OECD Maritime Transport Committee has done some work of its own on these issues, and has participated in the deliberations of the CMI.

Impact

185. These liability regimes provide a degree of certainty in instances where there is loss of cargo, which otherwise would have to be fought legally in a number of international legal systems (e.g. where the loss occurred, the vessel's flag state, where the contract of carriage was concluded etc). Because these regimes are not regulations in the normal usage of that word, and their relevance to this exercise is marginal, they are therefore not further considered.

4.10. Overall assessment

186. While the catalogue of measures in the maritime sector's regulatory framework is extensive, in reality neither governmental regulations nor unregulated commercial practices restrict to a significant extent the delivery of maritime transport services to and within markets of Member countries.

187. Cabotage and certain cargo reservation measures are certainly regrettable and should be subject to further liberalisation. However, although no data are available as regards the overall amount of cargoes falling under these restrictions, there is consensus among carriers and governments that their overall importance in terms of seaborne trade volumes is very limited, and together they probably constitute more of an irritant than a major problem.

III. ANALYSIS OF FREIGHT RATE TRENDS

1. Introduction

188. So far the material on the organisation of shipping and the regulatory framework has been largely descriptive, and any analysis which has been undertaken has been abstract. Therefore, any suggestions or observations regarding possible deregulatory initiatives, and their likely effect on the industry, have been based more on general competition policy theory than on specific sectoral analyses.

189. This reflects other studies of this kind, largely because information on freight rates (i.e. the "price" of the service), and operating costs (the "cost" of provision) are generally unavailable, either because they form part of confidential contracts of carriage between the shipper and the ship owner/operator, or because there are no reporting requirements for those details.

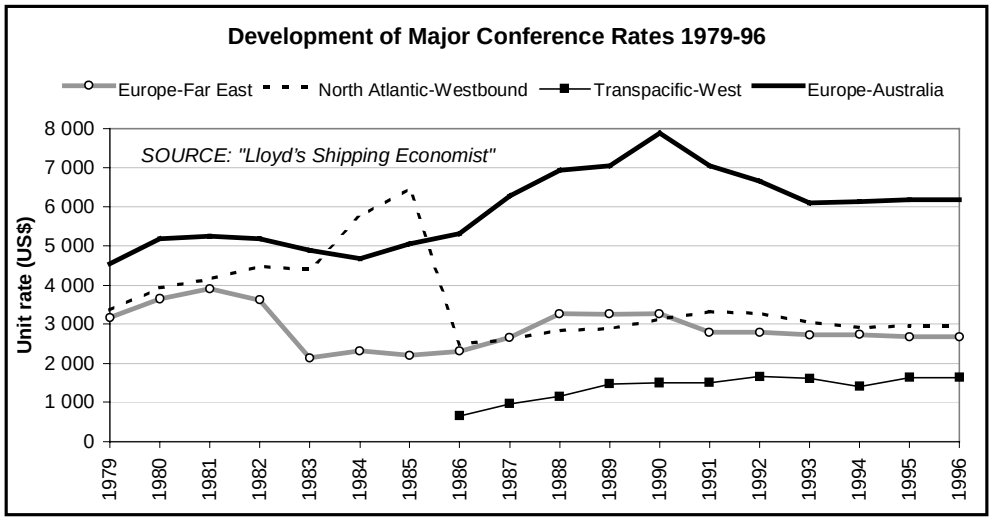
190. The net effect of this situation is that it is difficult to explore market responses to changing circumstances, or to assess whether co-operative practices among liner service providers (such as conferences) result in higher prices for consumers. Based on experience in other sectors it is likely that these co-operative arrangements, or indeed unnecessary regulations of any kind, drive up costs to providers and consumers, but this is difficult to establish empirically in this sector.

191. Nevertheless, despite these difficulties it is still possible to undertake some generalised analysis of the cost of shipping in both liner and bulk shipping, and to attempt to assess how these sectors may have responded to changing circumstances.

2. Container ship freight rates

192. The development of major conference rates for the 1979-96 period is reflected in Graph III-1[12].

Graph III-1



12 . The collection of this data was discontinued in 1996 because of its increasing unreliability.

193. In current price terms, conference tariffs have not followed a uniform pattern, rising on some trades and declining on others. If these are adjusted by applying an appropriate deflator, the long term trend in constant prices is much more stable, and on that measure the rates on all routes have either held steady or have shown a decline over the period.

194. However, while these rates reflect the overall trends in "book" rates (that is the rate that may be offered to one-off shippers), they do not reflect the actual rates paid by individual shippers. This is due to:

- actual rates charged will inevitably be significantly different from official "book" tariffs, as large shippers will be able to command significant quantity and loyalty-based discounts;
- growing use by conferences of surcharges on official "book" rates to reflect such factors as fluctuations in bunker prices and currency values, plus port charges;
- freight rates of non-conference lines tend to be about 10% lower than those of conference members.

195. Some additional observations are necessary in order to correctly interpret the figures in Graph III-1:

- the sharp fall in the freight rate in the Westbound North Atlantic rate in 1985 was due to a statistical adjustment to realign figures that had diverged from actual rates for some time. Therefore, while the long term trend in that rate is probably a fair reflection of the movement in conference rates, no special significance should be attached to the sharp fall in 1985;
- the comparatively high box rate for Europe-Australia reflects not only the length of the route, but also its relatively small volume, which means that carriers require a greater enticement to commit their vessels to regular and acceptably frequent services on the route.

196. The average conference freight rates shown in Table III-1 (below) more closely reflect actual freight rates paid by shippers which, as a consequence of the very significant growth of service contracts as well as the declining influence of conferences, are considerably lower than the "book" rates shown in Graph III-1. These data give a picture of developments over the past 5 years on the major trade routes. They reveal that freight rates for all the major liner trade routes, except for Asia to Europe and Asia to USA have declined, with falls ranging from 15 to 42%. A number of factors have caused this decline, with the introduction of larger ships, and the recent financial crisis in Asia as the most important.

197. The impact of the recent currency crisis in Asia can be clearly seen from the average freight rates, which show the most dramatic developments in the inbound routes to Asia. from both the US and Europe, rates are around 40% lower than at the end of 1995, reflecting sharply lower imports. In contrast, in 1998, at the height of the crisis, rates from Asia to the US rose by nearly 50% in response to booming exports.

198. Freight rates for the Trans-Atlantic routes were relatively stable for years, but these too have fallen (by between 14 and 30%) in both directions since their high points in 1996. The major difference on this route has been that changes have been in the same direction, and the differences have not been quite so marked, perhaps indicating a more balanced demand for services.

199. It is clear that shipping lines, whether they operate in conferences or independently, respond in a similar fashion to market forces, and when economic slowdowns occur the over capacity this creates will result in falling freight rates, at least until some operators are forced to re-deploy their vessels, or go out of business. Therefore, the continuing economic slowdown in Asia, as well as the increasing competitive forces from non-conference competitors, will mean that the pressure on rates on a number of routes is likely to remain and further severe fluctuations can be expected.

Table III-1

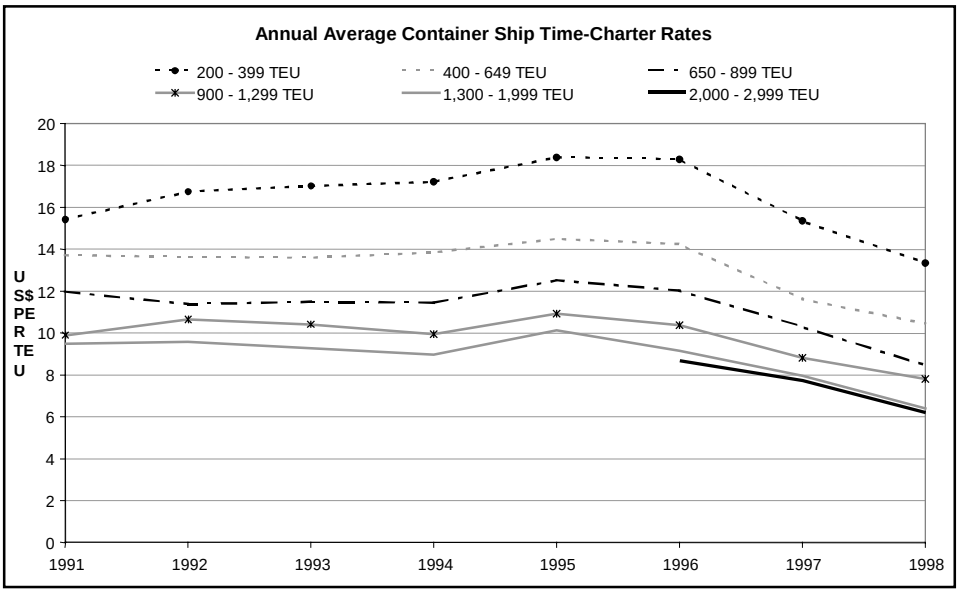
Freight rates in $US (average in markets) on major liner trade routes

	Trans Pacific		Trans Atlantic		Europe-Asia	
	Asia to USA	USA to Asia	USA to Europe	Europe to USA	Europe to Asia	Asia to Europe
1995 4q	1865	1473	1442	1349	1275	1455
1996 4q	1543	1384	1621	1311	1137	1281
1997 4q	1362	1182	1471	1288	1056	1155
1998 2q	1459	1015	1477	1210	869	1277
1998 4q	1614	842	1301	1188	807	1465
1999 2q	2018	871	1111	1045	723	1525
2000 2q	1953	852	1008	1148	829	1597
Change 95-00	+4.7%	-42.2%	-30.1%	-14.9%	-35.0%	+9.8%

Source: Containerisation International, various issues, 1996-2000

200. A further measure of the recent development of shipping services can be found in container vessel earnings. Container ship time charter rates can provide a useful indication of the movements in rates that may be charged to shippers. The emergence of surplus tonnage – as net fleet growth has outpaced even the rapid expansion of world trade in containerised cargoes - has resulted in stagnant or declining vessel earnings. For example, for ships of 2 000-2 999 TEU capacity it is estimated that average time-charter rates fell from US$8.70/TEU in 1996 to US$6.20 in first-half 1998 (see Graph III-2). This trend continued for the remainder of 1998, although it has since reversed. Declining vessel rates such as this generally indicate surplus capacity, strong competition, or both.

Graph III-2



Source: Maersk Broker.

201. More recent figures from a separate (and therefore perhaps not totally comparable) source, indicate charter rates for vessels between 2000-2999 TEU of around $US 7/TEU, perhaps indicating something of a recovery. Indeed anecdotal evidence is that charter rates have been increasing strongly in 2000, on the basis of strong demand for space.

Commentary

202. The range of services provided by carriers in the liner shipping trades has expanded significantly in the past decade. From the traditional port-to-port shipments, they have moved into multimodal transportation, and are moving into other/new organisational forms of carrier co-operation. Through the use of various technical, operational or commercial arrangements they have moved in consortia and more recently into the organisational form of strategic/global alliances (for more details, see Part I).

203. However, amid the mergers and consolidation that have taken place in the industry in the 1990s, widespread concerns have been expressed that the interests of small shippers might be compromised by the resulting emergence of mega-carriers. Some observers contend that some of these larger carriers, through their increased emphasis on round-the-world and hub-and-spoke routes, have reduced the range of port-to-port services available, to the detriment of small shippers on those routes.

204. Also, the available evidence seems to indicate that in a broadest sense the international shipping industry makes classic economic responses to changing circumstances. For example, when demand for cargo space increases then freight rates start to hedge higher. Because international routes are generally open, such higher rates (or increasing demand) attracts increased capacity from both conference and non-conference operators, which tends to dampen the extent of freight rate increases.

205. A similar picture emerges in instances where demand falls, which (as expected) leads to lower freight rates, until sufficient capacity has been removed to tighten up supply.

206. Neither of these instances are exceptional, and both more or less follow normal market responses to changes in demand and supply. What is not clear (because data for analysis is unavailable) is what the freight rates, and as a corollary the levels of service, might have been if liner shipping were completely open.

207. Also, a feature probably peculiar to transport is that generally there are inbound and outbound legs to any given trade, and real problems are created for service suppliers when the two legs move in different directions (as demonstrated in the case study at the end of this section). In those instances, while premium prices can be (and generally are) charged in the buoyant direction, the inevitable excess capacity on the back leg can create circumstances where freight rates can decline rapidly as shipowners attempt to capture as much of the going trade as possible. As shown in Table III-1, these differentials can be substantial. For example, the average rate for Asia to the US (the leg in demand) is more than twice the rate on the return leg, while in early 1996 it was only 1.1 times as much.

3. Bulk shipping freight rates

208. Much more than in the liner trades, bulk shipping freight rates are determined by the interaction of vessel demand and supply on an open market. Furthermore, much dry bulk and tanker trade is conducted on an ad-hoc basis, whereby a cargo owner charters a vessel for a single voyage. Rates for such shipments fluctuate significantly, according to various factors. These include:

- tonnage supply/demand conditions – both in overall terms and within respective size segments of the tanker and bulk carrier fleets;

- the availability of suitable tonnage in a given loading region, at a particular time;

- wars/embargoes/trade disputes/adverse weather/natural disasters;

- "market psychology," i.e. how shipowners and charterers *think* events may affect the market; as this will influence the rates that they seek or are prepared to pay;

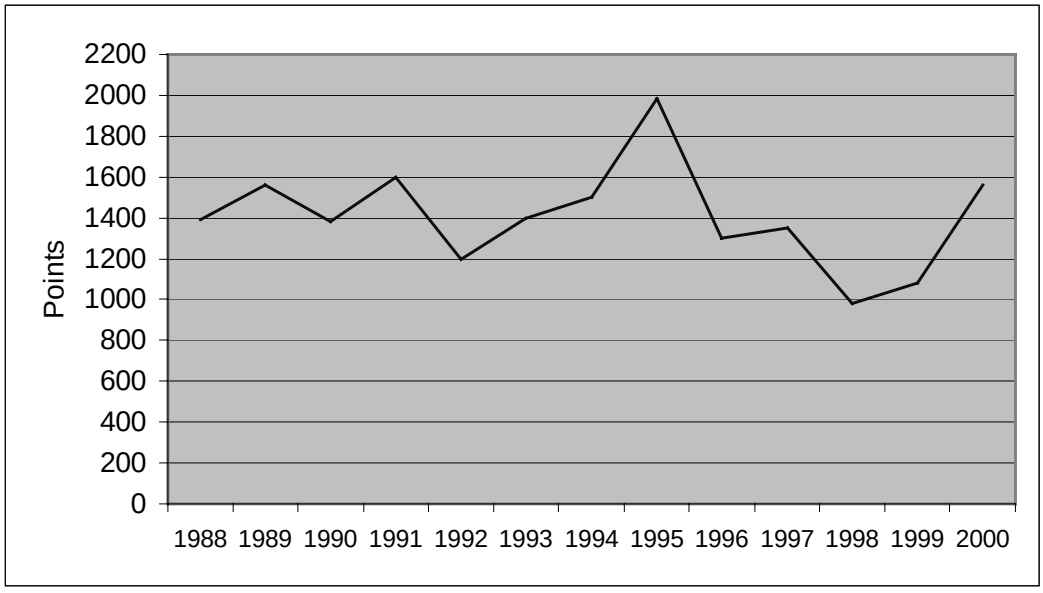
- disruptions to normal route patterns, e.g. the drought that reduced water depth in the Panama Canal in mid-1998, so restricting the size of vessel allowed to transit;

- changes in the vessel size preferred by charterers for certain trades. In the longer term, this can alter as a result of new port developments;

- legislative factors, if these make a particular size/type of ship less suitable for some trades.

209. During the past ten years dry bulk rates have continued their traditional volatility, (see the Baltic Freight Index, Graph III-3). Upturns in 1989,91 and 95 were followed by declines in 1990, 92 and 98. At the time of writing, the BFI was experiencing another cyclical increase from its lowest point since 1988.

Graph III-3.
Average Dry Bulk Freight Index - BFI 1988-2000

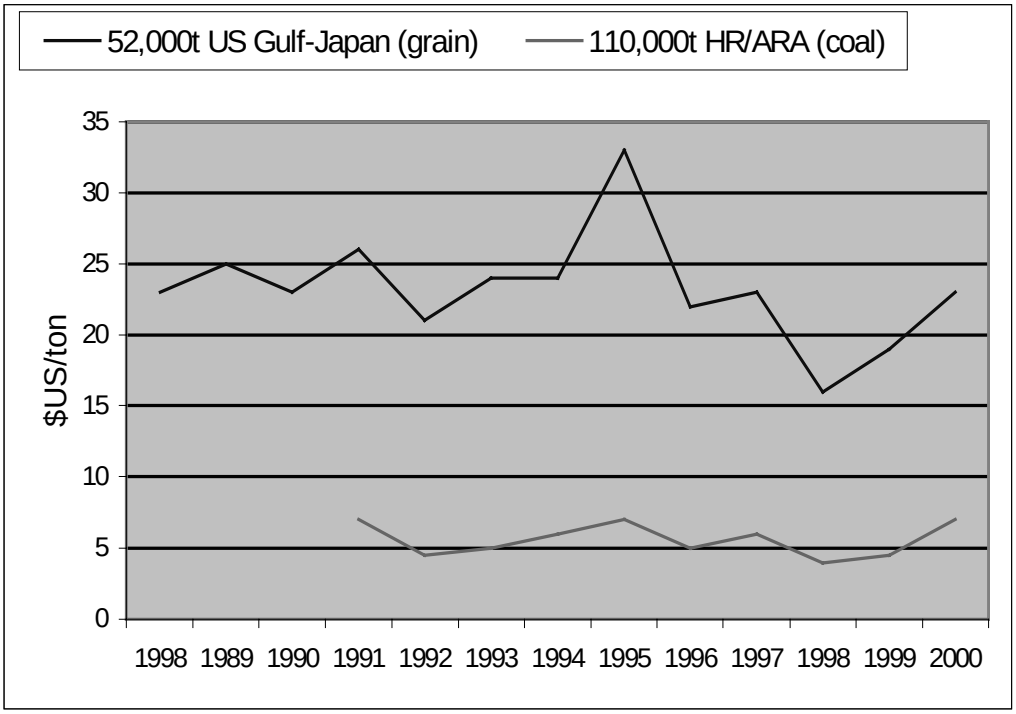


Source: Baltic Freight Index.
NB: Figures for 2000 are to end August.

210. For one of the world's staple grain trades, the US Gulf-Japan route, spot freight rates for benchmark 55 000-tonne cargoes have fluctuated substantially since 1988. Graph III-4 shows that monthly average rates have ranged from highs of US$37.19 per tonne in April 1995 to lows of US$13.13 in July 1998. Although much less volatile, there is a similar pattern in rates for 110,000-tonne coal cargoes from

Australia to the Netherlands, which have varied between a peak of US$9 in April 1995 to below US$3.00 in both mid 1998 and 1999. In line with other charter rates, both have shown a strong surge in 1999/2000.

Graph III-4
Average Dry Bulk Carrier Freight Rates 1988-200



Source: SSY Consultancy and Research Ltd.
NB: Figures for 2000 are for January to August.

Oil Trades 1988-2000

211. The principal features of international oil and tanker markets between 1988-97 were continued increases in world oil consumption, production and trade. Higher demand was principally due to industrial development in Asia and other non-OECD economies, while higher output came from the expansion of production capacity in both the OPEC states and various non-OPEC countries. Despite this growth in demand and output, mounting shortages became apparent for specific grades of crude oil and products, particularly in markets east of Suez. This led to the emergence of significant vessel employment on inter-regional "balancing trades," such as shipments of West African crude oils to Asia-Pacific destinations.

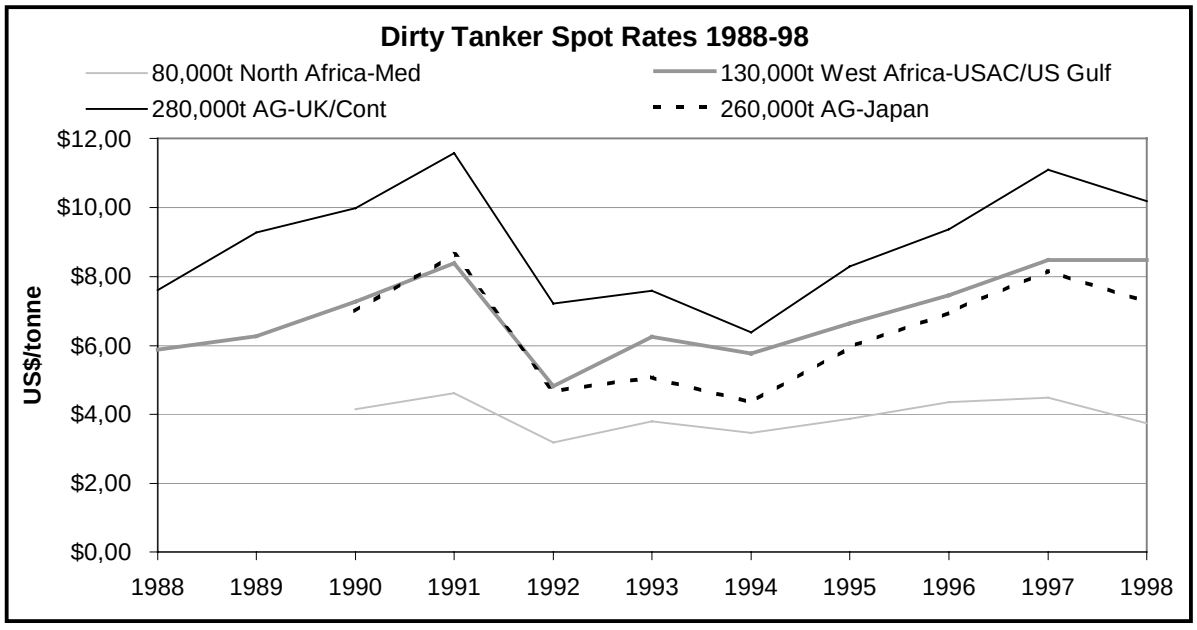
212. Fearnley's estimate that, from 1.37 Mt in 1988 (crude oil and refined products), seaborne oil trade volumes reached an estimated 1.83 Mt in 1997, or an overall increase of almost 34%. This was partly made possible by lower average oil prices than those that had prevailed between the 1973-74 "Energy Crisis" and 1986 – the inevitable result of gains in global oil output that exceeded even the rapid expansion of demand. In 1978-87 inclusive, as the world adjusted to sharply higher real oil prices, total seaborne oil trades had *contracted* at an average rate of 2.8% p.a.; during 1988-97, though, these *grew* by 3.6% p.a. Much of this was due to renewed expansion of crude oil trades, although volumes of refined products shipped also grew steadily for most of the period.

213. Since 1999, action by OPEC countries to regulate the production of crude oil has had the effect of sharply increasing its price, which rose from around $US10 per barrel in early 1999, to around $US30 a barrel in early-2001. The seaborne movements of oil, which totalled 29.9 in July 1999, rose and held firm above 31 mbpd throughout 2000, ending at a near-high of 33.1 mbpd in December 2000[13].

Tanker Freight Rates

214. After sustained depression between 1974-84, tanker freight rates rose in the second half of the 1980s as oil demand grew in response to lower prices. However, net additions to the fleet resulted in renewed declines in charter rates, apart from the dramatic increases resulting from the Gulf War. Once those effects passed, freight rates subsided, before rallying in the clean trades from 1992 onwards and for dirty tonnage after 1994. In the years 1988-98, annual average single voyage rates for 260 000-tonne *crude oil* shipments from the Arabian Gulf to Japan peaked at US$8.45/tonne in 1991, but subsequently fell as low as US$ 4.34/tonne in 1994 (see Graph III-5). For *clean product* shipments, spot rates for standard 30 000-tonne cargoes on the Caribbean-US Gulf route are traditionally very volatile. These varied between a high of US$21.76/tonne in early 1991 and a low of US$6.23/tonne in May 1992.

Graph III-5



Source: SSY Consultancy and Research Ltd.

215. Crude oil prices have trebled between early 1999 and mid 2000, and while freight rates have also increased, they have done so much more slowly. Recent figures from SSY Consultancy indicate that as a percentage of oil prices, freight rates fell sharply in mid 1999, and while they have recovered since, pro-rata they are still below 1998 levels. Whether this continues to remain true in the face of sharply higher charter rates remains to be seen.

13 . *Source:* The Drewry Monthly, February 2001

CASE STUDY

US to Germany Liner Freight Rates 1978-1988

In 1989 the US Federal Maritime Commission (FMC) conducted an investigation in the effects of the Shipping Act of 1984, which, while it introduced some changes, retained two fundamental features of the earlier 1916 Act, specifically:

i) the antitrust immunity of liner conference agreements, and

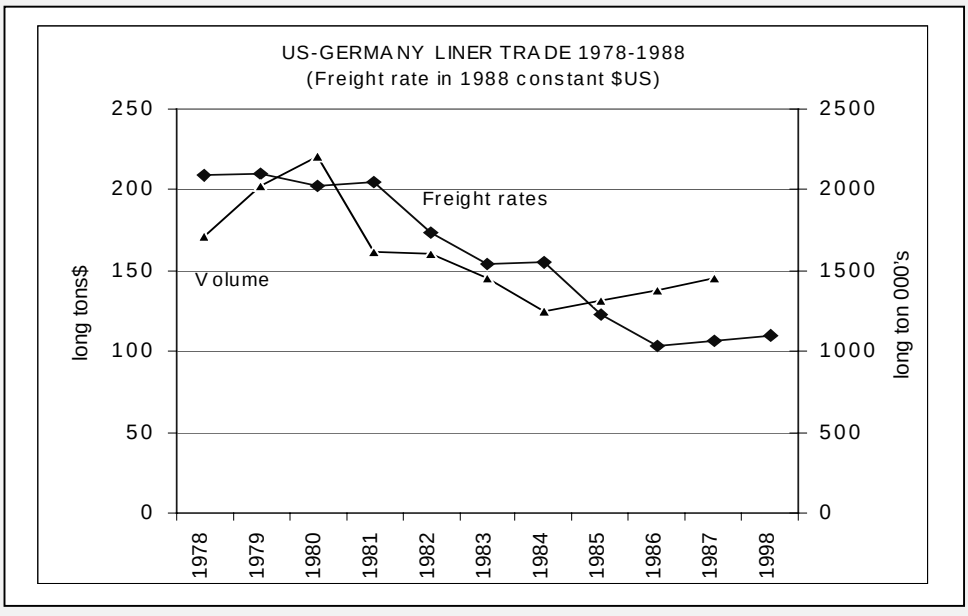
ii) the requirement that liner operators publish their tariffs with the FMC establishing rates and services and make the available to the public.

The FMC produced a substantial report which examined the impact of the 1984 Act on a range of US trades; including on liner freight rates. In its Executive Summary the FMC noted that the 1984 Act

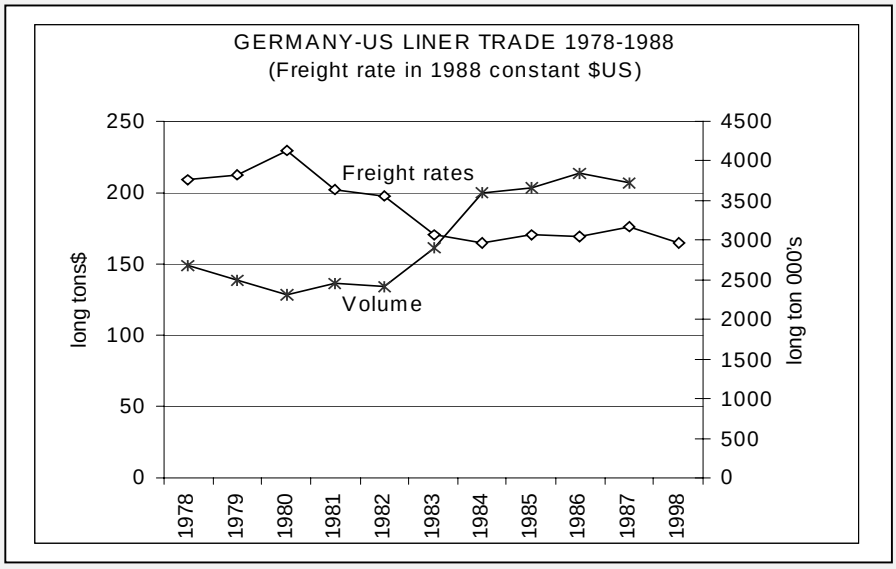
> *"…did not bring about the negative consequences that some observers predicted. The creation of 'superconferences' and the increases in rationalization agreements did not result in sharp rate increases, curtailment of shipping services, or loss of independent carrier competition. The 1984 Act did not have a significant impact on rate levels, service frequency and the strength of independent competition. The US trades remained open and competitive."*

Regardless of what these conclusions may say about the effect of conference immunity on competition and levels of service (at least as seen from a mid-1980s perspective), probably more illuminating are the conclusions that can be drawn from correlating data on liner freight rates with changes in trade patterns and developments in the provision of liner services.

Graph III-6



Graph III-7



Sources for graphs III-6 and III-7:
- Section 18, Report on the Shipping Act of 1984, US Federal Maritime Commission, 1989.
- Deflators for Water Transportation derived from US Treasury data.

Graphs III-6 and III-7 show the movements, in 1988 constant prices, of composite conference freight rates between the US and Germany for the period 1978 to 1988. The first point to note is that both the eastbound and westbound rates were almost identical in 1978, and their movements more or less mirrored each other until around 1982.

In real terms, rates in both directions generally declined during this period. This was attributed to an economic slowdown in the US which flattened demand for imports from Europe and reduced demand for freight services. This effect was heightened by increasing competition on the route, principally from independent operators. The FMC estimated that conference slot utilisation rates fell by approximately 13% between 1977 and 1982. As a consequence, falling demand for liner services, combined with increasing capacity, led to over-tonnaging on the route.

In real terms, westbound rates increased briefly in the late 1970s, but then commenced a steady decline. Eastbound rates barely managed to keep place with inflation, until they also commenced a protracted decline.

The point of divergence between the two rates occurred in 1984, when westbound rates staged a minor, but sustained recovery, but eastbound rates continued their sharp fall.

There were two principal reasons for this divergence. First, the US economy started picking up again in 1983, and grew at a higher rate than that of Germany or other European countries. Also, exchange rates, which had resulted in the US dollar edging lower against major currencies in the late 70s turned around and its value rose sharply. By 1984 the US dollar was at its highest level since 1972. The combined effect of these developments was that US imports from Germany rose sharply, while US exports to Germany fell, and remained generally flat throughout the period (see graphs).

The growth in westbound trade encouraged both conference and non-conference operators to substantially increase their capacity. The FMC estimated that in 1984 westbound slot utilisation by conferences was around 92%. However, this high utilisation rate did not translate into substantially higher freight rates, and in real terms these remained flat throughout the period.

However, the lower activity eastbound meant that there was considerable over capacity on the route, as vessels were in place essentially to service the much higher westbound activity. The result was strong competition for limited cargo, and the eastbound conference rates experienced protracted and substantial falls.

While figures for non-conference lines are not available, they are generally lower than those of conferences, and these would almost certainly have shown similar trends. In its commentary the FMC noted that as independents cut prices to maintain cargo volumes, conference rates also fell, and this eventually led to both conference and non-conference operators to leave the trade.

This case study is a clear instance which demonstrates that where there is freedom of entry for both conference and non-conference operators, even strong trade growth and high slot utilisation rates do not necessarily mean unrestrained freight rate increases. Conversely, and more significantly, in instances where commensurate backloading cargoes are not available, then the excessive capacity and unrestrained competition that this situation engenders can create the equivalent of a freight rate free-fall.

IV. MARITIME SAFETY AND THE ENVIRONMENT

1. Introduction

216. This section examines safety requirements for both ships and their crews, and the measures in place to enforce these requirements. It also attempts, in very broad terms, to assess the cost of safety.

217. The regulatory framework which affects safety and environmental protection was outlined in Section II. Annex C covers these regulations in greater detail, while Annex D contains a complete list of the major safety and environmental regulations made at the International Maritime Organization (IMO).

2. Environmental protection

218. In particular since the early 1970s, various international conventions formulated by the IMO dealing with ship safety, pollution prevention and oil spill response systems have been introduced as law in individual OECD Member as well as many non-member countries.

219. Much of this legislation has been based on the principles embodied within the SOLAS 74 Convention (which also includes the International Safety Management (ISM) Code) as well as MARPOL 73/78 and its subsequent technical annexes. In some cases, these standards have been supplemented by additional measures. Overall these regulations (which are outlined in more detail in Annexes C and D) have contributed substantially to increased environmental protection and safety.

220. Also, in both the dry cargo and tanker trades, the enacted regulations have been accompanied by various initiatives from within the shipping industry itself. Some of these have come from the ship classification societies.[14] These have included:

- enhanced vessel survey requirements for tankers and dry bulk carriers; these were first implemented from July 1993 for the former, and from July 1995 onwards for the latter;[15]
- codes of practice governing dry bulk cargo loading and discharge.[16]

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14 Ship classification societies are the organisations responsible for surveying vessels as they are being built and at regular intervals after they enter service. Each society devises a set of standards with which the ship must comply, these governing the structure of the vessel and the equipment aboard. Failure to comply with these requirements results in "class" being withdrawn; any ship that lacks classification is unlikely to obtain insurance or to be acceptable to most charterers and shippers.

15 An *accelerated* program of enhanced surveys for large dry bulk carriers greater than 10 years old subsequently took effect from 1 July 1997.

16 From 1 July 1998, it became mandatory under SOLAS that: a) the cargo loading and discharge plans of a dry bulk carrier should be lodged with the appropriate port state authority; b) the ship's master and a representative from the terminal should ensure compliance with that plan.

221. Other developments have originated from cargo-owners, with the international oil companies introducing their own vetting programs to ascertain the quality of the tanker tonnage chartered. Thus, changes in the performance of these vessel types in terms of ship safety and environmental protection have resulted partly from such developments, rather than being due solely to legislative factors.

222. In general, most OECD Member countries have followed a global approach to pollution liability, rather than piecemeal regional agreements. The one notable exception to this has been the United States, which is not a signatory to either the IMO's "Civil Liability Convention" or "Fund Convention".

3. The cost of safety

223. The regulations that apply to ships trading internationally are extensive, pervasive and generally very onerous, and impose substantial costs on shipowners and operators. As with all regulations associated with safety and environmental protection, the standards are high, and are in place because of a perceived view that the market would respond inadequately and unevenly if left to find its own solution.

224. Whether these standards are all economically justifiable is very difficult to ascertain, especially when it involves human life, potentially massive environmental hazards, and large property losses. Those standards (and from them international and national regulations) that are in place are there because the international community at the IMO has judged that they are necessary, and that the public benefit exceeds their cost.

225. It is not the role of this document to challenge that judgement. However, because of the pervasive nature of these regulations it is worthwhile examining some elements in order to at least test, at the broadest level, the cost and impact of these regulatory requirements.

226. The OECD's report "Competitive Advantages Obtained by some Shipowners as a Result of Non-Observance of Applicable International Rules and Standards" [OCDE/GD(96)4] released in 1996, compared the costs incurred by running vessels at different operating levels.

227. For one of the reference vessels (a 1990 product tanker of 40 000 dwt) the report identified the following operating indicative costs (in $US per day):

- Good Practice $US 4 850
- Common Practice $US 4 250
- Standard $US 3 750
- Floor $US 3 100

228. The "Standard" level represents the minimum expenditure that ensures compliance with basic safety standards. The "Floor" level represents a level of operation which is below standard, and continued operation at this level would depend on the vessel *not* being detected by regulatory authorities. It by no means describes the absolute lowest level of operation, where vessels may have serious structural and equipment defects, and whose crew may be totally inadequate. In such circumstances the cost of operation may be well below $US 3 100 per day (but with commensurate higher risks of detection by authorities).

229. While based on industry experience, these figures are indicative only. However, presuming that the "Floor" level represents a notional commercial trade-off between safety standards and cost, they suggest that minimum application of safety requirements (that is, to bring the vessel up to "Standard") imposes a cost burden of around 15% on those shipowners. This would be equivalent to around $US 237 000 a year for that vessel.

230. If these average costs were to be translated to the entire world fleet, of around 19 000 vessels, then the cost of maintaining those minimum standards could be around $US 4 billion per year. Adding national regulations, especially large scale items such as the US OP90 double hull requirements for tankers, would add substantially to that total. This figure is not intended to be a precise quantification of the overall cost of maritime safety, but simply to illustrate the order of magnitude, and to emphasise that that it would be a very large figure, however calculated.

231. Put in a different perspective, this yearly figure also represents the potential advantage available to a shipowner who fails to observe those minimum standards, which is the reason why the international community, having initially made the judgement that such cost burdens are socially acceptable, also had to put in place verifying procedures to ensure that those standards were met.

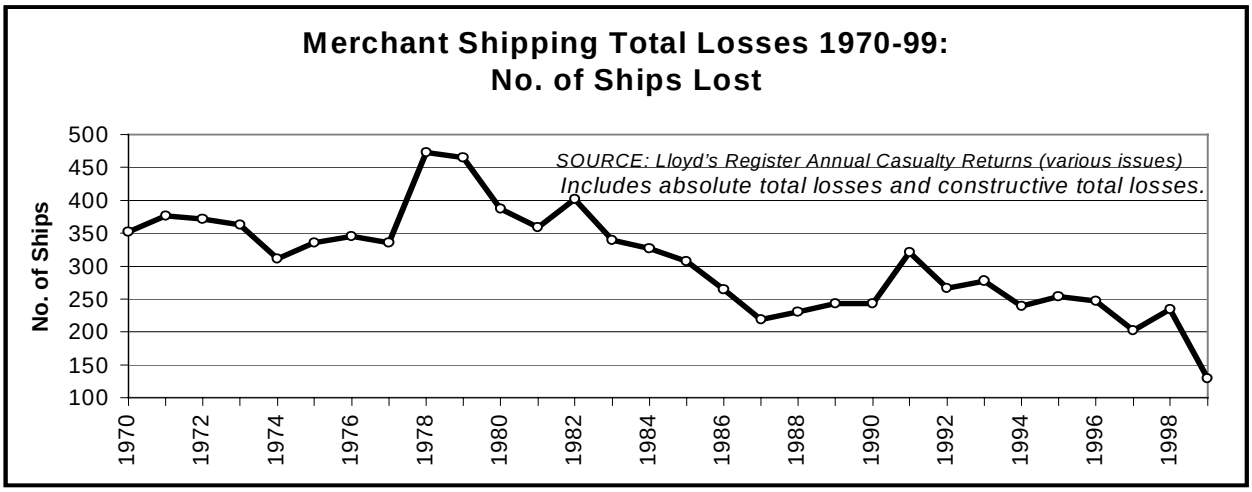
4. The cost of not maintaining safety

232. While there is clearly a very large cost associated with maintaining safety at even minimum levels, the other side of the coin is that there are even greater costs in ***not*** maintaining safety. In this case, the cost is measured in lost vessels, lost lives, and in the case of some cargoes (especially oil) massive environmental damage and economic loss.

4.1. Vessel casualties

233. Statistics for the overall number of vessel total losses by year show a downward trend since the late 1970s (see Graph IV-1). Based on all merchant ship types, figures from Lloyd's Register of Shipping indicate a general reduction in the number of ships lost (absolute total losses and constructive total losses) on average from 373 vessels p.a. in the 1970s to 308 p.a. in the 1980s and 242 p.a. in 1990-99 inclusive. In fact, the preliminary figure for 1999 (129 total losses) was lower than for any year from 1970 onwards and apart from a blip in 1989 represented a seventh successive annual decline since 1991.

Graph No. IV-1



234. In terms of ship safety, tankers now pose a more limited threat than in the 1970s.For example, most ships built since the early 1980s are equipped with "inert gas systems" that prevent the build up of explosive vapours in cargo tanks. This and other safety measures are directly attributable to the enactment of regulations corresponding to standards specified under the SOLAS Protocol. The "enhanced survey" requirements that tankers have been subjected to in recent years have also contributed to an improved ship safety record. The average number of tanker losses has fallen in recent years, from a yearly average of 20 ships between 1989-94 to 15 between 1995-99.

235. The decline of dry bulk carriers losses has been far more modest (see Table IV-1). For the period 1989-1994 average annual losses stood at 21 vessels, compared to 19 for the period 1995-1999. For dry bulk cargoes, iron ore has been the commodity carried by many of the vessels that have undergone serious casualty in recent years. Figures from Intercargo (these do not equate precisely to those shown in Table IV-1 as they are drawn from different sources and may use different definitions) show that of 106 bulk carrier total losses that occurred in the period 1990-97 inclusive, 31 were vessels that sank or disappeared without trace, apparently due to total structural failure. Of these, 16 ships were laden with iron ore.

Table IV-1
Dry Bulk Carrier Total Losses 1989-98

	Ships Lost	Seafarers Fatalities		Ships Lost	Seafarers Fatalities
1989	14	66.	1995	19	87
1990	25	94	1996	23	78
1991	27	154	1997	15	82
1992	23	28	1998	26	111
1993	15	41	1999	12	1
1994	22	163			

NB: Data include actual *and* constructive total losses.
Source: Lloyds World Casualty Statistics (various issues)

236. The high risk associated with high-density dry bulk cargoes has been acknowledged by ship classification societies, port operators and vessel owners, and has led to changes in loading practices. Each ship now has a loading plan that must be strictly adhered to, and entails that only a certain quantity of cargo is placed in each hold on each pass of the loading gear. This helps to guard against excessive stresses on the vessel's hull, thereby reducing the prospect of structural failure. These changes in operational practices account for some of the improvement in bulk carrier safety since the early 1990s. Ship safety has also been enhanced by the introduction in 1997 of more rigorous inspection programs for the cargo holds of existing dry bulk carriers of 10 years old and above, of 150 metres length or greater.[17]

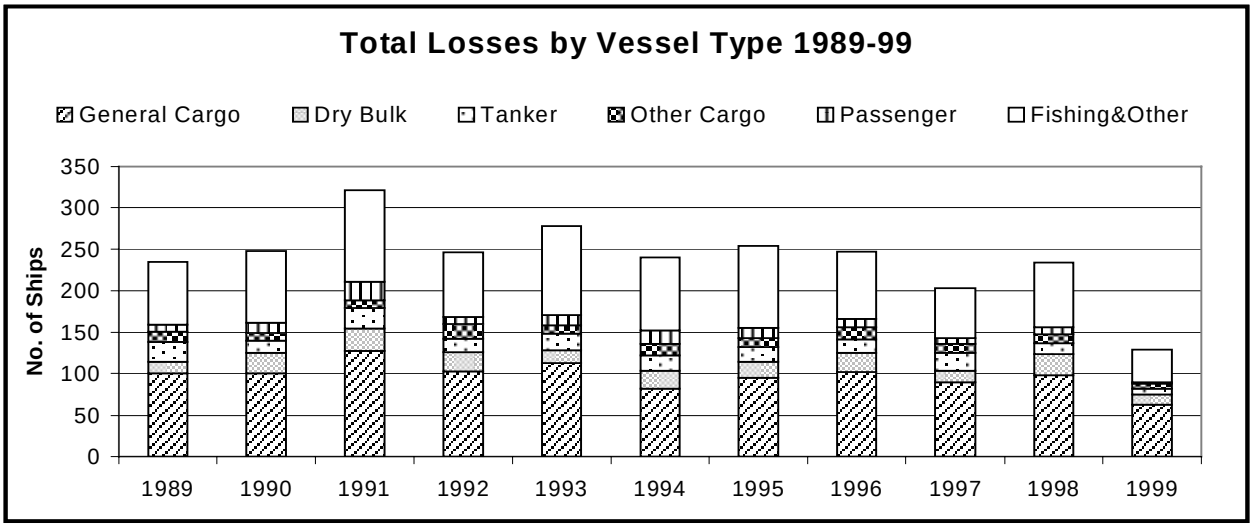
237. In the late 1990s, serious concerns again emerged regarding the casualty record of the dry bulk carrier fleet, as further ship losses have taken place despite the inception of more rigorous ship inspection programs. Given the existing correlation between casualties and the age of vessels and the large volumes of older tonnage still active in dry cargo trades, it is therefore widely hoped that the increase in bulk carrier demolition seen in 1998 to date continues, and eventually mitigates this problem.

[17] These requirements apply to vessels classed by IACS members. (IACS is the International Association of Classification Societies and its members classify most of the world merchant fleet).

238. In liner trades, increased vessel safety has reflected the trend towards greater containerisation of cargoes. Cellular container vessels, which need a high degree of reliability in order to meet fixed schedules, are constructed to a high standard, and incorporate the latest safety features. They are infrequently detained, and are rarely involved in serious incidents. The same cannot be said about the large number of general cargo ships which are still in operation. Many are old, and their design and maintenance are not always of the highest order, and therefore tend to be heavily represented in vessel loss statistics.

239. In the period 1989-99 inclusive (see Graph IV-2), 2661 vessel were lost (including passenger ships). Of these, around 40% involved general cargo ships – some of which would have operated in the liner trades. Losses were also high for fishing and other miscellaneous vessel types (34%), but somewhat lower for dry bulk carriers (8%) and tankers (7%). Losses of other cargo vessels stood at 5%, although container vessels contributed to less than 1% of the total.

Graph IV-2



Source: Lloyds World Casualty Statistics (various editions)
Figures include actual and constructive total losses

240. The loss of these vessels and their related cargoes would involve substantial cost. In 2000, the average replacement cost of a 140 000 dwt Suezmax carrier was $US 51m, a Capesize bulk carrier (155 000 dwt) $US 38m and a 3 500 TEU container vessel $US 41m[18]. Even at an average residual value of $US 20 million per vessel, each 100 vessels lost would imply a loss of around $US 2 billion. The loss of their cargo would add substantially to that figure, but there is no ready way of estimating that amount.

4.2. Seafarer fatalities

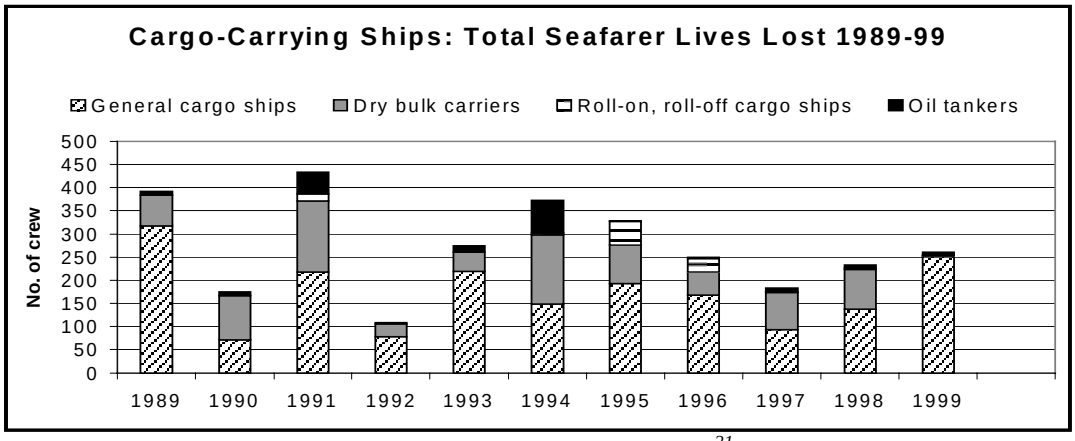
241. Of course, when vessels are lost, the overall cost is more than just the ship and its cargo, but much more tragically crews are also frequently lost. Graph IV-3 records seafarer lives lost between 1989

[18] Source: Clarkson World Shipyard Monitor, September 2000

and 1999 in cargo carrying ships.[19] While there is no discernible pattern in the number of lives lost at sea since 1989[20], according to Lloyd's Register data there were 2 985 fatalities during this period, of which 63% (1 984) took place on general cargo ships, while a further 27% (833) involved seamen serving on dry bulk carriers. In contrast, lives lost on oil tankers and "roll-on, roll-off" cargo vessels were more limited, accounting for only 6% and 4% respectively of the total in this period.

242. In recognition that the loss of life is a tragedy in itself, no effort is made here to convert the loss of these seafarers into a dollar amount, even though shadow pricing and other techniques are available for this purpose. However, if this exercise were to be attempted, there is no doubt that this would be a very substantial amount.

Graph IV-3



Source: Lloyd's Casualty Statistics (various editions)[21]]

4.3 Environmental costs

243. In terms of measurable costs, those associated with environmental damage resulting from the spillage of certain cargoes, particularly oil, are clearly the most significant.

244. Amongst those costs would be items which are readily measurable (such as lost aquaculture production and lost tourism revenue), and those which can only be estimated (such as environmental and ecological damage). While there have been a number of studies on the costs associated with individual incidents, to our knowledge there has not been a global estimate of cost attributable to spills from ships of oil or other noxious and hazardous substances. However, by way of example, the Fairplay shipping magazine of 25 March 1999 reported that according to the Oil Spill Intelligence Report of Arlington, the eventual cost to Exxon of the grounding of the *Exxon Valdez* in 1989 could total $US 9.6 billion.

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19 These are taken to be oil tankers, dry bulk carriers, general cargo ships and "roll-on, roll-off" cargo vessels. The data do *not* cover passenger or passenger/cargo vessels.

20 No comparable data are available for earlier years.

21 . Please note that in 1999 Lloyd's Casualty Statistics adopted a new reporting format for lives lost, going back to 1994. Therefore, 1994 marks a break of continuity and figures since then may not be strictly comparable to those for earlier years.

245. This amount would be made up of:

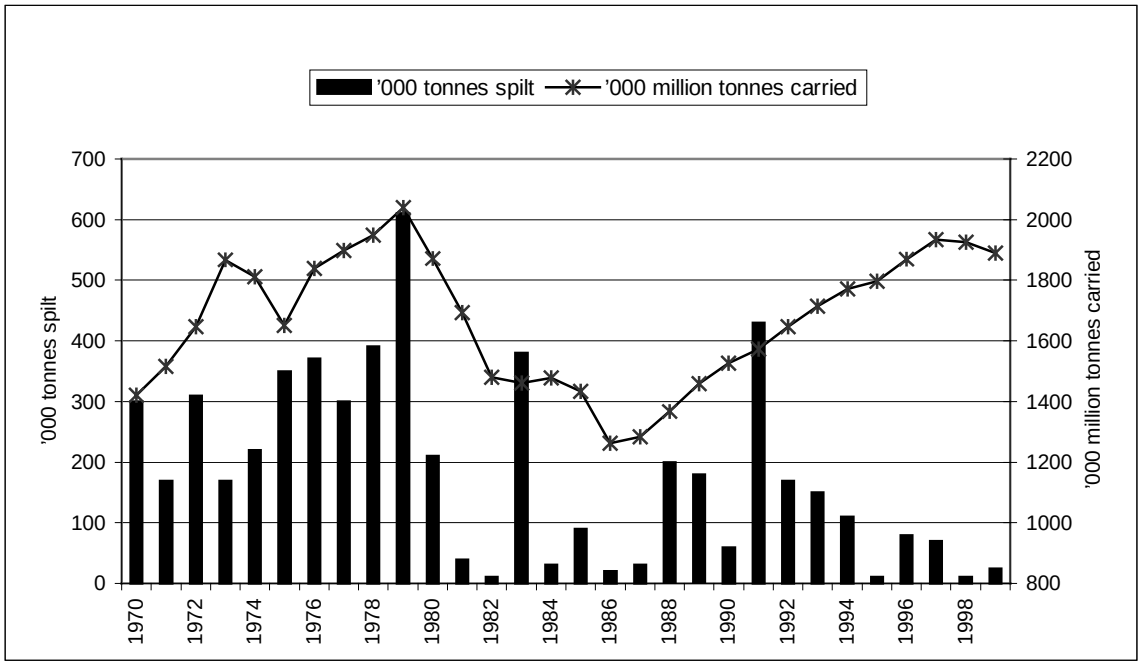
- $2.5 billion, clean up of physical aftermath
- $135 million, repayment of US federal expenditure
- $205 million, replacing wildlife habitats and natural resources
- $1 billion, settlement of federal/state damages and a claim by a pipeline services company
- $25 million, fines and penalties
- $5.6 billion, settlement of private damages claims (still within the US judicial system).

246. This is not to suggest that all oil spills would generate costs (especially compensation claims) of this magnitude, even though the 37 000 tonnes of oil spilt by the *Exxon Valdez* places it only as the 40th largest oil spill from ships. However, it does serve to emphasise that these costs, especially when oil affects environmentally sensitive areas, or those that sustain tourist and/or aquaculture industries, can be very large.

247. While the risk of oil and other spills will probably never disappear, it may be diminishing. As Graph IV-4 shows, for many years the quantity of oil spilt from ships was strongly correlated to the quantity of oil carried by ships (apart from a couple of abnormal years). The change in this trend occurred in the late 1980s, when oil spillages began to decline, despite the quantity of oil consumed increasing.

Graph IV-4

Marine Pollution: Volume of Oil Carried and Spilt from Ships 1970-1999



Source: - International Tanker Owners' Pollution Forum.
- OECD Maritime Transport Committee Annual Report.

248. Since the early 1990s, there has been a decline in the volumes of cargo spilt from oil-carrying ships, from an average 0.21 Mt p.a. in 1988-92 to 0.08 Mt p.a. in the period 1993 to 1999. Overall, the conclusion to be drawn is that, since 1980, the record has been improving, except for the occasional bad year which can be ascribed to individual major spills, which are probably impossible to prevent.

249. The interesting feature of the time series in Graph IV-4 is that, while for many years there was a strong correlation between oil carried by sea, and the quantity of oil spilt from ships, this trend was broken in the mid to late 1980s, when despite increasing trade in oil, the quantity of oil spilt has steadily declined. As a consequence of this trend, the proportion of oil spilt to that carried has also plummeted. Whereas in 1979, the very worst year for oil spills, nearly 0.3% of all oil carried was spilt, this proportion had dropped to a mere 0.0005%t by 1998. While this does not of itself remove the problems associated with individual oil spills, at least the trends are headed in the right direction.

250. This trend reversal coincides with a number of significant events that positively affected ship safety and environmental protection:

- greater public attention has been focussed on the effects of marine pollution (the *Exxon Valdez* was grounded in 1989), and the IMO began taking a much more active and effective role in ship safety and the environment;
- port state control became much more active (the Paris Memorandum dates back to 1982, the Tokyo Memorandum came into being in 1993); and
- some strict national legislation (such as the US Oil Pollution Act 1990) came into force.

251. It should also be acknowledged that tanker accidents are only one source of oil pollution. The International Tanker Owners Pollution Forum (ITOPF) estimates that in 1997 over 2.4 million tonnes of oil was discharged into the rivers, harbours, bays and the open sea. By far the largest source of this oil pollution was industrial waste (61% by volume), with the remainder coming from vessel accidents and tanker operations, i.e. the tank cleaning activities of older ships.

252. Continued high levels of operational pollution from tankers, even in the 1990s, can also be ascribed to:

- inadequate reception facilities for oily wastes from older ships at tanker ports;
- the failure of various major oil exporter nations outside the OECD to sign the IMO International Convention for Prevention of Pollution from Ships (MARPOL) and enact its terms, which would bar less environmentally-friendly ship designs from calling at their ports.

253. Longer-term data from ITOPF show that the number of spills fell from an average 77 p.a. in the 1970s to 37 p.a. in the 1990s to date. Moreover, there has been a particularly notable decline in *larger* spills (defined by ITOPF as those exceeding 700 tonnes); these fell from an average of 24 incidents p.a. in the 1970s to around 7 per year in 1990-99 inclusive.

254. However, the ITOPF statistics are not sub-divided according to flag; hence, it is unclear how much of this pollution came from ships registered under OECD or other flags. This, in turn, makes it impossible to judge the extent to which these overall improvements in the volumes of oil spilt have been due to the regulations implemented by OECD Member and non-Member countries.

Table IV-2
Maritime Pollution: Oil Spills by Year, 1988-99

	7-700t No.	> 700t No.	Quantity '000 Tonnes		7-700t No.	> 700t No.	Quantity '000 Tonnes
1988	11	10	198	1994	27	7	105
1989	32	13	178	1995	21	2	9
1990	50	13	61	1996	20	3	79
1991	27	8	435	1997	27	10	67
1992	31	9	162	1998	22	4	10
1993	30	11	144	1999	19	5	24

Note: The data excludes oil spills smaller than 7 tonnes. Data are for accidental oil spills from crude oil tankers, product tankers, combined carriers and barges.
Source: International Tanker Owners' Pollution Forum.

4.4. Non-oil pollution

255. No comparable published data are available for pollution caused by other liquid bulk commodities, such as chemicals, to enable trends to be ascertained.

5. Summary

256. This section covers the cost, and to some degree the benefits, associated with maritime safety and environmental protection requirements placed on vessels that trade internationally. These requirements are substantial, and quite clearly place heavy demands on shipowners and operators, but as shown in the analysis they have also greatly improved vessel safety and reduced the loss of life and environmental damage.

257. Maritime incidents can generate very large social and direct costs, through the loss of vessels, their cargoes and the lives of the seafarers. There have also been massive costs associated with environmental pollution and loss of production from the spillage of hazardous cargoes, principally oil. In overall terms these far outweigh the costs imposed on shipowners by minimum safety standards.

258. While continuing efforts need to be made to enhance ship safety it is not suggested that the risks associated with sea transport can ever be totally removed, or that by simply adding to safety regulations there will always be commensurate improvements in safety. However, the trends in Graphs IV-1, IV-2, and IV-4 strongly indicate that as safety awareness, regulation and enforcement has increased, then vessel and seafarer losses, as well as spillages of oil, have all contracted.

259. There appears to be a clear correlation between the existence and enforcement of regulations regarding safety standards. Conventional wisdom is that there probably exist sufficient regulations to ensure reasonable levels of ship safety, provided that these are effectively and consistently enforced around the world. This is not yet the case, and as well as further tightening regulatory requirements the IMO, as well as flag and port states, need to dramatically improve the level of enforcement. In doing this, the IMO and national administrations must also ensure that the cost of new regulations would be at least matched by expected direct and social benefits.

V. OPPORTUNITIES FOR REFORM

260. This section brings together the information and analysis in the previous chapters in a effort to assess in which areas of the maritime transport sector may there may be opportunities for reform. It should be recognised that, except for the blanket exceptions for conference activities, the international maritime sector is relatively lightly regulated. Anti-trust and competition policy regulations, which have a substantial impact on the maritime sector, will be the subject of a separate report.

261. The report clearly identifies that there are two quite distinct types of regulations that affect the maritime industry. The first type are those that deal with safety and environmental protection. The second type are those that deal with commercial operations and practices. Because their origin, operation and effect are so different, they are dealt with separately in this chapter.

1. Safety and environmental regulations

262. Part IV of this paper estimated that the cost of meeting the minimum safety requirements could cost the industry somewhere in the vicinity of $US4 billion per year, more if national regulations (such as the US double hull requirements for tankers) are taken into account.

263. However, even more significant are the potential costs associated with the loss of ships, in terms of the vessels themselves, their cargoes and the loss of life. With some cargoes (such as oil) there are associated environmental damage and potential economic losses. The analysis in Part IV suggested that, however large the cost of safety may be, the costs associated with ship losses are be much greater.

264. It is not suggested that ship losses can ever be totally eliminated, regardless of how many regulations are put in place, or how effectively they are enforced. However, there is clear evidence that stronger and more stringently enforced safety regulations have reduced both ship losses and consequent costs (both direct and social). Figures in Part IV indicate a steady, and substantial decline in ship losses, seafarer fatalities and oil spills as these new regulations have come into force and their implementation have been intensified by both flag and port states.

1.1. Possible reform activities

265. Safety and environmental regulations affecting shipping are strongly underpinned by decision of the international community, principally working through the International Maritime Organization, to develop standards, and then giving effect to these through national regulations. In taking these decisions the international community needs to judge whether the social benefits resulting from these standards and regulations exceed the immediate costs to the providers and users of shipping.

266. The reason for this is that while there is a clear relationship between effective safety regulations, and the incidence of vessel damage/loss, it does not necessarily follow that simply adding to these regulations will always be matched by commensurate increases in safety, especially if existing regulations are not implemented as effectively and consistently as they could be.

267. Because safety, lives and the environment are involved, such differentiation can sometimes be difficult, but that does not mean that proposals for new regulations should not be closely scrutinised to ensure they will achieve their intended aim, or that existing regulations should not also be scrutinised to ensure that there are no unintended negative effects.

268. Given the profusion of regulations introduced in recent years it would be constructive to evaluate the operational aspects of these requirements to ensure that they are working as intended, and that their enforcement is as effective as it could be.

269. Also, it may worthwhile exploring some alternative ways of dealing with maritime safety in recognition that more regulation is not the only response available to deal with safety and environmental concerns. For example, the following approaches, which are not mutually exclusive, could be considered as alternative courses of action:

a) Adopt a Formal Safety Assessment as an alternative to prescriptive regulation. This is an attempt to take a holistic view of the risks associated with the operation of a particular vessel. Although it has proved superior to traditional rule-making in other fields, and would have real advantages in terms of flexibility for shipowners, it would pose new problems for port state control authorities wishing to maintain tight control over visiting vessels. The subject is under active consideration at IMO.

b) Make changes in the institutional framework for safety regulation. A radical idea is the creation, by international agreement, of new powers for IMO to intervene directly with Member States who fail to live up to their treaty obligations (in the same way that ICAO can enforce aviation regulations). A range of possibilities exists, from enabling IMO to maintain a universal ship data base to authorising the Organization to "license" national ship registers. Ideas have also been floated concerning the future status of classification societies, following the strengthening of IACS and the involvement of societies in the issuing of ISM certificates.

c) Create new mechanisms within the shipping industry for self-regulation, to ensure that all players -- including brokers, insurers, financiers and cargo generators -- work together to raise standards, thus gradually eliminating the need for heavy regulation by governments. A number of approaches have already been identified, and are being pursued by the OECD, but these are seen as complementary to, rather than potential replacements for, the formal regulatory system.

2. Regulations affecting commercial operations and practices

270. While safety and environmental regulations can point to a strong rationale based on reducing the risk (and hence the eventual cost) of serious incidents involving vessels, this category of regulations is based on more abstract considerations.

271. These include administrative regulation of shipping services, regulations to foster national interests (such as preferences for national flags), and the application of national competition policy or anti-trust legislation.

272. While individual regulations would be justified by those who impose them as being necessary to meet a variety of objectives, there can be no doubt that they generally act to disturb the market, and to create circumstances where outcomes are determined by policy makers rather than by market forces.

273. Experience in other sectors of the economy is that reform of regulatory measures generally delivers better services, more efficiently and at better prices, even though there may be casualties amongst the ranks of the least efficient providers.

274. On the other hand, it must also be recognised that not all sectors are equal, and that certain circumstances may exist which may require the judicious application of appropriate and well targeted regulations. An example of this may well be the extensive exemptions from competition policy which are accorded to liner conference operations. However, in parallel with the comment made under the safety regulations, all regulations should be regularly and carefully scrutinised to ensure that they do not inadvertently and unnecessarily impact negatively on the sector.

2.1. Existing OECD instruments

275. These instruments were described in some detail in Part II, and consist of the:

- Code of Liberalisation of Current Invisible Operations.
- OECD Common Shipping Principles.
- Understanding on Shipping Principles (in place with the NIS/CEECs, and a number of the DNMEs).

276. These are strictly not regulations, but rather they are principles intended to preserve and foster competition in international shipping. By subscribing collectively to these principles OECD members undertake to avoid introducing restrictions on the provision of, and access to, maritime transport services.

277. In other words, the net effect of these instruments is to avoid restrictive practices (including regulations) in maritime transport activities. While these instruments are not impervious (there are some reservations by OECD members) they are generally adhered to closely, and have clearly shaped both the activities amongst OECD members, and their dealings with non-OECD members.

278. It is suggested that there is little scope to modify these instruments; indeed if anything their review has taken the direction of extending their coverage in order to widen the application of liberalising principles to areas not already covered.

279. However, there is scope for the US to review its position vis-à-vis Note 1 to CLIO. It is suggested that at least a rationalisation of the present situation through conversion of the US non-acceptance of Note 1 to a formal reservation or reservations should be sought. Such modification of the third sentence to Note 1 would clearly signal the preparedness of the US to fully liberalise at an appropriate time, as well as indicating a commitment not to implement further restrictive measures without the acceptance of other countries parties to CLIO.

2.2. Bilateral cargo access regulations

280. Access to international shipping markets within the OECD area shows a very high degree of liberalisation. It has to be recalled that restrictions on cargo access in international maritime currently exist only in two Member countries, and the extent of their cargo reservation is very limited.

281. Further, while a number of OECD members are also parties to the UN Liner Code, because of the application of the Brussels package (see Part I– Liner Shipping Sector) it applies only in a very small number of instances, and for all intents and purposes the Liner Code, and especially its cargo reservation provisions, is of minimal relevance (even if of important political value to some developing countries).

282. Strictly speaking, all regulations which act to restrict the free access to cargoes, or which prevent shippers from choosing their preferred shipping service, can be considered as inherently market distorting and ideally should be removed by those countries which have them in place.

283. In practice, given the fairly limited number of these restrictions and their minimal distortion of international maritime transport, as well as the substantive political support these measures attract (especially in the US Congress in respect of US measures) it may well be that liberalisation in this area may not be worth the effort it would take to roll back existing measures.

284. Also, the winding back or amendment of the UN Liner Code would require a major effort at the UN Conference of Trade and Development (UNCTAD) which may open up difficult political North-South discussions, and may create serious divisions between developed and developing countries, for what in the end may have a very limited effect.

285. Some additional considerations relevant to this item are also included in the assessment of the next item on cabotage.

2.3. Cabotage

286. Cabotage is widely practised, both by OECD and non-OECD members, and is generally considered, but never demonstrated, to be crucial to ensure the maintenance of domestic transport capability, as well as acting as an inhibitor to foreign influence in domestic transport services.

287. Therefore, liberalisation of cabotage trades in OECD member countries has not progressed to the same extent as liberalisation in international maritime trade. As is discussed in Part II (Regulatory Framework) cabotage regulations are still maintained in the United States, Japan, Korea, Turkey, Canada and Australia, with the latter two countries currently considering the possible reform of these provisions. In the European Union, national cabotage is being gradually opened up amongst member countries, but cabotage is not open to those outside of the EU. This opening of cabotage among EU members may in due course provide some evidence of whether its removal results in any adverse effects on national fleets or employment of national seafarers, although at this stage there has been no suggestion of severe downside effects from this liberalisation within the EU.

288. The employment opportunities arising from any relaxation of current cabotage requirements would be limited in qualitative terms. However, any concessions by EU countries, Japan and the US in particular would have a notable symbolic significance and could contribute to improved efficiency, via: a) lower transportation costs for bulk commodities; b) environmental benefits arising from the transfer of some traffic from land transport.

289. The main obstacle to such reforms is the pressure that exists within many countries to retain cabotage laws as a means of preserving related employment and maritime know-how necessary in cases of external emergencies. However, there are critics of the current provisions who suggest that cabotage has failed to achieve this aim.

290. It is suggested that, in view of benefits that have resulted from domestic liberalisation in other economic sectors, it may be valuable to ascertain from countries that have cargo reservation and/or cabotage provisions whether there is the political will to roll-back existing barriers. If the most desirable solution of an immediate total roll back meets significant political obstacles, some time frame for roll back could also be examined. Under such a solution all privileges derived from such arrangements and reserved to one Member country should be extended to all other Member countries, so as to at least ensure free and non-discriminatory treatment of all OECD countries. Full liberalisation might then come at a later stage.

2.4. Other regulations

291. Part II of the report also examines a range of other commercial regulations that apply to the maritime sector, such as ship registration conditions, cargo liability regimes and national security measures. Of these only the national security requirements (which restrict national security and other government cargoes to national flag vessels) can be considered to be regulations which distort the market.

292. The judgement on these types of regulations is that while they are important to specific countries which apply them (such as the US national security provisions), in reality they are no more than nuisance value, and affect a tiny proportion of total trade. This, this does not imply that they should not be targeted for reform, although past experience is that resistance to such proposals, based on defence and security arguments, can be expected to be very strong.

293. Of the other items, neither ship registration requirements, nor cargo liability regimes really fall in the category of "regulations". The first prescribes the conditions that must be fulfilled in order to acquire the nationality of that country (and thus carry its flag). Of themselves these requirements do not constitute either barriers nor market distortions, and as such are probably outside our interest. While it is true that national registration may be a prerequisite to participation in schemes such as cargo reservation arrangements, the way to address those is through the schemes themselves, and not the ship registration requirements.

294. Finally, cargo liability regimes create an international legal framework, and as they are not regulations in their own right these fall outside the scope of this study.

ANNEX A

LINER SHIPPING

1. Overview

1. As noted in the introduction, the liner shipping sector is subject to a range of national and international regulations where there may be scope for further reform. It is therefore appropriate to describe the sector in some detail.

2. The history of the liner shipping trades can be traced to the late 19th Century, when steady growth of seaborne trade created an increasing need for regular, *scheduled* shipping services. The advent of steam ships - which made voyages less dependent on weather conditions than they had been for sailing vessels - facilitated such a development.

3. Several different vessel types are engaged in the liner trades - general cargo ships, container carriers, reefers, "multipurpose" ships and "roll-on, roll-off" ("ro-ro") vessels - transporting a diverse range of cargoes. These include construction materials, machinery, manufactures and other consumer goods, textiles, foodstuffs (fruit, dairy products and meat, all of which are shipped in refrigerated containers) automobiles and trailers. Until the 1960s, general cargo vessels predominated on liner trades, but the advent of unitised cargoes has been followed by massive expansion of container vessel traffic. Goods are moved predominantly in twenty-foot or forty-foot containers (known as TEUs and FEUs). Traditionally, the TEU has been the industry standard, but growth of trade in low-density cargoes on some trade routes has brought increased use of the FEU.

4. By the mid-1990s, over 50% of all cargoes (in volume terms) moving in the liner trades did so in containerised form. In fact, for many OECD Member countries, the vast majority of liner cargoes move in containers. For example based on statistics for recent years, Australia, Canada, Japan, Korea, the Netherlands, New Zealand and the UK have all indicated that containerised cargoes account for over 75% of their liner trades by volume.

5. The growth of containerised shipping has reflected such factors as:

- economies of scale of container transportation;

- rising per capita consumption in the major industrial economies of North America and Western Europe of goods that are suitable for carriage in containerised form, plus greater imports by these regions of such products;

- rapid economic growth in Japan and, in the past ten years, in the newly-industrialised economies of Asia, which contributed to the "globalisation" of trades in containerised cargoes.

6. The increases in seaborne liner traffic has been evident in all trades, be they short distance domestic or regional trades, or international long distance trade routes.

7. To a large extent, the growth in domestic and regional container traffic has been assisted by the growth of distributive services from major “hub” terminals. This has been particularly helpful within some regions where ports are unable to accommodate many of the larger, modern container ships.

8. On international long distance services, economic development outside North America and Western Europe, plus global growth of trade in large manufactured goods, led to an extensive expansion of liner shipments in the 1980s and 1990s. Together these developments contributed to the upward trend in the size of container ships, as owners sought the benefits of economies of scale on these longer routes.

9. An important feature of the liner-shipping sector is the high degree of collaboration that occurs between rival owners; this traditionally taking the form of conferences. The term "liner conference" is generally applied to formal or informal private arrangements between carriers or between shipping lines for their operations of a particular route or routes. They are multinational or national cartel type organisations, and there is great diversity in the contents and practical effects of conference agreements. Some conferences have written agreements and secretariats responsible for their day-to-day operation. A few may have no written agreement at all, although they are still called conferences. Others may be called "associations" or something similar, although they are universally regarded as being conferences in the accepted sense of the word. Conferences of different membership may be present on both directions of a given route. There are a few single-nation conferences, all the members of which are of the same nationality; however, the vast majority are international in composition.

10. Such co-operative arrangements are generally considered to be anti-competitive, especially in OECD countries which have well developed competition policies, and only survive because of specific exemptions which are extended to them. Such exemptions, which exist in every OECD member country, have been put in place in recognition of special circumstances that apply to international liner shipping services.

11. However, it should also be noted that over time the conference system has weakened considerably, and nowadays conferences no longer enjoy the same market position as they did in the 1960s or 1970s. Furthermore, historically a number of owners of liner vessels have chosen to stay outside the conference system as independent operators, who compete effectively with conference lines, and normally charge rates about 10% below those charged by conferences. This may be balanced by the provision of lower levels of service.

2. Forms of liner services

12. As global trades have grown, various forms of liner service have evolved:

Port-to-port: as the name implies, these entail shipments from one port to another, and are the type of services that have traditionally been available from national shipping lines and/or the small- to medium-sized carriers previously prevalent in the liner trades.

Point-to-point: in contrast to the above, these include a multimodal component, in that they carry cargo from a nominated origin to an inland destination, meaning that part of the service consists of a land-borne movement. However, certain countries apply restrictions on the ability of foreign carriers to offer such services, as this brings them into direct competition with its domestic road and rail companies. During recent years, the growth of large “mega-carriers” in the container shipping trades – partially as a result of mergers and strategic alliances - has brought about considerable growth of such services;

Pendulum: these entail a "round-trip" itinerary whereby a vessel makes an outward voyage, calling at several ports to load and discharge cargoes, before embarking on a return journey that takes the ship back to its original place of departure, again via several interim ports en route. A simplified sample itinerary might, for example, comprise: Hong Kong, Oakland, Panama, New York, Rotterdam, Le Havre, Panama, Long Beach, Yokohama, Hong Kong.

Round-the-world: these services, which operate in both directions, circumnavigate the globe and visit a series of interim ports where cargoes are loaded and discharged. These trades are the preserve of large, modern vessels, due to the scale economies that they provide. They also travel at slightly slower voyage speeds than smaller ships, for reasons of fuel economy.

Hub-and-spoke: these are based on the principle of very large, modern vessels serving a limited number of major container shipping terminals, with smaller ships then undertaking short-haul "feeder" voyages to other ports within the region.

Transhipments: this describes any service where containers are first taken to a port where they are then loaded (transhipped) onto another vessel to complete the voyage to final destination. The growth of such services has been a further aspect of the industry's recent development. For example, in 1997 a reported 33% of the container traffic that moved through Europe's main container terminals (Rotterdam, Hamburg, Antwerp and Bremen) consisted of such shipments.

3. Fleet development and ownership

3.1. Fleet development

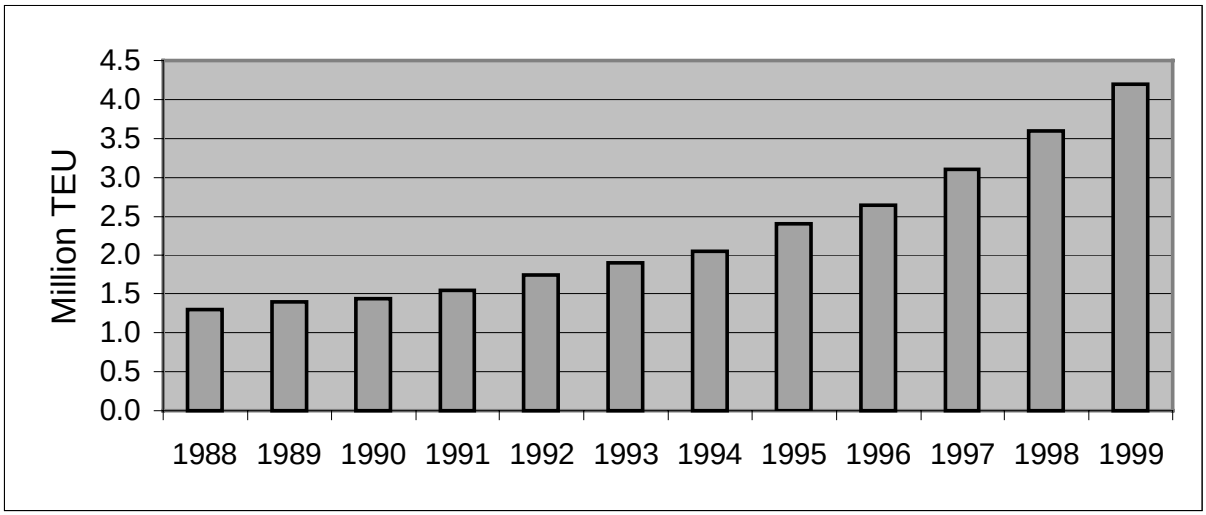
13. Given the predominance of containerised cargoes within much of the liner trade involving OECD Member countries, the fleet analysis in this section concentrates on container vessels.

14. At the end of 1999 the world fleet of fully cellular container ships[22] totalled around 2400 vessels of 4.2 million TEU capacity. The fleet trebled in terms of its total cargo-carrying capacity since 1998, rising from 1.25 to 4.2 million TEU (see Graph A-1). Moreover, there has been a pronounced increase in average vessel size which has moved from around 1 200 TEU in 1988 to over 1 700 TEU by 1999. However, this fails to illustrate the extent of the trend towards construction of very large vessels. In terms of total carrying capacity, at the beginning of 1999 container ships in the 2 000 to 4 000 TEU range accounted for 40% of the total, while 23% were above 4 000 TEU.

15. This growth in the fleet of large container vessels - which culminated in the delivery in 1997 of the 7 000 TEU "Sovereign Maersk" - has increased the prospects of future expansion in "hub-and-spoke" trade patterns and transhipments. Plans reportedly already exist for the possible construction of yet larger container vessels, of up to 10 000 TEU capacity. Naturally, very few existing container terminals would have either the loading gear or the depth of water to accommodate such ships, and the number of facilities that are likely to do so in future is expected to be very limited. Any further consolidation within the liner shipping sector, whether through mergers, consortia or alliances, could also be expected to heighten the tendency for trade to be concentrated among a limited number of major ports. This would similarly imply an increase in feeder and transhipment services to other terminals.

22. A ship specially constructed to carry standard size containers in cells; i.e. in compartments into which the containers fit exactly. The holds or cells are arranged so that the containers are lowered and stowed in a vertical line and restrained at all four corners by vertical posts.

Graph A-1
Development of the Fully-Cellular Container Ship Fleet 1988-1999



Figures as at 1 January except for 1999 which are end of year. Excludes vessels smaller than 1 000 grt.
Source: Institute of Shipping Logistics, Bremen and Containerisation International.

3.2. Ownership by Flag/Beneficial Ownership

16. Of the overall total of 3.6million TEU in 1998, around 1.35million TEU (37.8% in terms of carrying capacity) was registered under the flag of OECD Member countries. This compared, according to the Institute of Shipping Logistics (ISL), Bremen, Germany, with 41% for open registry[23+24] countries of which more than 80% were registered under the flags of the Bahamas, Bermuda, Cyprus, Liberia and Panama. Based on owners' country of domicile, though, the share of the fleet owned by interests from OECD Member states amounted to 2.32 million TEU (65.2%), against just 0.2% for the five above mentioned countries. The discrepancy between these figures for vessel ownership by flag and country of

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23 The generally accepted definition of open registries as outlined in the "Committee of Enquiry into Shipping- Report", Cmnd 4337, HMSO, May 1970 paras 183 - 198 is as follows:

"i) The country of registry allows ownership and/or control of its merchant vessels by non-citizens;

ii) Access to the registry is easy. A ship may usually be registered at a consul's office abroad. Equally important, transfer from the registry at the owner's option is not restricted;

iii) Taxes of the income from ships are not levied locally or are low. A registry free and an annual fee, based on tonnage, are normally the only charges made. A guarantee or acceptable understanding regarding future freedom from taxation may also be given;

iv) The country of registry is a small power with no national requirement under any foreseeable circumstances for all the shipping registered, but receipts from very small charges on a large tonnage may produce a substantial effect on its national income and balance of payments;

v) Manning of ships by non-nationals is freely permitted; and

vi) The country of registry has neither the power nor the administrative machinery to effectively impose any government or international regulations; nor has the country the wish or the power to control the companies themselves."

However, it might be noted that vi) of the above definition is no longer universally valid.

24 Liberia, Panama, Bahamas, Cyprus, Malta, Saint Vincent, Bermuda, Marshall Islands, Vanuatu and Antigua are defined by ISL as open registry countries.

domicile is largely accounted for by extensive flagging out of container ships from high-cost registers to these low cost registers.

17. Furthermore, given the fact that the container shipping industry is very capital intensive with high fixed costs, it is not surprising that in mid-2000 the top twenty container service operators accounted for over 60% of the world container fleet.

4. Regional growth in container trade

18. Table A-1 provides a breakdown of container movements on a number of the world's more important trade routes.

Table A-1
Container movements on major liner trade routes for 1995-1999[25]
[000 TEU]

	Asia-USA	USA-Asia	USA-Europe	Europe-USA	Europe-Asia	Asia-Europe
1995	4009	3471	1208	1448	2306	2834
1996	4104	3520	1219	1421	2584	3142
1997	4662	3615	1276	1556	2734	3290
1998	5221	3326	1327	1696	2710	3487
1999	5840	3370	1340	1710	2850	3950
2000	6130	3540	1410	1800	3050	4150

Source: Review of Maritime Transport, UN, 2000 and various issues of Containerisation International

4.1. Transatlantic

19. This route has been relatively stable over the past few years, with container numbers increasing in both directions. While the westbound trade (US imports from Europe) continues to carry more containers, the Transatlantic route is not characterised by the same imbalance in trade directions as the other major trade routes. The strength of the westbound trade is due to sustained high shipments of foods, beverage and other consumer goods, most of which are not in direct competition with Asian imports, and benefit from increased consumer confidence and spending in the United States.

4.2. Transpacific

20. The transpacific corridor is by far the world's largest liner trade route carrying over 9 million TEU per year. Over the last few years the eastbound traffic has seen stable growth, while the westbound trade experienced steady growth up to 1997. The trading situation since 1998 has been very different with strong eastbound growth at a time when westbound movements actually fell. This has exacerbated an already unbalanced trade, which in 2000 saw eastbound movements exceed those westbound by over 70%.

[25] Data as regards container movements easily vary +/- 10% from one source to another.

4.3. Europe/Asia/Europe

21. Like the Transpacific trade the European - Asian routes are characterised by severe imbalances although the container balance is much closer than in the Transpacific trades (around 25% difference). Between 1997 and 2000 westbound exports from Asia continued to grow while eastbound shipments were relatively stagnant. Eastbound, commodities will experience the steepest declines from reduced Asian demand, while westbound increasing trade will be driven by increased demand for consumer goods, textile products and electrical equipment. The continued influx of larger vessels will encourage the use of load centres and transhipments in the years to come.

5. Outlook

22. The financial crisis that emerged in Asia in 1998, and which has only just abated, has slowed the pace of growth of containerised cargoes to the Asian region. In particular imports into Asia were seriously affected as substantial depreciation of most Asian currencies greatly reduced the purchasing power of those countries. It is significant that despite a recovery in Asia, the difference in movements between Asia-Europe and Eurpoe-Asia, which was around 235 in 1995, stood at around 35% in 2000.

23. Conversely, the changes in currency parities have made Asian manufactures more competitive on world markets and their exports have grown strongly. However, growth in traffic volumes after 1989 was largely fuelled by rapid expansion of containerised trades within Asia itself. Therefore, it can be expected that slower economic growth in various Asian economies will inevitably reduce the potential for further expansion of such intra-regional business. Hence, until the effects of the region's difficulties are finally over, future growth of containerised trades will be more dependent than previously on developments outside Asia.

ANNEX B

BULK SHIPPING

1. Overview

1. Rising demand for particular commodities, as a result of the economic developments in North America, Europe and, subsequently, parts of the Asia-Pacific region, brought progressive growth in the trade in fuels and industrial raw materials. Eventually, the volumes of cargo moved reached such levels that, for practical reasons, it became more efficient – due to economies of scale - to move some commodities in bulk, rather than in bales, bags, crates, drums or other forms of packaging. This led to the development of such vessel types as the oil tanker and, by the 1950s, the dry bulk carrier. Substantial growth in trade volumes – and in the distances that these cargoes were carried - subsequently led to increases in average vessel size. This tendency was also facilitated by port developments – as these increased the maximum ship size that could be accommodated at various loading or discharging facilities.

2. Although some large corporations own shipping fleets with which they can move their proprietary cargoes, many cargo-owners possess no shipping capacity, which makes them dependent on chartering, whether on a single voyage basis or for a specified period (e.g. 12 months). This is done at a rate that will vary according to tonnage supply/demand conditions for the particular type and size of vessel required. In various parts of the bulk shipping industry, freight rates can be prone to sharp variation.

3. Some of the key points to note about the bulk cargo sector are:

- the dry bulk, oil tanker, liquefied gas carrier and chemical tanker markets are each served by discrete, purpose-built vessel types that are generally unsuitable to trade in other commodities;

- the environmental threat posed by respective commodities varies considerably. In the event of a serious vessel casualty, for instance, the loss of an iron ore cargo would entail comparatively little subsequent pollution, whereas that of persistent oils could present a serious problem. Hence, some ship types pose an inherently greater pollution risk than others, depending on the cargoes that they carry;

- owners' commitment to maintaining vessel quality may vary in different sectors of bulk shipping. For example, in tanker trades, more stringent ship inspections by the leading charterers in recent years have made it harder for owners of lower-quality tonnage to secure regular employment for their ships, except at heavily discounted rates. Likewise, cargo consignees in some trades may attach greater importance to vessel quality than in others – depending on such factors as cargo value. This means that "self regulation" by the shipping industry may be more effective in some parts of the bulk shipping industry than in others.

4. The *dry bulk* market is characterised by a diverse range of commodities carried, some of which are typically shipped on a regular, high-volume basis, e.g. steam coal to thermal power stations, plus coking coal and iron ore to steel mills. A relatively high proportion of such trades, especially in iron ore cargoes, is undertaken on long-term contracts of carriage. By contrast, demand for other dry bulks is more

volatile (e.g. grain, due to variations in harvests). Thus, in relative terms, a greater share of these trades is accounted for by single voyage chartering.

5. Disparities between the incidence of single voyage and long-term charter are also apparent for other commodity groups. In *oil* trades, a very high proportion of cargoes are moved on a single voyage basis, although this situation contrasts starkly with chartering practices for other liquid cargoes.

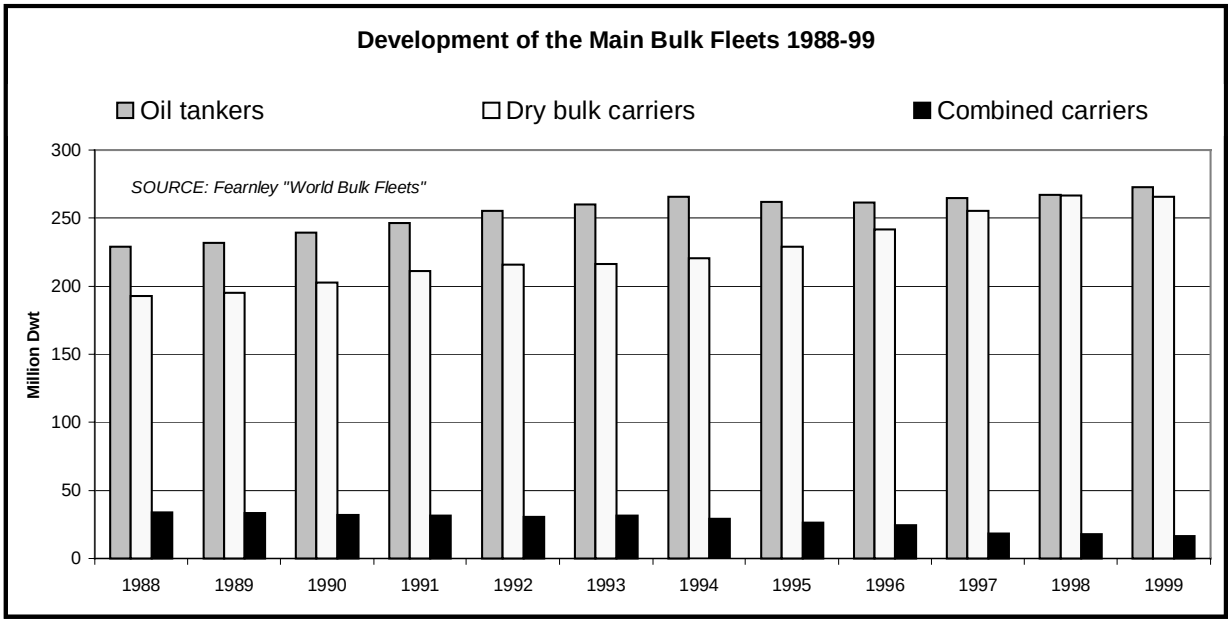
6. Compared to the oil sector, the *liquefied gas* trades are closely associated with a predominance of longer-term charters. Such a situation is clearly apparent for LNG shipments: in general, ships are built specifically for a single project and then trade exclusively on a dedicated route. The present LNG carrier fleet is composed almost entirely of vessels that operate on such a basis with some ships engaged, for example, on 25-year time-charters. The few vessels currently operating on the spot market are older units for which such charters have expired and which are therefore seeking alternative employment. A high proportion of the LPG carrier fleet also operates on longer-term charters.

7. Chartering in the liquid bulk *chemical* trades is also notable for a higher proportion of long-term contract business than exists in the oil tanker market. However, the relative significance of single voyage and longer-term chartering varies according to the type of cargo carried. For some petrochemicals and methanol, many cargoes move on long-duration contracts, yet for others spot fixing is more commonplace.

2. Fleet development

8. As shown in Graph B-1, the main world bulk fleets have undergone collective growth in the past ten years, with a rise from 456 to 560 million dwt between 1 January 1988 and 1999 respectively. The size structure of the fleet is rather heterogeneous, almost 31% of all bulk carriers in tonnage terms are in the 40 - 150.000 dwt range and 41% in the above 150 000 dwt range. While the average age of all bulkers is about 15 years, larger ship units are significantly younger - 8.3 years. This reflects the revival in tanker newbuilding activity during the 1990s and continued construction of new ships for the dry bulk trades primarily in response to declining prices for newbuildings.

Graph B-1



3. Ownership by flag

9. As at 1 January 1998, the share of respective fleets accounted for by OECD Member country flags ranged from as little as 20.6% of dry bulk carrier tonnage to as high as 44.1% of the liquefied gas tanker fleet. In both the oil tanker and dry bulk carrier sectors (the two largest fleets in the bulk shipping industry), a large portion of tonnage operates under open registry flags.

Table B-1
Bulk Shipping Fleets by Flag of Registration
(as at 1 January 1998)

Percentage shares of total tonnage in each fleet:				
	OECD Members	Main Open Registers[26]	Others	Total
Dry bulk carrier	20.6	46.1	33.3	100
Oil tankers	29.4	44.1	26.5	100
Chemical tanker	37.1	*	62.9	100
Liquefied gas tanker	44.1	37.9	17.9	100

* = less than 0.1%.
1. Ships of 1 000 grt and greater. Totals may not tally due to rounding.
Source: Institute of Shipping & Logistics, Bremen.

10. Based on flag of registry, ISL statistics show that the most significant OECD Member countries in terms of bulk shipping ownership as at 1 January 1998 were Greece, Norway (including the Norwegian International Ship Register) and Japan.

4. Flag/beneficial ownership

11. In contrast to the data for bulk fleets by flag of registry, statistics for ownership by country of domicile show a far higher share for OECD Member countries in general. This reflects the widespread tendency by owners in the industrialised economies to re-flag their vessels to other registers for cost-saving reasons. It also demonstrates that, although open registry countries have attracted much foreign tonnage to their flags, they still possess very few domestic shipowning interests of their own.

Table B-2
Bulk Shipping Fleets by Country of Domicile
(Ships of 1 000 grt and above, as at 1 January 1998)

Percentage shares of total tonnage in each fleet:				
	OECD Members	Open Registry Countries	Others	Total
Dry bulk carrier	60.6	0.1	39.3	100
Oil tankers	68.4	*	31.6	100
Chemical tanker	68.0	*	32.0	100
Liquefied gas tanker	73.4	*	26.6	100

* = less than 0.1%.
Source: Institute of Shipping & Logistics, Bremen.

[26] ISL defines these as Liberia, Panama, Cyprus, Bahamas, Bermuda

ANNEX C

OVERALL REGULATORY FRAMEWORK

1. Regulations and practices relating to the rights and obligations of states and to safety and the protection of the environment

The Law of the Sea – UNCLOS - rights and obligations of flag states

1. The 1982 UN Convention of the Law of the Sea (UNCLOS) entered into force in November 1994. All four Geneva Conventions of 1958[27] have been integrated, albeit with varying degrees of change and amendment, both for the sake of improvement and to make them more consistent with each other and with the Law of the Sea's further provisions. Since 1994, a single binding instrument regulates the rights and duties of States at sea and regarding the sea. It furthermore encompasses new concepts such as the exclusive economic zone, archipelagic waters, transit passage through straits and the International Seabed Area.

2. The provision of international law which govern the registration of ships clearly establish that each State shall fix for itself the conditions for the granting of its nationality to ships, for the registration of ships in its territory, and for the right to fly its flag. This is not only the customary international law with regard to the registration of ships but is stipulated by Article 91 of UNCLOS. (This declares that: "Every State shall fix the 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").

3. However, these rights are coupled with a number of obligations. The flag state is obliged to:

- establish and maintain a shipping register (Article 94/2);
- inspect the vessel before registration (Article 94/4a) and issue flag documents (Article 91/2) granting nationality to the vessel, if the latter fulfils the conditions for granting nationality and the right to fly its flag.

4. These conditions are to be fixed by the state in accordance with Article 91/1.

5. Article 91 of UNCLOS as well as Article 5 of the 1958 Convention on the High Seas, furthermore states that "there must exist a genuine link between the State and the ship." However, the term "genuine link" is not spelled out in the Convention and there is no consensus on what should constitute that link. Certain countries, in particular developing countries, interpret this link as a "genuine *economic* link" to be established through some kind of minimum participation in ownership, management and manning.

6. This view is in contrast to the interpretation by some countries that believe this concept of "genuine link" should respect the "national sovereignty" concept, as established through effective jurisdiction and control by the flag state upon registration of the vessel.

7. Article 94/1 spells out the duties of the flag state; i.e. the flag state must in particular exercise effectively its jurisdiction and control in administrative, technical and social matters over ships flying its flag. To ensure safety at sea, Articles 94/3 and 94/4 stipulate that the flag state should ensure, *inter alia*, seaworthiness of the vessel, manning, labour and training of crew. In doing so, it should take into account

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[27] These are the "Territorial Sea and the Contiguous Zone," the "High Seas," the "Continental Shelf" and "Fishing and Conservation of the Living Resources of the High Seas."

applicable international instruments (Article 94/5). In practice, this means all generally applicable international rules and regulations of the International Maritime Organisation or the International Labour Organisation. If there are clear grounds for believing that proper jurisdiction and control are not being exercised over a vessel, other states may report the facts to the flag state.

8. Finally the flag state must set certain rules as regards collision or other incidents on the high seas, as well as rules requiring masters of vessels of its nationality to render assistance to any person at risk of being lost or in distress (Articles 94, 97 and 98).

Box I. UN Convention on the Law of the Sea: Vessels

Issue	Flag State Obligations – Merchant Vessels	Other Circumstances
Jurisdiction	*General* Vessels are subject to exclusive jurisdiction of flag state on the high seas (Article 92, Paragraph 1) (For pollution measures in general, see Articles 194, Subparagraph 3(b); 211; 217) *Particular* Flag state required to assume jurisdiction under its internal law with respect to administrative, technical, and social matters *Collision incidents on the high seas* - In respect to penal jurisdiction: arrest/ detention flag state (Article 97, Paragraph 3) - Penal and disciplinary matters exclusive jurisdiction of flag state (Article 97, Paragraph 1) *except:* withdrawal of certificates issued by other states (Article 97, Paragraph 2) - Inquiry (Administrative jurisdiction) (Article 94, Paragraph 7)	Except in cases expressly provided for in international treaties and this Convention (Article 92, Paragraph 1; e.g., Articles 99-111, Articles 218 and 221) - In penal cases, home state can institute proceedings against its nationals (Article 97, Paragraph 1) - Inquiry by other states possible (Article 94, Paragraph 7)
Administration	*Registration* - Fix conditions for grant of nationality (Article 91, Paragraph 1) - Maintain a register of ships (Article 94, Subparagraph 2(a)) - Inspect before registration (Article 94, Subparagraph 4(a)) - Issue flag documents (Article 91, Paragraph 2) *Other measures* er to help persons in danger or distress (Article 98, Subparagraphs l(a-b)) and assist in collision cases - Investigate allegations of improper control (Article 94, Paragraph 6)	- Registration may take place only where "genuine link" (Article 91, Paragraph 1) - Nationality follows flag (Article 91, Paragraph 1) - "Treatment" as ship without nationality (Article 92, Paragraph 2)
Technical Matters	Required to ensure - Construction, equipment, seaworthiness, manning, training of crew, use of signals, maintenance of communication, collision prevention (Article 94, Paragraph 3) - Inspection at intervals (Article 94, Subparagraph 4(a)) - Charts, nautical publications, navigational equipment is on board (Article 94, Subparagraph 4(a))	Flag state measures are to - Comply with generally accepted international regulations, procedure and practice (Article 94, Paragraph 5) - Ensure appropriate crew qualification and numbers of crew (Article 94, Subparagraph 4(b)) - Ensure that crew is conversant with and required to observe international regulations: safety, collision, pollution, radio communication (Article 94, Subparagraph 4(c))
Social Matters	- Labour conditions (Article 94, Paragraph 3)	
WARSHIPS, etc.: Immunity (Articles 89-90); Pollution (Articles 236, 304)*VESSELS OF UNITED NATIONS*, etc.: Article 93		

Source: Bernaerts' Guide to the Law of the Sea, the 1982 United Nations Convention, Fairplay Publications.

International safety and environment regulations

9. Recognising a need to develop an international agreement on Safety at Sea, a United Nations conference was held in 1948 which established the International Maritime Organization, originally known as Intergovernmental Maritime Consultative Organization (IMCO). In 1958, the convention came into force, and the Organization assumed responsibility for the development of international standards and regulations to ensure safety at sea and the protection of the marine environment. IMO's profile and influence has grown considerably since 1958. Then, international shipping was controlled mainly by traditional ship-owning states based mainly in Europe. This was to change drastically over the next thirty years with the emergence of new ship-owning states and "open registries". By the 1980's, ship registration had significantly migrated from its post-war European base, and membership of IMO had swelled to 158 states.

10. IMO's governing body is the Assembly which meets every two years. Between Assemblies, a Council, consisting of 32 States elected by the Assembly, acts as IMO's governing body. IMO is a technical organisation and the majority of its work is carried out by five committees and nine sub-committees.

11. During its forty years of existence, IMO has produced a large number of international maritime conventions which cover areas ranging from Safety at Sea to Civil Liability for Oil Pollution (see Annex D). However, despite some recent successes with tacit acceptance procedures, a major problem faced by the IMO is that the process for both implementing and amending most of these conventions can be lengthy. As most deal with technical matters, and with technology advancing at an accelerating rate, IMO is continually reactive and is playing a 'catch-up' agenda; by the time a convention or amendment eventually comes into force, parts of it may be already out of date. This continuing process of amendments can become extremely complex and it also leaves IMO open to criticism. In some cases such criticism may be justified, however, on many occasions the excuse of 'too much too soon' is used by some as an argument to attempt to block any changes whatsoever in order to avoid associated costs.

12. There is often a major divide between States motivated by strong environmental and safety concerns and those States which often include, but are not limited to, lesser developed countries or off-shore registries, motivated by different priorities and realities, including financial considerations, the capabilities of their maritime administrations and their overall safety records. Thus, proposals for new and improved safety or anti-pollution initiatives are often met by arguments to retain the status quo or to introduce delays or compromises. This, in turn, leads to increasing polarisation among member States which effectively inhibits the achievement of the objectives of the Organization.

13. Directly linked to this polarisation, and becoming an issue for IMO credibility, is the inability, or apparent reluctance, of certain members to ensure that vessels flying their flags implement the mandatory safety/pollution standards required by the various conventions which they have ratified. IMO was not designed to enforce measures or intrude into national jurisdiction, but faces the growing need for some means of ensuring that its own members apply agreed standards in order to preserve its viability as a meaningful organisation.

The International Safety Management (ISM) Code

14. The primary source of much of the ship safety legislation enacted by OECD Member countries since the 1970s has been the standards established in the SOLAS 74 Convention, its subsequent Protocol and other chapters that have since been adopted by the IMO, even though various countries have been slow to enact domestic legislation embodying these standards. However, an exception to this has been the ISM

Code (contained in SOLAS Chapter IX), which has been implemented with speed and rigour. Since the Code took effect for various ship types on 1 July 1998, extensive compliance has already been observed in both the tanker and dry cargo trades. For liner shipping, violations of ship safety regulations have been less evident, meaning that the ISM Code's implementation was likely to impact less significantly than in the bulk shipping industry. This relatively extensive and rapid compliance – in contrast to other maritime transport regulations – can be ascribed to the effectiveness of the penalties that can be imposed for not doing so, namely:

- The threat that the vessel will be detained by the port state authorities.
- The denial of permission for the ship to enter its intended port of call.
- Fines.
- The targeting for port state inspections of that vessel - and all other ships owned or managed by that company - on future visits to that country.

15. The effectiveness of the Code, even at this early stage, arises because it introduces accountability if safety standards are breached. Traditionally, shipowners and operators have not been held liable for damage caused by an accident provided that they have shown "due diligence" to ensure the seaworthiness of the ship at the start of a voyage, even though on occasions the practical outcome of that due diligence was a clearly unseaworthy vessel.

16. Apart from vessel owners and operators, accountability also extends, for example, to the classification societies. Although most of these have been closely associated with efforts to eliminate sub-standard vessels, some societies have been comparatively lax in ensuring full compliance with international safety standards. The accountability imposed on them by the ISM Code, though, should help eliminate the scope of such slippage.

17. Looking ahead, the prospective impact of the ISM Code should include:

- An improved trading position for those shipowners that tend to comply with regulatory requirements, as it becomes harder for their non-complying rivals to remain in breach of standards.
- The elimination of sub-standard ships from regions that have previously been tardy in enforcing the legislation that they have enacted. This should materialise via enhanced port state inspections.

18. Also, the withdrawal of insurance cover in some countries would mean that any ship that proceeds to sea without a valid ISM Safety Management Certificate and Document of Compliance would risk being discovered by those port state inspectors. However, it should be noted that this depends heavily on issuing authorities taking their responsibilities seriously and inspectors being able to detect forgeries.

National environmental and safety regulations

19. A limited number of national environmental and safety regulations - other than the provisions made under international conventions - exist in certain OECD Member states. In addition, it should be noted that states in the area of safety and environment act sometimes unilaterally interpreting for their own flag vessels international rates more strictly than required under international conventions. National

environmental regulations apply in particular in Australia, Korea and the US, and cover the following areas:

- Australia: ballast water management

20. Voluntary guidelines were introduced by the Australian Quarantine & Inspection Service (AQIS) and only took effect from 1 August 1998. The guidelines apply to all ships trading in Australian territorial waters and seek to prevent damage to Australia's marine environment from alien species carried in ballast water that ships discharge before loading at its ports. To achieve this, it is recommended that vessels replace the ballast water that they have taken onboard after discharging their previous cargo before arriving to load in Australia. New Australian arrangements for ballast water management are to come into effect from mid 2001.

- Korea: use of older tankers in the country's import trade

21. After a series of oil spills off Korea in 1996, all of which involved older vessels, the Korean authorities devised several measures to lessen the threat of further pollution of its territorial waters. These include a requirement that the hull bottoms of older Korean-flag ships should undergo annual inspection. There is also a recommendation that Korean oil companies should limit their chartering of tankers greater than 15 years old to vessels of proven quality and condition.

- United States: double-hull requirements for ships carrying oil cargoes

22. These were enacted in the US Oil Pollution Act of 1990 and already mean that all new oil-carrying vessels of 5 000 gross tons or above must be equipped with double hulls to trade in the US "exclusive economic zone," i.e. within a 200-mile limit of shore. ("New" ships are defined as those ordered after 30 June 1990 or delivered after 1 January 1994). However, requirements for older, single-hulled vessels to comply with this legislation are still being phased in, a process that will not be completed until 2015, by which time many such ships may have completed their trading lives. In the interim, single-hulled vessels are still permitted to trade within US waters, although the parties responsible for operating them would be liable to financial penalties levied by the Federal government and individual states if these ships were involved in an oil spill.

International labour regulations

23. Because of the unique character of seafaring, most maritime countries have special laws and regulations covering this occupation. Consequently the International Labour Organization (ILO), since its founding has had a special "machinery" for seafarers. The "machinery" includes a standing, bipartite (shipowner/seafarer) Joint Maritime Commission, which advises the Governing Body of the ILO on maritime issues, and special Maritime Sessions of the International Labour Conference (ILC) which focuses solely on the preparation and adoption of maritime labour standards. Over 60 such standards have been adopted during the past 75 years. The standards adopted specifically on seafarers during the years cover a multitude of questions including minimum age of entry to employment, recruitment and replacement, medical examination, articles of agreement, repatriation, holidays with pay, social security, hours of work and rest periods, crew accommodation, identity documents, occupational safety and health, welfare at sea and in ports, continuity of employment, vocational training and certificates of competency. This international seafarers' "code" directly or indirectly influences both the terms of collective agreements and national maritime labour legislation.

24. An important, if not the most far-reaching, maritime labour instrument is the Merchant Shipping (Minimum Standards) Convention 1976 (No.147). This Convention has been ratified by States accounting for over half the world fleet, and requires conditions on board ships to be substantially equivalent to the following ILO instruments covering safety and health, social security, living and working conditions of seafarers:

- Minimum Age Convention, 1973 (No. 138), or
- Minimum Age (Sea) Convention (Revised), 1936 (No. 58), or
- Minimum Age (Sea) Convention, 1920 (No. 7);
- Shipowners' Liability (Sick and Injured Seamen) Convention, 1936 (No. 55), or
- Sickness Insurance (Sea) Convention, 1936 (No. 56), or
- Medical Care and Sickness Benefits Convention, 1969 (No. 130);
- Medical Examination (Seafarers) Convention, 1946 (No. 73);
- Prevention of Accidents (Seafarers) Convention, 1970(No. 134)(Articles 4 and 7);
- Accommodation of Crews Convention (Revised), 1949 (No. 92);
- Food and Catering (Ships' Crews) Convention, 1946 (No. 68) (Article 5);
- Officers' Competency Certificates Convention, 1936(No. 53) (Articles 3 and 4)[28]
- Seamen's Articles of Agreement Convention, 1926 (No. 22);
- Repatriation of Seamen Convention, 1926 (No. 23);
- Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87);
- Right to Organise and Collective Bargaining Convention, 1949 (No. 98).

25. Additionally ILO 147 requires that:

- Effective jurisdiction or control must be exercised over home registered vessels.
- There must be adequate procedures for the employment of seafarers.
- Seafarers must be properly qualified and adequately trained.
- Maritime labour standards must be enforced, principally by inspection.
- There must be an inquiry into any serious marine casualty.

[28] In cases where the established licensing system or certification structure of a State would be prejudiced by problems arising from strict adherence to the relevant standards of the Officers' Competency Certificates Convention, 1936, the principle of substantial equivalence shall be applied so that there will be no conflict with that State's established arrangements for certification.

- Advice should be provided to nationals of states which have ratified the Convention on the problems of working a vessel flagged in a state which has not ratified the Convention.

- Port states may take action to rectify clearly hazardous deficiencies on board and may notify the country of registration.

26. In 1996 the Conference adopted a Protocol to the Convention allowing States to accept additional obligations regulating accommodation of crews, hours of work and manning, seafarers' identity documents, worker's representatives, health protection and repatriation. The Conference also adopted the "Seafarers Hours of Work and the Manning of Ships Convention" setting maximum number of hours that can be worked in a given period, or the minimum number of hours' rest to be taken.

Maritime liability, insurance and compensation arrangements

27. The impact of liability commitments on shipowners' behaviour varies significantly between different sectors of the shipping industry. For example, in the liner trades, pollution liabilities tend to be small, as most cargoes carried have limited potential to harm the environment, whereas for tankers there exist far greater risks. Apart from the large financial penalties now being imposed on owners found guilty of oil spills, vessels may be arrested and ships' masters imprisoned .

28. Among OECD Members, liability considerations have had their greatest effect on tanker owners trading to or from the United States, following the passing in 1990 of the Oil Pollution Act. The heavy penalties that apply if vessel owners or operators are found guilty of spilling oil due to negligence or wilful neglect have already led certain owners to cease trading their vessels in US territorial waters.

29. In addition to pollution liability regulations, reductions in accidental oil spills and an improved ship safety performance in the tanker sector during the 1990s have been attributable to other factors. These have included:

- Heightened emphasis by charterers on vessel quality. This has largely stemmed from the need of the international oil companies to avoid the adverse publicity that accompanies major oil spills. Some companies have distanced themselves entirely from direct ownership of vessels, and instead move their cargoes on independently owned ships. However, if a pollution incident occurs, it is still quite easy for external observers to identify the owners of the cargoes spilt. This has made many tanker charterers, especially the oil companies, highly conscious of the choice of vessels used to carry their cargoes. "Oil company approval" has thus become a primary factor that determines a ship's prospects of finding regular employment.

- The development of the OPEC nations' oil tanker fleets. Several of the Middle East States – particularly Saudi Arabia, Iran and Kuwait - plus Venezuela have marketed a greater share of their oil exports on a delivered basis in the past ten years. To do so, these countries have invested heavily in tanker newbuildings to ensure that prospective customers are satisfied with the quality of the tonnage used to carry the oil that they are buying.

30. By comparison, pollution liability considerations have exercised only a limited influence in dry cargo trades, reflecting the generally low environmental risk of most main commodities carried. Of dry cargoes shipped in bulk, the only noteworthy exception is sulphur. However, the quantities of such cargo carried by sea are very small within total dry bulk trade.

2. Other regulations and relevant practices

The OECD Code of Liberalisation of Current Invisible Operations (CLIO)

31. Under the Code members are obliged to eliminate restrictions between each other on current invisible transactions and transfers relating to maritime transport operations identified in items C/1, C/5 and C/6 of Annex A to the Code where:

- Item C/1 concerns maritime freight including chartering, harbour expenses, disbursement for fishing vessels, etc. (but does not cover transport between two ports of the same state; where such transport is open to foreign flags, transfers shall be free).

- Item C/5 concerns harbour services (including bunkering and provisioning, maintenance, repairs, expenses for crews, etc.) for all means of maritime transport.

- Item C/6 concerns the repair of ships.

- The nature and scope of these obligations and, in particular, those obligations associated with items C/1 and C/5 are made more explicit in Note 1 to Annex A of the Code. This note reads as follows:

  - "The provisions of C/1 "Maritime freights, including chartering, harbour expenses, disbursements for fishing vessels, etc.," of C/5, first subparagraph "For all means of maritime transport: harbour services (including bunkering and provisioning, maintenance, repairs, expenses for crews, etc.)," and of the other items that have a direct or indirect bearing on international maritime transport, are intended to give residents of one Member state the unrestricted opportunity to avail themselves of, and pay for, all services in connection with international maritime transport which are offered by residents of any other Member state. As the shipping policy of the Governments of the Members is based on the principle of free circulation of shipping in international trade in free and fair competition, it follows that the freedom of transactions and transfers in connection with maritime transport should not be hampered by measures in the field of exchange control, by legislative provisions in favour of the national flag, by arrangements made by governmental or semi-governmental organisations giving preferential treatment to national flag ships, by preferential shipping clauses in trade agreements, by the operation of import and export licensing systems so as to influence the flag of the carrying ship, or by discriminatory port regulations or taxation measures, the aim always being that liberal and competitive commercial and shipping practices and procedures should be followed in international trade and normal commercial considerations should alone determine the method and flag of shipment. The second sentence of this Note does not apply to the United States."

32. The first sentence of Note 1 generally defines Member countries' obligations in the maritime transport area. This makes it clear that the intention of the obligations under item C/1 and the first paragraph of Item C/5, and other items having a direct or indirect bearing on international maritime transport is to give "residents of one Member state the unrestricted opportunity to avail themselves of, and pay for, all services in connection with international maritime transport which are offered by residents of any other Member state."

33. The second sentence, in turn, explains with greater precision the obligations defined in the first sentence. It also reaffirms the aim of these provisions that commercial considerations alone should determine the method and flag of shipment and that liberal and competitive commercial shipping practices should be the norm.

34. All Member countries have accepted the general definition of the Invisible Code's obligations concerning maritime transport set out in the first sentence of Note 1. However, Canada, France, Korea, Mexico, Turkey and the United States have lodged reservations with regard to Item C/1 in accordance with the provision of Article 2 (b) of the Code on "Measures of Liberalisation." In this context, it is important to note that the reservations of Canada, France, Korea and Mexico concern restrictions on issues mentioned in the second sentence of Note 1; and their formal registration confirms the fact that these matters are subject to obligations. Turkey's reservation covers C/1 as a whole and, by implication, the entire Note 1. The United States, which has recorded a reservation under the first sentence of Note 1, does not subscribe to the second sentence of Note 1 as indicated in the third sentence; i.e. the US is not committed to the same liberalisation obligation as the other parties to the Code.

The OECD Common Shipping Principles

35. Council Recommendation [(87)11(Final), 13 February 1987] Concerning Common Principles of Shipping Policy for Member Countries, which complemented the commitments they had already entered into under the OECD Code of Liberalisation of Current Invisible Operations, covers the following:

- The maintenance of open trades and free competitive access to international shipping operations; i.e. Member countries agreed that their shipping policies should be directed to safeguard and promote open liner and bulk trades, and also incorporated the concept of not introducing any new measures restricting competitive access.

- Co-ordinated response to external pressure, based on full consultations between Member countries: Member countries agreed to oppose the imposition of regimes which restrict access by commercially operated shipping companies to cargoes which move internationally. However, it was also agreed that before any such action was taken, consultations should be initiated with the country, as well as with governments of other Member countries affected or concerned by the measure.

- The role and recognition of governmental involvement by Member countries to preserve free competitive access and the provision of choice to the shippers: The tradition in OECD commercial shipping has been to reject governmental involvement. However, governments of Member countries recognised that, if necessary, they would have to play an active role in negotiations with non-Member states and with each other in order to maintain or re-establish a free and competitive sea transport market, as well as the freedom of choice for shippers.

- A common approach to the application of competition policy to the liner shipping sector: Member countries agreed to prevent anti-competitive agreements and abuse of a dominant position by any commercial party, and to this end paid particular attention to the establishment of guidelines concerning competition policy as applied to liner shipping.

These Principles were reviewed and extended in late 1999 when the Maritime Transport Committee agreed to a number of new elements to reflect recent developments in the shipping sector.

These new elements, which were formally adopted by the OECD Council in September 2000[29] [C(2000)124/FINAL], cover the following matters:

- Non-discriminatory treatment as regards the access to and use of maritime auxiliary services. The new principle also provides that where these auxiliary services are commercially provided there should be a free and fair competitive environment as regards their provision.

- Non-discriminatory treatment as regards the access to and use of services involving a sea-leg in international maritime transport, as well as a free and fair competitive environment in regards to their provision.

- Measures relating to the promotion of safety, the protection of the environment and the prevention of substandard shipping.

The UN Convention on a Code of Conduct for Liner Conferences (UN Liner Code)

Objectives and principles of the Convention

36. The Convention is a complex document that attempts to give effect to certain objectives and principles:

- Facilitating the orderly expansion of world sea-borne trade.

- Facilitating the development of regular and efficient liner services adequate to the requirements of the trade concerned.

- Ensuring a balance of interests between suppliers and users of liner shipping services;

- Discouraging conference practices which involve any discrimination against the shipowners, shippers or the foreign trade of any country.

- Encouraging conferences to hold meaningful consultations with shippers' organisations, shippers' representatives and shippers on matters of common interest with, upon request, the participation of appropriate authorities; and

- Requiring conferences to make available to interested parties pertinent information about their activities which are relevant to those parties and to publish meaningful information on their activities.

37. In pursuance of these principles and objectives the Convention establishes procedures for relations among conference members, including national flag carrier participation and cargo sharing,[30] relations between conferences and shippers (loyalty agreements, consultations, criteria for freight rate determination, conference tariffs, general rate increases, surcharges, etc.) and conciliation machinery for dispute settlement.

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29 . Greece and Turkey placed partial reservations on the first two of the new Principles.

30 "Cargo sharing" is defined as the reservation by a country's authorities of the ocean carriage of its exports and imports to a) the ships of its own national fleet and b) those of the countries with which it trades – usually in equal proportions. This leaves a smaller share remaining for vessels from third-party states.

38. The Convention clearly describes and limits the role of governments; i.e. governments have the primary responsibility for recognising national lines (a prerequisite to qualify as national carrier in order to make use of the provisions of the Code) and the right to participate in consultations between shipper organisations and conferences. However, as a general rule, governments would distance themselves from the day-to-day activities of commercial parties, and decision-making on commercial issues would be done by the commercial parties or through the Code's machinery for resolving disputes.

The cargo sharing formula of the Convention

39. Debate about the Convention has been directed principally to the special position it provides for national carriers within conferences and, in particular, to the cargo entitlements of those lines. Under Article 2, national lines (which are guaranteed conference membership subject to readily fulfilled criteria) of the countries at either end of a given trade are entitled to equal rights of participation in the carriage of cargoes generated by their mutual trade and carried by the conference. Cross-traders are entitled to "a significant part such as 20%." From these provisions has been derived the so called "40:40:20 formula." It should be noted that the 20% figure and therefore the "40:40" is recommended only. However, two important qualifications need to be made about this provision. First, the provisions concern conference trades only and not the totality of the liner trade. Second, it is for conferences themselves, not governments, to determine the allocation of the cargo shares between conference members. Governments have no part to play in that allocation.

40. The practical significance of the cargo-sharing formula of the Convention is that the national lines at each end of the trade can exact 40% of the conference trade by simply not "agreeing otherwise." Prima facie, any such formula would constitute a curtailment of the unrestricted opportunity of residents of OECD Member countries to avail themselves of all services in connection with international maritime transport which is offered by residents of any other Member countries, as provided by Note 1 of CLIO (see above). However, most closed conferences, in addition to freight rate fixing, have market sharing and polling provisions. That is, each line which is a member of a closed conference is provided with a certain market share and by mutual agreement with other lines cannot offer services in excess of those fixed by the conference agreement. The provisions of services by lines in closed conferences, either in trades covered or not covered by the Convention (Codist or non-Codist) is thus restricted in both cases. The only difference is the extent. While in non-Codist trades the amount of services is limited by the conference agreement, Codist trades are bound - if not otherwise agreed - by the provisions of the Convention. This has led certain supporters of the Code to argue that the issues raised by the UN Convention are not much different to those raised by the closed conference system as such, and to the extent that the latter is tolerated, the UN Convention should be considered as compatible with OECD obligations. However, it must be noted that the closed conference system, which is the underlying concept for the UN Convention, is not acceptable to all OECD countries in their national trades.

Non-conference shipping and the Convention

41. The Convention is silent on the subject of non-conference shipping lines and hence does not deal with individual shipping lines outside conferences. Non-conference shipping (except for a few minor references) is relegated to a Resolution adopted at the same time as the Convention. This recognises their existence and allows them to operate provided that they adhere to the principle of free and fair competition on a commercial basis. This Resolution was meant to preserve the shipper's option to choose between using conference and non-conference lines and to protect outsiders, as it was feared that the relative position of outsiders could be weakened by the strengthened conference system envisaged by the Convention.

The Convention and the Brussels Package

42. Most EU Member States, plus Norway, are parties to the UN Convention on a Code of Conduct for Liner Conferences in a manner that safeguards the conditions of competition among lines from EC and other OECD countries, so as to accord a preferential treatment to national lines of developing countries, in accordance with an EC Council Regulation of 15 May 1979 (the "Brussels Package"). This renders the cargo sharing provisions of Article 2 of the Code inapplicable in conference trades between EC Member States and, on a reciprocal basis, between EC Member States and other OECD countries. It also makes subject to redistribution, among the conference lines of the Member States and of other OECD countries offering reciprocity, the shares of the national lines of the Member State concerned.

43. Furthermore, these countries made a declaration at the time of ratification concerning non-conference line participation. They stated that the Convention does not oblige contracting parties to accept the validity of regulations, measures or situations whereby conferences acquire effective monopoly in trades subject to the Convention. Moreover, they stressed that the Government making the declaration is not precluded by the Convention from taking appropriate steps in the event that another contracting party adopts measures or practices that prevent fair competition on a commercial basis in its liner trades.

44. In the view of OECD Member countries that have ratified the Convention, the Brussels Package - together with the Outsider Declaration - enables them to fulfil their OECD obligations. However, this view is contested by other Member countries who believe that the Brussels Package falls short of the requirements of Articles 8 and 9 of CLIO. This stipulates that measures of liberalisation other than those among a special customs or monetary system must be extended to all OECD countries.

45. Countries opposing the Convention do so for a variety of reasons. Those that are most often cited are: cargo sharing would lead to inefficiencies and reduced competition, reduction of shipper choice, and ultimately to higher freight rates; shipper protection could be provided more efficiently through national legislation; ratification would be inconsistent with OECD obligations and run counter to existing competition legislation.

The Convention's impact on world trade

46. Despite having been in force for more than 15 years, it has to be noted that the Convention is nowadays of limited economic relevance - due to the changed shipping environment and the progressive liberalisation in OECD shipping relations with non-member countries.

47. The Convention reflects the shipping situation of the late 1960s and early 1970s when most liner trades were predominantly conference-orientated. Since that time conferences have lost a significant volume of cargoes to non-conference lines. The implementation of the Convention, together with its cargo sharing provision, have not had a negative effect on the level of carryings of non-conference shipping lines. On the contrary, non-conference shipping lines have had an increasing opportunity to provide services and to carry increasing amounts of cargoes, associated with a significant reduction of cargoes carried by conferences under the provisions of the UN Liner Code. As a consequence, the present liner conference system is significantly weaker than in the early 1970s.

48. Furthermore, previously most liner trades were conventional. Given the typical size of liner vessels at that time, even smaller countries were in a position to transport large parts of their liner conference trades by a number of vessels which could provide an adequate frequency of services. In the interval, the situation has changed dramatically; trades are now almost totally containerised and the majority are served by large and very capital-intensive vessels, having the effect that due to the cost of

such vessels not all countries' shipping lines are in a position to participate in efficient and remunerative liner trades - conference and non-conference alike.

49. Another aspect of the changed shipping environment is the appearance, towards the end of the 1970s, of a wide range of multimodal transport operations that are outside the Convention. An eventual extension of the application of the Convention to multimodal transport operations would create problems for conferences in fulfilling their obligations under the Convention. This is because such a measure would impose undue problems for conferences concerning consultations on prices of the through service, the requirement for a rate freeze and the determination of eventual cargo shares and their allocation in accordance with the provisions of the Convention.

50. Overall, it has to be noted that the 40/40/20 cargo sharing formula of the Convention is only rarely applied by shipping lines of contracting parties, and governments of contracting OECD and non-OECD member countries see no reason to intervene. However, it is also fair to observe that while the direct effect of the Code has been relatively small, its indirect effects may have been more pronounced. For example, a number of countries in Africa, Asia and Latin America have from time to time applied the code and some sought MFN exemptions for the Code during the GATT negotiations. In addition there were some instances where the Liner Code was used as a justification for exclusionary policies that created market distortions, or certain sections of the Code were applied as justification for other policies. In some instances the Code provisions were misused in efforts to justify the extension of the 40/40/20 cargo sharing elements to the whole of the liner trade, or even to cover bulk trades. However, despite this, the overall judgement must be that the impact of the Liner Code has been minimal, and declining.

51. Withdrawal from the Convention would have no effects on the economic performance of liner conference companies. However, withdrawal from this highly political multilateral instrument could be understood as a negation of established and commonly agreed conference/shipper relations. This could create a number of political problems with certain developing countries, particularly those in West Africa, which regard the Code as an important political achievement in South/North relations. Today's value of the Convention is that it provides an accepted framework for liner operators and their relations with shippers (consultations, freight rate discussions, dispute settlement etc).

3. OECD Member countries' national cargo reservation policies

52. The United States and Turkey are the only OECD Member states in which cargo reservation policies still apply. with the following provisions made for access to commercial and government-related cargoes:

a) Access to commercial cargoes

United States

53. US Public Law 104-58 of November 1995 requires US-flag vessels for the carriage of oil exports from Alaska. In defence of this legislation, the US argues that:

- This measure was necessary to secure the lifting of an export ban on Alaskan oil exports.
- The impetus for this legislation was energy policy and not maritime or trade policy.

- There are only about two shipments a month and that this should be seen against the larger picture of carriage of oil to and from the US. Most US oil imports arrive in non-US flag tankers.

54. Opponents to this expansion of cargo reservation to the field of commercial cargoes, in addition to existing government-related cargoes stress that this legislation is discriminatory. They argue that it constitutes a threat to the system of international free trade and represents a material and significant breach of US obligations as entered into in multilateral and bilateral treaties.

b) Access to governmental, government-financed or government-guaranteed cargoes

Turkey

55. Up to 1983, regulations required all imports for the account of the State or of nationalised enterprises to be transported by Turkish-flag vessels. This restrictive policy was liberalised in 1983 by Decree 152, which stipulates that all imports for the account of the State are to be carried on board Turkish-flag vessels if the freight rate is not more than 10% higher than that quoted by foreign operators. If, on the other hand, the rate quoted by Turkish operators is more than 10% above that of their foreign competitors, foreign-flag vessels must move the imports. In practice, however, the Turkish government does not monitor the implementation of these provisions which, as a result, appear to have only an exhortatory value.

United States

56. Cargo preference for government-related cargoes has a long history in the US. The primary US cargo preference laws are:

The Cargo Preference Act of 1954 (P.L. 83-664). This requires that at least 50% of the gross tonnage of all government-generated cargo are transported on privately-owned, US-flag commercial vessels to the extent such vessels are available at fair and reasonable rates. (If this condition is not met, the Maritime Administration may grant a waiver). In 1985, the Merchant Marine Act of 1936 was amended to require that the percentage of certain agricultural cargoes required to be carried on US-flag vessels increase from 50 to 75 percent.

The Cargo Preference Act of 1904. This requires all items procured for or owned by US military departments and defence agencies be carried exclusively (100%) on US-flag vessels available at fair and reasonable rates. (If this condition is not met, the Maritime Administration may grant a waiver). These cargoes are generated primarily by Department of Defense (DOD) contracts with domestic and foreign contractors. Cargo preference applies not only to the end product, but also to component parts.

Public Resolution (P.R.) 17 of the 73rd Congress. This requires all cargoes generated by the Export-Import Bank to be shipped on US-flag vessels, unless a waiver is granted. If a recipient country does not discriminate against vessels of the United States and requests a general waiver, it would be allowed to move 50 percent of the cargoes on national-flag vessels. In the Ex-Im Bank program, total tonnage increased from 144,752 tonnes in 1993 to 167,289 tonnes in 1994. US operators' carriage decreased by 34 percent from 104,034 tonnes in 1994 to 68,171 tonnes in 1995.

57. As a general rule, the recipient country pays the cost of transporting government-donated cargoes. Under Ex-Im Bank programs, the credit terms include transport costs for US-flag vessels, but not for foreign-flag carriage. Under agriculture programs, such as PL-480, Food for Progress and Section 416, the federal government pays the freight differential between the US-flag cost and the foreign-flag costs. Under donation-type agriculture programs, the costs are generally shared. Under the Foreign Military Finance Program, the terms of the sale determine whether the transportation costs are paid by the US Government or by the recipient country.

58. Compliance with the three major cargo preference laws is considered to be essential in encouraging Federal agencies to maximise the use of US-flag vessels. While precise data is not available on the percentage of total volume by tonnage of US ocean-borne foreign trade covered by the cargo preference laws, this was estimated at about 1 to 2% in 1996.

4. Ship registration conditions in OECD Member countries

Australia

59. The Ship Registration Act 1981 requires that, for a ship to be registered in Australia, it must be majority Australian-owned,[1] unless the ship is designated chartered by an Australian operator. (N.B.: in May 1997, proposals were made to amend the terms of this legislation).

Austria

60. Requirements for the right of flag and registration: more than 50% ownership by EEA nationals and a principal place of business located in Austria.

Belgium

61. Sea-going vessels automatically have Belgian nationality if they belong to: i) Belgians domiciled and resident in Belgium; ii) commercial companies that have their main establishment in Belgium.

62. The Minister of Communications can grant Belgian nationality to vessels belonging to: i) Belgians who do not live in Belgium; ii) foreigners who have had their habitual and effective residence in Belgium for at least a year. Foreigners are therefore allowed to operate vessels flying the Belgian flag if they have been authorised to do so by the Minister; consequently, they are not obliged to set up a Belgian company.

63. The draft of a new Royal Decree provides that sea-going vessels can be registered if they belong to: i) natural persons habitually and effectively resident in Belgium; ii) natural persons effectively established in an EU Member State.

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1 *i.e.* owned by an Australian citizen, a body corporate established by or under law of the Commonwealth or of a State or Territory of Australia.

Canada

64. To register a vessel in Canada for purposes of providing international maritime transportation services, the owner of that vessel must be:

- A Canadian citizen or a citizen of a Commonwealth country; or

- A corporation incorporated under the laws of, and having its principal place of business in, Canada or a Commonwealth country.

Denmark

65. The right to fly the Danish flag is reserved for vessels owned by persons or at least two-thirds owned by companies which have EU nationality or the nationality of one of the countries which is party to the European Economic Area (EEA) agreement. The above-mentioned persons or companies must practise their business by means of an establishment in Denmark. Companies must either have a primary establishment in Denmark or a secondary establishment in Denmark based on a primary establishment within the EU/EEA. In case of secondary establishment in Denmark, the vessel must be directly controlled and operated from Denmark.

Finland

66. Since 1 January 2000, as well as Finnish nationals or Finnish companies, all EU nationals, and nationals of countries that are members of the EEA Agreement, may own more than 60% of a Finnish flagged vessel, including fishing vessels.

67. The requirement implements Article 91 of UNCLOS, according to which there must be a genuine link between the State of registration and the ship, and it is in compliance with generally established international practice.

68. The principal place of business and the effective control of the operation of the vessel is exercised in the State of registration. The State of registration shall, according to Article 94 of UNCLOS, effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag.

France

69. In order to be registered in France, ships must either be:

- Owned by natural persons and at least half-owned by nationals of the EEA, a Member State of the European Community or, in respect of ships used for trade or pleasure boating, a Contracting State to the Agreement on the European Economic Area; or

- Wholly owned by firms headquartered in France or another Member State of the European Community or, in respect of ships used for trade or pleasure boating, a Contracting State to the Agreement on the European Economic Area. This is on the condition, in the latter two cases, that the ship's operation and utilisation be managed and controlled from a permanent establishment located in France.

70. Notwithstanding, under certain conditions, the head office may be located in an EU non-member State or a non-contracting State to the Agreement on the European Economic Area. This is if, under an agreement between France and that other State, a company constituted in accordance with French law may conduct its business normally, and have its head office, in the said State. In this case as well, the ship's operation and utilisation must be managed and controlled from a permanent establishment located in France.

Germany

71. Registration in the German Ship Register is reserved to vessels that are owned by nationals of an EU Member State or by companies having their place of business in an EU Member State. The registration is a precondition for the right to fly the German flag.

Greece

72. Ownership of a vessel under the Greek flag is limited to 49% for non-Greek natural or legal persons.

Hungary

73. Licenses for ships on internal waterways may only be issued to vessels owned by Hungarian companies and to foreign-owned or controlled companies flying the national flag. Vessels of Hungarian firms with foreign participation above 50% may not operate in international waters unless provided by an existing bilateral agreement.

Ireland

74. Qualification to own an Irish-registered ship or a share in an Irish-registered ship is currently confined to Irish citizens, Irish bodies corporate, citizens or bodies corporate of a "reciprocating" State. States currently defined as reciprocating States are the UK and Colonies, Canada, New Zealand and Pakistan.

Italy

75. For a vessel to be Italian-registered, at least 50% must be owned by Italian citizens, the Italian public sector or Italian private companies. In this respect, EC nationals (persons or companies) are equal to Italian nationals. Non-EU foreigners may have only a minority interest in Italian flag vessels. They may have a majority participation in Italian joint stock companies owning Italian ships, provided that national interest predominates in their administration and management. Italian ships can also be owned by companies incorporated abroad if such companies have a branch in Italy where they are represented by Italian citizens. Exemptions may be allowed by the competent Minister if a foreigner has lived in Italy for more than five years or if a company has its primary establishment in Italy.

Japan

76. Ships are defined as Japanese vessels eligible to fly the Japanese flag if owned by: i) the Government of Japan or a Japanese public office; ii) Japanese nationals; iii) a juridical person whose principal place of business is located in Japan, and two thirds of whose representatives are Japanese nationals.

Korea

77. Registration of a ship under the Korean flag is reserved to: i) Korean nationals; ii) public bodies; iii) trading corporations; iv) companies that are majority-owned by Korean nationals;[2] v) other companies whose representative is a Korean national and whose head office is located in Korea.

Luxembourg

78. In order to be registered under the Luxembourg flag, more than 50% of the vessel must be owned by Luxembourg or EU nationals or by companies established in Luxembourg. The master of the vessel must be a national of an EU country.

Mexico

79. Only natural and legal persons established in accordance with national legislation may have vessels flying the Mexican flag (Article 10 of the Shipping Act).

Netherlands

80. The right to fly the Netherlands flag is reserved for ships at least two-thirds owned by persons or companies which have the EU nationality or the nationality of one of the countries which is party to the European Economic Area (EEA) agreement. The above-mentioned persons or companies must practise their business by means of an establishment in the Netherlands and operate the vessel from the Netherlands. The management of the above-mentioned establishment must be in the hands of persons who have the EU nationality or the nationality of one of the countries which is party to the EEA Agreement.

New Zealand

81. Only ships majority-owned by a New Zealand citizen or residents may be registered in New Zealand.

Norway

82. A ship is regarded as Norwegian and may be registered in the ordinary Norwegian Ship Register when owned by Norwegian citizens, or by a Norwegian company where Norwegian citizens own at last 60% of the capital. When the company is a limited liability company, it headquarters must be in Norway,

[2] For this purpose, 60 percent of the voting rights that can be exercised by the board of directors must be in Korean hands and the representative director must have Korean nationality.

the majority of the members of the board, including the chairman, must be Norwegian citizens living in Norway for at least two years. Exemptions from the 60% rule may be granted.

83. In the Norwegian International Ship Register (NIS), there are no such limitations. However, a ship with more than 40% foreign ownership must be operated by a Norwegian shipowning company having its registered office in Norway or by a Norwegian management company. If a foreign company registers the ship directly in the NIS, a Norwegian representative is required.

Poland

84. A ship may be registered in the Polish Ship Register and hoist the Polish flag only if:

- It belongs to a Polish citizen or a company with its seat in Poland or it belongs to the State Treasury.

- The shipowner has its seat in Poland and the ship is partly owned by the aforementioned persons or entities.

- The shipowner has its seat or representative office in Poland and has fulfilled all conditions necessary to register the ship for a definite period of time.

Portugal

85. Registration of vessels in the national register is reserved to residents in Portugal, and the ship must comply with technical requirements such as safety and environmental standards fixed by national rules (in accordance with IMO Conventions and EC Regulations). The registry does not involve quantitative requirements.

Spain

86. Article 76 of Law 27/1992 on Ports and Merchant Marine provides that natural persons and corporations domiciled in Spain or in countries of the European Economic Community shall have the right to register and flag civilian vessels. This is provided that corporations domiciled in countries of the European Community designate a representative in Spain.

Sweden

87. A ship is entitled to fly the Swedish flag if it is more than half-owned by a Swedish national or a Swedish legal entity. The Swedish national maritime administration may grant the right to fly the Swedish flag to other ships whose operation is essentially under Swedish control and whose owner has his permanent residence in Sweden.

Switzerland

88. An enterprise may not register a vessel that is intended to transport persons or goods, or that takes part in other commercial maritime activities, unless a majority of its capital and two-thirds of its voting rights, administrative bodies and management are in Swiss hands.

United Kingdom

89. A ship cannot be deemed a "British" flag vessel unless a majority interest in it is owned by:

- British citizens or persons who are nationals of an EEA Member State other than the UK and are established in the UK.
- British Dependent Territories' citizens.
- British Overseas citizens; persons who under the British Nationality Act 1981 are British subjects.
- Persons who under the Hong Kong (British Nationality) Order 1986 are British Nationals (Overseas).
- Bodies corporate incorporated in any relevant British possession with a principal place of business in the UK or any such possession; or European Economic Interest Groupings.

United States

90. A vessel of at least five (5) net tons that is not registered under the laws of a foreign country is eligible for documentation in the United States if the vessel is owned by:

- An individual who is a citizen of the United States.
- An association, trust, joint venture, or other entity.

  a) all of whose members are citizens of the United States, and
  b) that is capable of holding title to a vessel under the laws of the United States or of a State.

- A partnership whose general partners are citizens of the United States, and the controlling interest in the partnership is owned by citizens of the United States; or a corporation established under the laws of the United States or of a State, whose president or other chief executive officer and chairman of its board of directors are citizens of the United States and no more of its directors are non-citizens than a minority of the number necessary to constitute a quorum.

91. A business entity must have a United States citizen as its president or other chief executive officer, the chairman or its board or directors, and a majority of the members of its board of directors if it owns a vessel or vessels:

- Operating in the domestic trade of the United States, or
- Built with the aid of construction subsidies, financed with the aid of ship financing guarantees, operated with the assistance of operating subsidies or in receipt of certain tax deferred benefits.

Table 8. **Registration Conditions in OECD Countries**

Country	Registration Requirements
Australia	vessel must be majority Australian-owned unless designated to be chartered by an Australian operator
Austria	over 50% ownership by EEA-nationals; principal place of business must be located in Austria
Belgium	vessel must be owned by nationals domiciled and resident in Belgium or legal identities having their main establishment in Belgium
Canada	vessel must be owned by Canadian/Commonwealth citizens/company, principal place of business must be in Canada/Commonwealth country.
Denmark	at least 2/3 of the vessel must be owned by persons/companies of EU/EEA nationality, principal place of business must be in Denmark
Finland	more than 60% of Finnish registered vessels must be owned by Finnish nationals, principal place of business must be in Finland
France	50% of the vessel must be owned by EU/EEA nationals or wholly owned by companies headquartered in a EU country, principal place of business France
Germany	vessel must be owned by an EU national or a company having its principal place of business in an EU Member country
Greece	foreign ownership in Greek flag vessel is limited to 49% for non-Greek natural or legal persons
Hungary	foreign ownership is limited up to 50% unless bilateral agreements imply otherwise
Ireland	vessels must be fully owned by Irish nationals/corporations or nationals/corporations of a reciprocating state (i.e. UK, Canada, New Zealand and Pakistan)
Italy	at least 50% of the vessel must be owned by Italian or EU nationals (persons or companies), derogations can be granted under certain circumstances
Japan	vessel must be fully owned by Japanese nationals or companies having their principal place of business in Japan, two-thirds of the representatives must be Japanese
Korea	majority-owned by Koreans (60% of the voting interest); board of directors and representative director must be Korean nationals
Luxembourg	over 50% ownership by EU-nationals or companies established in Luxembourg; master must be EU-national
Mexico	vessels must be owned by Mexican natural/legal person
Netherlands	ship must be owned 2/3rds by EU/EEA-nationals; place of business must be in the Netherlands; management must be in the hands of EU/EEA-nationals
New Zealand	ships must be majority-owned by New Zealand citizens/residents
Norway	if registered in the NIS,* ships with more than 40% foreign ownership must be managed by a Norwegian company with its registered office in Norway.
Poland	ship must be owned by Polish citizens or a company incorporated in Poland
Portugal	only resident in Portugal can register vessels under the Portuguese flag
Spain	EU nationals or companies; corporations must be domiciled in an EU country and have a representative in Spain
Sweden	50% of the vessel must be owned by Swedish nationals or if the vessel is essentially under Swedish control and its owner his permanent residence in Sweden
Switzerland	majority of the capital and two thirds of the voting rights, administrative bodies and management must be exercised by Swiss nationals
United Kingdom	ship must be owned by EEA-citizens; place of business must be in the UK

ANNEX D

MAJOR INTERNATIONAL SAFETY & ENVIRONMENT REGULATIONS

1. The maintenance of standards and safety is a prominent motivation for regulatory practices in the maritime transport sector. Regulations are put in place to protect safety of lives at sea as well as the protection of the marine environment. Since 1960 a series of ship safety and pollution prevention regulations have been elaborated by the International Maritime Organisation that now apply in almost all OECD Member countries, and are listed below. These regulations took effect in the following chronological sequence:

The "International Convention on Load Lines" (entered into force 21 July 1968):

2. This Convention superseded its predecessor of the same name, which had been introduced in 1930, and defines the limitations on vessel draft to which a ship may be loaded. Load lines must be marked amidships on both sides of the vessel's hull, thus contributing to the ship's stability and helping to prevent excessive loading of cargo. Three sets of amendments to this Convention, adopted in 1971, 1975 and 1983 respectively, are still awaiting acceptance from a sufficient number of IMO Member states before they can enter force.

The "International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Damage," or "Intervention Convention" (6 May 1975):

3. This clarifies the rights of the coastal state; in particular, it grants permission to take measures that would otherwise contravene international law, if the aim is to avert marine pollution or the threat thereof, i.e. it establishes an entitlement that did not previously exist to intervene on purely environmental grounds. Although pollution is more likely to ensue from oil carriers, the Convention is applicable to all ship types except offshore installations, warships, and government-owned non-commercial vessels. To exercise its powers of intervention, the coastal state must first consult the flag state authorities and owner of the offending vessel, the cargo owner and, if possible, independent experts.

The "International Convention on Civil Liability for Oil Pollution Damage" (19 June 1975)

4. Also known as the "Civil Liability Convention" (CLC), this applies to oil tankers carrying 2 000 tonnes or more of persistent oils,[31] and was devised as a direct response to the "Torrey Canyon" oil spill off the UK in 1967. As its terms do *not* apply to oil used as bunkers, the Convention is applicable only to tankers and combined carriers carrying oil cargoes in bulk, and obliges a shipowner to maintain

[31] *i.e.* crude oil, fuel oil, heavy diesel oil or lubricating oil.

specified levels of insurance cover to meet liability claims in the event of oil pollution.[32] The Convention was updated by a Protocol that came into force in 1996.

The "Convention on the International Regulations for Preventing Collisions at Sea" or "COLREG" (15 July 1977):

5. "COLREG" superseded the international regulations governing vessel collisions that had been devised in 1960; in particular, it is noteworthy for its introduction of provisions for ship procedures under traffic separation systems. It also features requirements for vessel operations in narrow channels and in restricted visibility, plus stipulations for ships undergoing manoeuvrability problems.

The "International Convention for Safe Containers" (6 September 1977):

6. The objectives of this Convention are to ensure high levels of safety for the shipment and handling of containers, and to establish uniform standards for containers, irrespective of whether these are carried by sea, road or rail. Its adoption and subsequent entry into force were a specific response to the growth of world trade in containerised cargoes.

The "International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage," or "Fund Convention" (16 October 1978):

7. This creates a fund that can provide payments to victims of oil pollution if the provisions available under the Civil Liability Convention are insufficient. Contributions to the fund are made via a levy on oil companies that receive more than 150 000 tonnes p.a. of persistent oils, meaning that the economic burden of ensuring compensation to victims is thus shared between the shipping industry and cargo owners. The compensation scheme is administered by the International Oil Pollution Compensation Fund (the "IOPC Fund"). A 1992 Protocol to this Convention that entered into force in 1996 extended its scope to cover: a) damage within a country's Exclusive Economic Zone, b) spills from unladen tankers and c) the cost of preventive measures undertaken when pollution is threatened but does not ensue.

The "International Convention for the Safety of Life at Sea," or "SOLAS 74" (25 May 1980)

8. "SOLAS 74" specifies various requirements for vessel equipment and operation to promote safety of life at sea. As the IMO explains:

> "The SOLAS Convention in its successive forms is generally regarded as the most important of all international treaties concerning the safety of merchant ships[33]. The main objective of the SOLAS Convention is to specify minimum standards for the construction, equipment and operation of ships, compatible with their safety. Flag states are responsible for ensuring that ships under their flag comply with its requirements, and a number of certificates are prescribed in the Convention as proof that this has been done."

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32 Special exemptions apply if the shipowner can prove that the pollution resulted from an act of war, natural phenomena or negligence by parties responsible for navigational aids.

33 There have now been five international Conventions of that name, following previous regulations adopted in 1914, 1929, 1948 and 1960.

9. Its various provisions relate to cargo-carrying and passenger ships, including chapters that cover requirements for surveying of vessels; ship subdivision and stability; machinery and electrical installations (including steering gear); plus fire protection, detection and treatment. Further chapters also deal with life-saving appliances; radiotelegraphy and radiotelephony; safe navigation; the stowage, trimming and securing of grain cargoes to prevent shifting; carriage of dangerous goods other than liquids and gases in bulk; and requirements for nuclear ships. More recently, there have been several extra chapters added; these contain provisions for the management of safe ships (see ISM Code below), safety measures for high-speed craft and the improvement of dry bulk carrier safety via enhanced ship surveys[34] (a requirement for vessels of five years old or greater). The authority of port state control officers is also extended to include assessment of operational procedures if "clear grounds" exist to doubt the ability of a foreign ship's crew to perform their duties.

The "SOLAS Protocol," or "SOLAS 78" (1 May 1981):

10. The 1978 Protocol incorporates a series of changes to "SOLAS 74," and is primarily notable for its introduction of mandatory IGS requirements for:

- all new crude and products tankers of 20 000 dwt and above;
- existing crude oil carriers of 20 000 dwt and above. For vessels of 70 000 dwt and over, these took effect from 1 May 1983. For ships of 20-70 000 dwt, IGS requirements became effective from 1 May 1985. However, ships of 20-40 000 dwt were exempted from the need to comply if fitting of IGS was found to be "unreasonable or impractical" and if high-capacity crude oil washing equipment was not to be used;
- existing product carriers of 70 000 dwt and above from 1 May 1983 and for ships of 40-70 000 dwt from 1 May 1985. The latter date also applied for product tankers of 20-40 000 dwt equipped with high-capacity tank washing machinery.

NB: IGS is **always** *required when crude oil washing (COW) is operated.*

11. Further provisions require ships of 1 600 grt and greater to have two independently operated radar systems, each operable separately from the navigating bridge. Vessels of 10 000 grt and above must also possess two independent steering gear control systems, including two or more identical power units.

The "International Convention for the Prevention of Pollution from Ships 1973/78," or "MARPOL 73/78" (2 October 1983)[35]

12. In contrast to SOLAS, the MARPOL Convention ("MARPOL 73") and its Protocol ("MARPOL 78") are treated as a single instrument ("MARPOL 73/78"). N.B.: unlike earlier international regulations concerning oil pollution, the MARPOL Convention also covers the disposal of other harmful substances.[36]

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34 These are comparable to the enhanced survey requirements for tankers that are stipulated under MARPOL 73/78.

35 NB: this supersedes the IMO's "OILPOL" Convention, which entered force on 29 July 1954 and had been the first attempt to devise international standards regulating accidental and operational pollution of the seas by oil.

36 Of MARPOL's six technical annexes, two (Annexes I and II, which relate to oil and noxious bulk substances respectively) are mandatory. Annexes III, IV, V and VI (covering harmful substances in packaged form; sewage; garbage; and air pollution respectively) are optional.

13. The only vessels exempt from its Annex requirements concerning pollution arising from oil are tankers of less than 150 gt and other ship types of below 500 gt. Apart from seeking to minimise accidental pollution caused by tanker accidents, the Convention:

- Entirely prohibits ocean-going ships from deliberately discharging oil (whether persistent or otherwise) and oily mixtures in stipulated locations. This provision applies for all locations within 50 nautical miles of land, plus IMO-designated "Special Areas." These include the Mediterranean, Baltic Sea, Black Sea, Red Sea and Arabian Gulf.

- Restricts the maximum volume of oil that an oil tanker may discharge in a ballast voyage to 1/30 000 of the vessel's cargo-carrying capacity;

- Sets maximum limits on the rates of discharge that are allowed outside these areas. These are now 30 litres per nautical mile.

- Obliges parties to the Convention to promote the provision of reception facilities for dirty wastes. (In September 1998 this requirement remained largely unfulfilled, even within the industrialised economies);

- Makes it mandatory for new and crude oil existing tankers to be equipped with COW and SBT.

14. For "new" tankers (i.e. vessels which were ordered from 1 June 1979 onwards, had their keel laid from 1 January 1980 onwards or were delivered after 1 June 1982), all ships of 20 000 dwt and above must possess COW and protectively located SBT. By comparison, "existing" crude oil tankers of 40 000 dwt or greater require either COW or SBT; "existing" product tankers need only be equipped with SBT or dedicated clean ballast tanks ("CBT").

The "International Convention on Standards for Training, Certification and Watchkeeping for Seafarers" (28 April 1984, as amended 1 February 1997):

15. The STCW Convention is the first to determine international requirements for seafarer training, certification and watchkeeping. Its terms include provisions for the keeping of navigational, engine and radio watches; there are also specific requirements for masters, officers and ratings serving on oil tankers, chemical tankers and liquid gas carriers. Since its entry into force, a series of amendments have been enacted in 1992, 1996 and 1997, with the last of these entailing a major overhaul of the Convention's original terms. The latest revision of the STCW Convention makes critically important reforms in the area of training.

Annex II to "MARPOL 73/78" - pollution from noxious liquids in bulk (6 April 1987)

16. Inter alia, this stipulates the rate at which a defined list of around 250 noxious substances can be discharged at sea. These are divided into four categories (A, B, C and D, in declining order of severity). Annex II requires ships that carry chemical cargoes in bulk to comply with the amended International Bulk Chemical Code (applicable for new ships, i.e. those built from 1 July 1986 onwards) and the Bulk Chemical Code (for existing vessels). No discharges of these substances are allowed within 12 nautical miles of land, with tighter restrictions applied in the Baltic and Black Seas.

Annex V to "MARPOL 73/78" - pollution from garbage (31 December 1988)

17. Annex V to MARPOL applies to all ships of 400 gt or greater (as well as passenger vessels certified to carry 15 or more persons). It requires vessels to carry a garbage management plan giving written procedures for collection, storage, processing and disposal of such materials. N.B.: the dumping of plastics at sea is entirely prohibited. Disposal of all other forms of garbage is only permitted to take place at least specified distances from shore, depending on the biodegradability of the materials concerned.[37] Stricter controls apply in IMO-designated "Special Areas."

Annex III to "MARPOL 73/78" - pollution from harmful substances in packaged form (1 July 1992)

18. This includes general requirements for standards of "packing, marking, labelling, documentation, stowage, quantity limitations, exceptions and notifications for preventing pollution by harmful substances." Its terms also apply to cargoes carried in freight containers, portable tanks, road and rail tank wagons.

Regulation 13F of "MARPOL 73/78" Annex I – double hulls for new ships (6 July 1993)

19. The terms of this regulation relate to the prevention of pollution in the event of vessel collision or stranding and largely mirror the provisions of the US Oil Pollution Act (or "OPA," as described under the sub-section "National Regulations"). Regulation 13F applies to new oil tankers of 5 000 dwt or greater,[38] requiring such vessels to be equipped with a double hull *or to be of "mid-deck" design*. Other alternative means of cargo containment to double hulls could also be permitted, subject to approval from the IMO's Maritime Environment Protection Committee. However, this would be "provided that such methods ensure at least the same level of protection against oil pollution in the event of a collision or stranding."

20. Among the various provisions of Regulation 13F:

- Minimum acceptable distances between the inner and outer hull are set, with a requirement of two metres applying for ships of 30 000 dwt and above.

- New requirements for ship subdivision and stability are introduced for vessels of 20 000 dwt and greater.

- A substantial reduction is made in the volumes of oil or oily mixtures permitted to be discharged into the sea – from 60 to 30 litres per nautical mile.

- Existing tankers of five years' age and above must undergo enhanced inspection, with these requirements applying to annual, intermediate and special surveys.

Regulation 13G of MARPOL 73/78 Annex I - double hulls for existing ships (6 July 1995):

21. In contrast to Regulation 13F for "new" ships, as described earlier, this applies to existing single-hulled crude oil tankers of 20 000 dwt and above, plus single-hulled product carriers of 30 00 dwt and

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37 These are at least 3 miles offshore for some forms of garbage and a minimum 25 miles for others.

38 "New" ships are defined for this purpose as those ordered from 6 July 1993 onwards, for which the keel is laid from 6 July 1994, or which are delivered from 6 July 1996 onwards. NB also: single-hulled tankers of between 600 and 5 000 dwt must have double bottoms, with limitations also applying on maximum cargo tank size.

over. Initially, it was intended that once Regulation 13G entered into force in July 1995, the vessels covered into by its provisions would be required to possess double bottoms *and* double sides on reaching 25 years of age. Ships already equipped with double bottoms *or* double sides, though, would need to comply by the time that they were 30 years old. After research by the IMO's MEPC, however, a decision was made in November 1994 that single-hulled ships could also continue trading until 30 years old, provided that they operated with hydrostatically-balanced loading (HBL)[39] A very limited number of oil tankers are now trading thus, although this is set to rise – depending on the acceptability of such tonnage to charterers.

"International Convention on Oil Pollution Preparedness, Response, and Co-operation" or "OPRC" (13 May 1995)

22. In an effort to improve prospects of preventing pollution from ships, the OPRC Convention was devised by the IMO to establish an international framework for co-operation and assistance in the treatment of major oil spills. Previously, no such attempt had been made to improve upon the piecemeal provisions that had evolved to tackle such situations or to promote the development of pollution response capabilities in countries not already equipped for such disasters. Ships, offshore platforms and ports are all required to possess an oil pollution response plan and to contact coastal authorities if a pollution incident arises, while national and regional response systems are required to be established. Parties to the Convention are then obliged to assist others that experience pollution incidents, in return for which due financial redress will be made.

"International Safety Management Code" or "ISM Code" (1 July 1998):

23. The principal objectives of the ISM Code, which became mandatory via the adoption of SOLAS Chapter IX ("Management for the Safe Operation of Ships") are:

- to enhance safety at sea;
- to prevent human injury or loss of life;
- to avoid damage to the environment or property.

24. Initially, the Code entered force from 1 July 1998 for vessels of 500 gt or above in the following ship type categories:

- passenger vessels carrying 15 persons or more, including high-speed craft;
- oil tankers, chemical tankers, gas tankers, dry bulk carriers (including ore carriers and combined carriers) plus high-speed cargo-carrying craft.

25. In the second phase of ISM Code implementation, its provisions will take effect from 1 July 2002 for other cargo-carrying vessel types and for mobile offshore drilling rigs of 500 gt or above. NB: government-controlled ships operating for non-commercial purposes are exempted from compliance.

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[39] HBL works on the basis that oil is less dense than water. Hence, if a ship only loads its cargo tanks to a level below that of the surrounding sea, any breach of the hull in an accident will result in a tendency for water to flow inwards, rather than for oil to escape. This is because the pressure of water outside exceeds that of oil from inside.

26. The ISM Code requires a Safety Management System (SMS) to be established for each ship, which a specifically defined shore-based party (the vessel owner, or other competent party, such as its manager or bare-boat charterer) is then responsible for implementing.[40] A copy of the SMS procedures must be kept onboard ship in a Safety Management Manual.

SOLAS Chapter XII: new safety rules for new and existing dry bulk carriers (1 July 1999):

27. These requirements were initially formulated by the International Association of Classification Societies (IACS) in direct response to the many total losses that took place in the early 1990s of dry bulk carriers and combined carriers.[41] It identified as major areas of prospective weakness within these vessel types: a) the bulkhead between No. 1 and 2 cargo holds, b) the ship's double bottom at this location. Research had indicated that many existing ships had suffered progressive flooding as a result of the collapse of this bulkhead, with older vessels being especially at risk in this regard. It therefore requires these areas to be subject to particular scrutiny at Special Survey and to be reinforced if appropriate.

28. The rules apply to all single-hull bulk carriers over 20 000 dwt with an overall length of 150 metres or above that transport high-density cargo. N.B.: for the purpose of these rules, the IMO defines "high-density cargoes" carried on existing ships as those with a density of 1.78 tonnes/m^3 or greater, i.e. iron ore, pig iron, steel, bauxite and cement. For new vessels, a more stringent definition of 1.0 tonnes/m^3 applies. This therefore also encompasses cargoes of wheat, rice and timber.

40 This person is required by the Code to have "direct access to the highest level of management."

41 As the IMO notes: "In the period 1990-94, 97 bulk carriers sank with the loss of 537 lives. Most were 15 years old or older." According to the IMO, an estimated 44% of these vessels apparently sank due to structural damage and/or heavy weather.