Chapter 2

STRUCTURE, OWNERSHIP AND REGISTRATION OF THE WORLD FLEET

This chapter reviews the supply-side dynamics of the world maritime industry. The information and data comprehensively cover the structure, ownership and registration of the world fleet. The chapter also reviews deliveries and demolition of ships, tonnage on order, newbuilding prices and markets for second-hand tonnage. The world merchant fleet expanded by 7.2 per cent during 2007, to 1.12 billion deadweight tons (dwt) at the beginning of 2008. With historically high demand for shipping capacity, the shipping industry responded by ordering new tonnage, especially in the dry bulk sector. Vessel orders are at their highest level ever, reaching 10,053 ships with a total tonnage of 495 million dwt, including 222 million dwt of dry bulk carriers. This represents 28 per cent of merchant fleet by number of vessels over 1,000 GT or, a 44 per cent in terms of volume. The average age of the world fleet decreased to 11.8 years. In container shipping, the share of gearless vessels continued to grow; the total TEU carrying capacity on the gearless cellular containerships built in 2007 amounted to 1.18 million TEUs, 8.5 times larger than the combined geared capacity of 0.14 million TEUs that entered the market during the same period.

As of January 2008, nationals of the top 35 shipowning economies together controlled 95.35 per cent of the world fleet, a further slight increase over the January 2007 figure. Greece continued to be the country with the largest controlled fleet, followed by Japan, Germany, China and Norway; together, these five countries held a market share of 54.2 per cent. Among developing countries, oil exporters tend to control a relatively high share of oil tankers, and large exporters of agricultural commodities and other dry bulks also tend to be host to dry bulk shipping companies; in the case of manufactured goods, there is no significant correlation between trade structure and fleet ownership.

A. STRUCTURE OF THE WORLD FLEET

1. World fleet growth and principal vessel types

Data on the world fleet for 2005–2008 are provided in figure 10 and table 6. At the beginning of 2008, the world merchant fleet reached 1.12 billion deadweight tons (dwt). Year-on-year growth on 1 January 2008 was 7.2 per cent, a gain of 82 million dwt. The tonnage of oil tankers increased by 6.5 per cent and that of bulk carriers by 6.4 per cent. These two types of ships together represent 71.5 per cent of total tonnage, a slight decrease from 72.0 per cent in January 2007. The fleet of general cargo ships increased by 4.5 per cent in 2007; as this growth rate was below the world total growth rate, this category's share of the total world fleet has further declined to 9.4 per cent. The fleet of containerships increased by 16.3 million dwt, or 12.7 per cent, and now represents 12.9 per cent of the total world fleet. This high growth rate reflects the increasing share of trade in manufactured goods, which is further enhanced by its continued containerization.

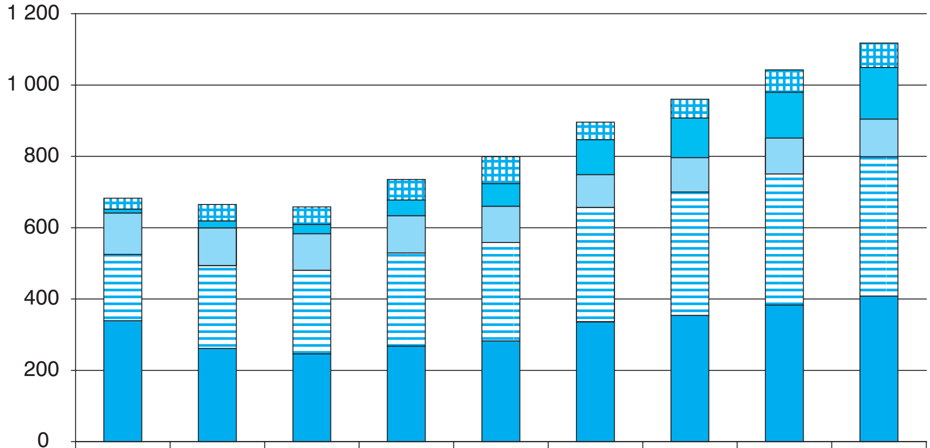
> The containership fleet grew by 12.7 per cent – a response to the increasing share of trade in manufactured goods, which is further enhanced by its continued containerization.

In 2008, only 1.1 per cent of the dry bulk fleet (0.4 per cent of the total fleet) are combined ore/bulk/oil carriers, a further decrease from the 1.5 per cent share of one year earlier. In spite of the high fluctuations in vessel charter rates, both for oil

Figure 10

World fleet by principal vessel types, selected years[a]

(Beginning of year figures, millions of dwt)



	1980	1985	1990	1995	2000	2005	2006	2007	2008
Other	31	45	49	58	75	49	53	63	69
Container	11	20	26	44	64	98	111	128	145
General cargo	116	106	103	104	101	92	96	101	105
Dry bulk	186	232	235	262	276	321	346	368	391
Oil Tanker	339	261	246	268	282	336	354	383	408

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

[a] Cargo carrying vessels of 100 GT and above.

tankers and for dry bulk carriers, the building cost differential between pure dry bulk carriers and combined carriers still deters investment in the more versatile combined carriers. Among other types of ships, in 2007 there was a continued strong growth of liquefied natural gas carriers (plus 11.5 per cent), reflecting the growing use of LNG in the global energy supply, although the record number of new LNG carriers also raised concerns of short-term overcapacity following delays in the completion of liquefaction plants.

2. The world containership fleet

In terms of deadweight tonnage, 53.9 per cent of the containerized tonnage is registered in the 10 major open and international registries, a slight decrease over the previous year. 27.9 per cent of deadweight tonnage on containerships is registered in developed market economies (down from 28.4 per cent in 2007), and 18.0 per cent in developing economies (up from 17.15 per cent). Among the developing economies, by far the largest share is registered in Asia, which increased its deadweight tonnage by more than one fifth, reaching a 17.6 per cent share (see table 7).

The world fleet of fully cellular containerships continued to expand substantially in 2007; by the beginning of 2008, there were 4,276 ships, with a total capacity of 10.76 million TEUs. This represented an increase of 9.5 per cent in the number of ships and 14 per cent in TEU capacity over the previous year. Ship sizes also continued to increase, with average carrying capacity per ship growing from 2,417 TEUs in January 2007 to 2,516 TEUs in January 2008 (see table 8). The average vessel size of new cellular containerships that entered into service in 2007 was 3,291. Behind the increase in average vessel sizes was a growing spread between the largest ships deployed on the main East–West routes, and the smaller containerships used for intraregional and feeder services. In 2007, the largest new fully cellular containerships were five 12,508-TEU vessels built in Denmark for the Danish company Maersk, and the smallest new deliveries were one 136-TEU ship built in Viet Nam for the Danish company Erria, and two Indonesian-built and operated 241-TEU ships.

Table 6

World fleet size by principal types of vessel, 2005–2008[a]

(Beginning-of-year figures, in thousands of dwt)

Principal types	2005	2006	2007	2008	Percentage change 2008/2007
Oil tankers	336 156	354 219	382 975	407 881	6.5
	37.5	*36.9*	*36.7*	*36.5*	*-0.3*
Bulk carriers	320 584	345 924	367 542	391 127	6.4
	35.8	*36.0*	*35.3*	*35.0*	*-0.3*
Ore/bulk/oil	9 695	7 817	5 614	4 284	-23.7
	1.1	*0.8*	*0.5*	*0.4*	*-0.2*
Ore/bulk	310 889	338 107	361 928	386 842	6.9
	34.7	*35.2*	*34.7*	*34.6*	*-0.1*
General cargo ships	92 048	96 218	100 934	105 492	4.5
	10.3	*10.0*	*9.7*	*9.4*	*-0.2*
Containerships	98 064	111 095	128 321	144 655	12.7
	10.9	*11.6*	*12.3*	*12.9*	*0.6*
Other types of ships	48 991	52 508	62 554	68 624	9.7
	5.5	*5.5*	*6.0*	*6.1*	*0.1*
Liquefied gas carriers	22 546	24 226	26 915	30 013	11.5
	2.5	*2.5*	*2.6*	*2.7*	*0.1*
Chemical tankers	8 290	8 919	8 823	8 236	-6.7
	0.9	*0.9*	*0.8*	*0.7*	*-0.1*
Ferries and passenger ships	5 589	5 649	5 754	5 948	3.4
	0.6	*0.6*	*0.6*	*0.5*	*0.0*
Other	12 566	13 714	21 062	24 427	16.0
	1.3	*1.1*	*1.9*	*2.2*	*0.3*
World total	895 843	959 964	1 042 328	1 117 779	7.2
	100.0	*100.0*	*100.0*	*100.0*	

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

[a] Vessels of 100 GT and above. Percentage shares are shown in italics.

Table 7

Distribution of dwt capacity of containerships, by country groups, 2007 and 2008[a]

(Beginning-of-year figures)

	2007		2008		Change 2007/2008		
	1 000 dwt	Per cent	1 000 dwt	Per cent	1 000 dwt	Growth, per cent	Percentage share
World total	128 321	100.00	144 655	100.00	16 333	12.73	-
Developed economies	36 475	28.42	40 356	27.90	3 881	10.64	-0.53
Transition economies	167	0.13	144	0.10	- 23	- 13.73	-0.03
Developing economies	22 006	17.15	26 084	18.03	4 079	18.54	0.88
of which:							
Africa	187	0.15	182	0.13	- 5	- 2.49	-0.02
America	663	0.52	401	0.28	- 262	- 39.46	-0.24
Asia	21 114	16.45	25 459	17.60	4 345	20.58	1.15
Oceania	41	0.03	41	0.03	0	0.00	0.00
Other, unallocated	51	0.04	67	0.05	16	31.01	0.01
10 major open and international registries[b]	69 622	54.26	78 002	53.92	8 381	12.04	-0.33

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

[a] Vessels of 100 GT and above.

[b] There exists no clear definition of "open and international registries". UNCTAD has grouped the 10 major open and international registries to include the 10 largest fleets with more than 90 per cent foreign-controlled tonnage. See table 15 for the list of registries.

Table 8

Long-term trends in the cellular containership fleet[a]

World total	1987	1997	2006	2007	2008	Growth 2008/2007
Number of vessels	1 052	1 954	3 494	3 904	4 276	9.53
TEU capacity	1 215 215	3 089 682	8 120 465	9 436 377	10 760 173	14.03
Average vessel size	1 155	1 581	2 324	2 417	2 516	4.11

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

[a] Vessels of 100 GT and above. Beginning of year figures, except 1987, which are mid-year figures.

By May 2008, the world containership fleet had reached approximately 13.3 million TEUs, of which 11.3 million TEUs were on fully cellular containerships. This fleet included 54 containerships of 9,000 TEUs and above, which were operated by five companies: CMA CGM (France), COSCON and CSCL (both from China), Maersk (Denmark) and MSC (Switzerland). Twelve existing ships had a capacity of more than 10,000 TEU; these included eight 12,508 TEU ships owned and operated by Maersk and four vessels of 10,000 to 10,062 TEUs owned and operated by COSCON. Maersk's largest containerships were registered in the Danish International Registry DIS, while COSCON's largest vessels were flying the flag of Panama.

Currently, the largest containerships are all gearless, i.e. the vessels depend on the ports' container cranes for the handling of the containers. Many smaller ports, especially in developing countries with infrastructure constraints in their ports, cannot accommodate large or gearless containerships. Operating costs for geared containerships are higher than on gearless ships, while loading and unloading speeds in the ports are lower.

> 55.9 per cent of general cargo tonnage is 20 years and older. Containerships have the lowest average age.

Of the fully cellular containerships that entered into service in 2007, 23.3 per cent were geared. The average vessel size of those geared ships was 1,473 TEUs, versus 3,843 TEUs for the gearless ships that entered into service during the same year. The total TEU carrying capacity on the gearless ships built in 2007 amounted to 1.18 million TEUs, 8.5 times larger than the combined geared capacity of 0.14 million TEUs that entered the market during the same period. The long-term trend towards larger and more gearless ships is also depicted in tables 9 (a),(b) and (c). Larger ships are far more likely to be gearless. On ships built after 2000, 87 per cent of the container carrying capacity is gearless, as is 94 per cent of the capacity on existing ships of 2,500 TEUs and above. Among containerships built since 2001, the number of gearless vessels is three times higher than that of geared ships.

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Shipping lines based in developing economies or companies that specialize in regional South–South or North–South shipping services have a higher share of geared vessels than companies serving mostly the East–West trade lanes. The six operators with the largest deliveries of geared containerships between January and May 2008 are all based in developing economies: TS Lines (Hong Kong, China); CSAV (Chile); Safmarine (based in South Africa, belonging to the Danish AP Moller Group); PIL (Singapore); UASC (Kuwait); and Maruba (Argentina). The six operators with the largest deliveries of gearless containerships during the same period are Maersk (Denmark); MSC (Switzerland); NYK (Japan); COSCON (China); APL (Singapore); and Hanjin (Republic of Korea).

3. Age distribution of the world merchant fleet

Table 10 provides data on the average age distribution of the world merchant fleet by both ship types and groups of countries and territories of registration. The estimated average age of the total world fleet continued to decrease during 2007 to 11.8 years. By vessel type, the youngest fleet continues to be that of containerships, with an average age of 9.0 years; 37.3 per cent of tonnage on containerships is younger than five years and only 12.4 per cent is 20 years and older. The average age of tankers increased marginally to 10.1 years, the average age of bulk carriers decreased slightly from 12.9 to 12.7 years, and general cargo vessels continue to be the oldest vessel type, with an average of 17.1 years and 55.9 per cent of tonnage 20 years and older. Only 12.0 per cent of general cargo tonnage is younger than 5 years, reflecting the trend that general cargo is increasingly containerized.

As regards country groupings, ships registered in developed countries are the youngest (average age of 9.7 years in January 2008), followed by developing countries (12.3 years) and transition economies (15.5 years). Replacement of general cargo vessels by containerships is particularly noticeable in the fleets registered in developing and transition economies. In these country groups, containerships were introduced later than in the developed market economies fleets. As a consequence, in developing economies, 39.2 per cent of containerships are younger than five years old, versus only 12.1 per cent of general cargo vessels in this age group. Of general cargo vessels registered in developing

Table 9 (a)

Geared and gearless cellular containerships in service in May 2008, by years of build and by vessel size

	Geared	Gearless	Total
Built during or before 2000	20.7	35.8	56.5
Built during or after 2001	10.6	33.0	43.5
Built during or after 2002	31.3	68.7	100.0

	Geared	Gearless	Total
Capacity of up to 2,499 TEU	27.9	33.0	60.9
Capacity of 2,500 TEU and above	3.4	35.8	39.1
Total	31.3	68.7	100.0

Source: Compiled by the UNCTAD secretariat on the basis of data from *Containerisation International Online*, May 2008.

Table 9 (b)

Container carrying capacity on geared and gearless cellular containerships in service in May 2008, by years of build and by vessel size

(Percentage of TEU)

	Geared	Gearless	Total
Built during or before 2000	10.2	31.2	41.3
Built during or after 2001	7.5	51.1	58.7
Total	17.7	82.3	100.0

	Geared	Gearless	Total
Capacity of up to 2,499 TEU	13.9	27.0	40.9
Capacity of 2,500 TEU and above	3.8	55.3	59.1
Total	17.7	82.3	100.0

Source: Compiled by the UNCTAD secretariat on the basis of data from *Containerisation International Online*, May 2008.

Table 9 (c)

Geared and gearless cellular containerships built in 2007

	Geared	Gearless	Total
Ships	93	306	399
Per cent of ships	23.3	76.7	100.0
TEU	136 956	1 176 011	1 312 967
Per cent of TEU	10.4	89.6	100.0
Average vessel size	1 473	3 843	3 291

Source: Compiled by the UNCTAD secretariat on the basis of data from *Containerisation International Online*, May 2008.

Table 10

Age distribution of the world merchant fleet, by types of vessel,[a] as of 1 January 2008

(Percentage of total dwt)

Country grouping	Types of vessel	0–4 years	5–9 years	10–14 years	15–19 years	20 years and over	Average age (years) 2008[b]	Average age (years) 2007[b]	Change 2008/2007
World total	All ships	25.8	21.3	15.8	11.7	25.2	11.8	12.0	-0.2
	Tankers	28.8	27.6	14.1	16.2	13.2	10.1	10.0	+0.1
	Bulk carriers	23.4	18.3	18.4	9.6	30.3	12.7	12.9	-0.2
	General cargo	12.0	10.8	12.2	9.2	55.9	17.1	17.4	-0.2
	Containerships	37.3	22.9	19.4	8.0	12.4	9.0	9.1	-0.2
	All others	20.5	15.8	9.8	10.0	44.0	14.7	15.1	-0.4
Major open-registries[c]	All ships	28.5	20.9	16.1	11.3	23.2	11.3	11.5	-0.1
	Tankers	29.6	26.1	15.1	17.5	11.7	10.0	9.8	+0.2
	Bulk carriers	26.7	18.6	18.2	8.1	28.4	12.1	12.3	-0.3
	General cargo	13.2	11.3	14.7	9.1	51.8	16.5	16.5	+0.0
	Containerships	41.0	21.6	15.7	8.3	13.5	8.8	8.9	-0.1
	All others	24.9	15.9	8.1	7.1	44.0	14.1	14.7	-0.6
Developed economies	All ships	28.4	31.6	16.3	8.7	15.0	9.7	9.9	-0.2
	Tankers	35.5	38.5	12.6	8.2	5.2	7.5	7.7	-0.2
	Bulk carriers	19.0	29.1	18.8	8.3	24.9	11.9	11.9	-0.0
	General cargo	16.9	21.6	18.1	12.6	30.8	13.4	13.7	-0.3
	Containerships	33.5	29.1	21.2	6.9	9.3	8.6	8.9	-0.3
	All others	20.0	22.2	14.4	12.3	31.1	13.1	13.0	+0.1
Transition economies	All ships	21.8	8.3	11.2	10.6	48.0	15.5	16.2	-0.7
	Tankers	38.9	12.6	11.8	7.6	29.1	11.2	12.6	-1.4
	Bulk carriers	10.4	4.2	15.2	14.9	55.2	17.8	18.2	-0.4
	General cargo	7.5	5.0	4.5	8.2	74.8	20.0	20.1	-0.1
	Containerships	37.8	14.5	14.9	9.7	23.1	10.6	10.5	+0.2
	All others	36.5	12.7	10.1	9.1	31.6	11.8	13.1	-1.3
Developing economies	All ships	25.8	18.4	15.7	12.8	27.3	12.3	12.4	-0.1
	Tankers	27.1	23.0	13.8	19.9	16.2	11.0	10.8	+0.2
	Bulk carriers	24.8	16.6	18.5	9.8	30.3	12.7	12.8	-0.1
	General cargo	12.1	8.7	11.5	8.1	59.7	17.6	17.9	-0.2
	Containerships	39.2	21.2	18.9	8.0	12.8	8.9	9.1	-0.2
	All others	19.0	14.1	8.9	8.8	49.1	15.5	15.9	-0.4

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

[a] Vessels of 100 GT and above.

[b] To estimate the average age, it has been assumed that the ages of vessels are distributed evenly between the lower and upper limits of each age group. For the 20-years-and-over age group, the mid-point has been assumed to be 23.5 years.

[c] The open registries included in this group are the Bahamas, Bermuda, Cyprus, Liberia, Malta, Panama and Vanuatu.

economies, 59.7 per cent are older than 19 years, versus only 12.8 per cent of containerships in this age group. For transition economies, 74.8 per cent of general cargo vessels are older than 19 years, and 37.8 per cent of containerships younger than 5 years. After a period of ageing in the 1990s and modernizing in the present decade, at the beginning of 2008 the average age of the world fleet was approximately the same as it was in 1987, with tankers being on average younger, and bulk carriers and general cargo ships still somewhat older today than two decades ago (table 11).

> 54.2 per cent of the world's tonnage is controlled by owners from Greece, Japan, Germany, China and Norway.

B. OWNERSHIP OF THE WORLD FLEET

1. The 35 economies with the largest controlled fleets

The 35 economies with the largest fleets owned by nationals are ranked in table 12 according to deadweight tonnage.[69] Nationals of these countries control 95.35 per cent of the world fleet, a slight increase over the 95.33 per cent historical record of January 2007. Greece continues to be the country with the largest controlled fleet, totalling 174.6 million dwt and 3,115 ships, followed by Japan (161.7 million dwt and 3,515 ships); Germany (94.2 million dwt, 3,208 ships); China (84.9 million dwt, 3,303 ships); and Norway (46.9 million dwt, 1,827 ships). Together, those five countries hold a market share of 54.2 per cent.

Thirty-two per cent of the Greek-controlled fleet use the national flag, versus 68 per cent using foreign flags. As regards vessel types, the Greek-controlled fleet includes 82.7 million tons of dry bulk carriers, 76.3 million dwt of oil tankers, 8.3 million dwt of containerships, 4.3 million dwt of general cargo vessels and 3.0 million dwt of other vessels. The share of foreign flagged tonnage is highest among general cargo ships (93 per cent) and lowest among oil tankers (56 per cent).

The Japanese-controlled fleet is 93 per cent foreign flagged. Japanese-controlled ships include 86.5 million dwt of dry bulk carriers, 44.1 million dwt of oil tankers, 12.7 million dwt of containerships, 9.4 million dwt of general cargo vessels and 9.0 million dwt of other vessels. An impressive total of 880 Japanese-controlled dry bulk carriers with a combined tonnage of 70 million dwt fly the flag of Panama.

The German-controlled fleet uses a foreign flag for 85 per cent of it tonnage. More than half of the German-controlled fleet is comprised of containerships (50.7 million dwt), followed by 20.7 million dwt of oil

Table 11

Long-term trends in the average age, by vessel types

	Types of vessel	1987	1997	2007	2008
World total	All ships	11.7	14.9	12.0	11.8
	Tankers	12.1	14.9	10.0	10.1
	Bulk carriers	10.7	14.6	12.9	12.7
	General cargo	13.7	17.3	17.4	17.1
	Containerships	n/a	12.0	9.1	9.0
	All others	n/a	15.3	15.1	14.7

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

Notes: Vessels of 100 GT and above. Data are beginning of year figures, except for 1987, which are mid-year figures

Table 12

The 35 countries and territories with the largest controlled fleets, as of 1 January 2008[a]

Country or territory of ownership [b]	Number of vessels			Deadweight tonnage						
	National flag[c]	Foreign flag	Total	National flag[c]	Foreign flag	Total	Foreign flag as a percentage of total	Total as a percentage of world total, 1 Jan. 2008	Total as a percentage of world total, 1 Jan. 2007	Change in percentage share
Greece	736	2 379	3 115	55 766 365	118 804 106	174 570 471	68.06	16.81	17.39	-0.58
Japan	714	2 801	3 515	11 620 381	150 126 721	161 747 102	92.82	15.58	15.07	0.50
Germany	404	2 804	3 208	14 588 066	79 634 721	94 222 787	84.52	9.07	8.69	0.38
China	1 900	1 403	3 303	34 351 019	50 530 684	84 881 703	59.53	8.18	7.19	0.98
Norway	792	1 035	1 827	14 182 841	32 689 255	46 872 096	69.74	4.51	4.98	-0.46
United States	855	914	1 769	20 301 154	19 526 996	39 828 150	49.03	3.84	4.93	-1.10
Korea, Republic of	756	384	1 140	19 122 776	18 580 931	37 703 707	49.28	3.63	3.30	0.33
Hong Kong, China	311	346	657	18 228 651	15 195 788	33 424 439	45.46	3.22	4.60	-1.38
Singapore	536	333	869	16 440 270	12 192 284	28 632 554	42.58	2.76	2.63	0.13
Denmark	317	544	861	10 466 920	16 967 723	27 434 643	61.85	2.64	2.24	0.41
Taiwan Province of China	93	497	590	3 986 356	22 163 936	26 150 292	84.76	2.52	2.54	-0.02
United Kingdom	394	482	876	10 479 296	15 522 244	26 001 540	59.70	2.50	2.73	-0.23
Canada	206	213	419	2 352 552	16 395 893	18 748 445	87.45	1.81	0.61	1.20
Russian Federation	1 532	579	2 111	5 986 569	12 051 321	18 037 890	66.81	1.74	1.85	-0.11
Italy	559	214	773	11 419 633	6 320 035	17 739 668	35.63	1.71	1.63	0.08
India	474	60	534	13 956 575	2 096 910	16 053 485	13.06	1.55	1.51	0.03
Turkey	495	531	1 026	6 431 016	6 728 712	13 159 728	51.13	1.27	1.12	0.15
Saudi Arabia	61	103	164	801 539	12 144 926	12 946 465	93.81	1.25	1.21	0.03
Belgium	87	146	233	6 087 051	6 067 624	12 154 675	49.92	1.17	1.28	-0.11
Malaysia	314	78	392	7 399 196	3 769 710	11 168 906	33.75	1.08	0.68	0.40
Iran, Islamic Republic of	116	63	179	5 080 136	5 176 747	10 256 883	50.47	0.99	1.02	-0.03
United Arab Emirates	54	370	424	521 677	8 403 618	8 925 295	94.16	0.86	0.71	0.15
Netherlands	503	259	762	4 136 349	4 499 185	8 635 534	52.10	0.83	0.89	-0.06
Cyprus	111	144	255	2 828 540	4 484 942	7 313 482	61.32	0.70	0.63	0.08
Indonesia	728	122	850	4 807 801	2 450 354	7 258 155	33.76	0.70	0.68	0.02
Sweden	154	211	365	1 758 402	5 159 712	6 918 114	74.58	0.67	0.66	0.01
France	182	176	358	3 036 041	3 490 150	6 526 191	53.48	0.63	0.61	0.02
Kuwait	40	29	69	3 953 100	1 348 386	5 301 486	25.43	0.51	0.49	0.02
Viet Nam	358	50	408	3 192 261	1 394 075	4 586 336	30.40	0.44	0.31	0.13
Spain	190	192	382	1 422 309	3 075 812	4 498 121	68.38	0.43	0.45	-0.02
Brazil	130	14	144	2 472 017	1 949 344	4 421 361	44.09	0.43	0.50	-0.07
Thailand	302	39	341	3 520 841	500 984	4 021 825	12.46	0.39	0.30	0.09
Switzerland	29	129	158	847 265	2 731 566	3 578 831	76.33	0.34	1.28	-0.93
Bermuda	0	62	62	0	3 216 806	3 216 806	100.00	0.31	n/a	
Croatia	78	39	117	2 086 397	978 977	3 065 374	31.94	0.30	n/a	
Total (35 countries)	14 511	17 745	32 256	323 631 362	666 371 178	990 002 540		95.35	95.33	0.02
World total	16 798	19 515	36 313	342 662 755	695 633 834	1038 296 589		100.00	100.00	

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

[a] Vessels of 1,000 GT and above, excluding the United States Reserve Fleet and the United States and Canadian Great Lakes fleets, which have a combined tonnage of 6.4 million dwt.

[b] The country of ownership indicates where the true controlling interest (i.e. parent company) of the fleet is located. In several cases, determining this has required making certain judgements. Thus, for instance, Greece is shown as the country of ownership for vessels owned by a Greek national with representative offices in New York, London and Piraeus, although the owner may be domiciled in the United States.

[c] Includes vessels flying the national flag but registered in territorial dependencies or associated self-governing territories such as Isle of Man (United Kingdom), as well as second registries such as DIS (Denmark), NIS (Norway) or FIS (France). For the United Kingdom, British flagged vessels are included under the national flag, except for Bermuda.

tankers, 14.1 million dwt of dry bulk carriers, 7.4 million dwt of general cargo vessels and 1.3 million dwt of other vessels. The share of foreign flagged tonnage is highest among dry bulk carriers (98 per cent) and lowest among containerships (74 per cent).

The Norwegian-controlled fleet declined slightly during 2007, still maintaining its fifth-place ranking with 46.9 million dwt. Of this tonnage, 69.7 per cent is registered under a foreign flag, and the remaining 30.3 per cent mostly under the Norwegian International Ship Register (NIS). Half of the Norwegian-controlled tonnage consists of oil tankers (23.5 million dwt), followed by 10 million dwt of general cargo vessels, 7.4 million dwt of dry bulk carriers, 5.2 million dwt of other types, and 0.7 million dwt of containerships.

The largest nationally-controlled fleets from developing economies are mostly found in Asia, as well as in Bermuda and Brazil (see also figure 11).

The Chinese-controlled fleet is 40 per cent registered in China, versus 60 per cent that uses a foreign flag. More than half of the Chinese-controlled fleet are dry bulk carriers (43 million dwt), followed by 19.4 million dwt of oil tankers, 10.1 million dwt of general cargo vessels, 7.7 million dwt of containerships and 4.6 million dwt of other vessels. The share of foreign flagged tonnage is highest among other vessel types (78 per cent) and lowest among general cargo ships (74 per cent). 62 per cent of the Chinese-controlled dry bulk fleet uses foreign flags.

Nationals of the Republic of Korea control a fleet of 37.7 million dwt, 49 per cent of which is foreign flagged, compared to 55 per cent that were foreign flagged one year earlier. The fleet includes 20.2 million dwt of dry bulk carriers, 10.3 million dwt of oil tankers, 3.0 million dwt of containerships, 2.3 million dwt of other types and 1.9 million dwt of general cargo vessels. Of oil tanker tonnage, 66 per cent is foreign registered, compared to just 36 per cent of the general cargo fleet.

Hong Kong (China) controls a fleet of 33.4 million dwt, a significant decline from the previous year's 45 million dwt, as some owners have moved to China. Although Hong Kong (China) also has a large national vessel registry that is used by foreign vessel operators, 45 per cent of tonnage controlled by Hong Kong (China) itself is registered under a different flag. The Hong Kong (China)-controlled fleet consists of 17.2 million dwt of dry bulk carriers, 12.2 million dwt of oil tankers, 1.7 million dwt of general cargo vessels, and 0.4 million dwt of other ships. The only vessel type of the Hong Kong (China)-controlled fleet that has grown during 2007 is containerships, reaching 1.9 million dwt.

The fleet with owners from Singapore totals 28.6 million dwt, 62 per cent of which consists of oil tankers (17.6 million dwt), followed by 5.3 million dwt of dry bulk carriers, 4.0 million dwt of containerships, 1.1 million dwt of general cargo vessels and 0.7 million dwt of other types. Although the flag of Singapore is itself used by a large number of foreign vessel operators, Singaporean companies themselves register 43 per cent of their fleet under foreign flags, including 56 per cent of their dry bulk tonnage.

The Indian-controlled fleet of 16.1 million dwt is 87 per cent nationally flagged. This includes practically all Indian oil tankers, which make up 52 per cent (8.4 million dwt) of the country's total. The remainder of the fleet consists of 5.7 million dwt of dry bulk carriers and 1.3 million dwt of other types, as well as a small number of general cargo and containerships. Thirty per cent of the Indian-controlled dry bulk tonnage and 39 per cent of the general cargo fleet is foreign flagged.

The Turkish-controlled fleet is 49 per cent registered in Turkey, versus 51 per cent that uses a foreign flag. Almost half of the Turkish-controlled fleet are dry bulk carriers (6.1 million dwt), followed by 3.2 million dwt of oil tankers, 2.8 million dwt of general cargo vessels, 0.7 million dwt of containerships and 0.2 million dwt of other vessels. The share of foreign flagged tonnage is highest among oil tankers (67 per cent) and lowest among containerships (37 per cent).

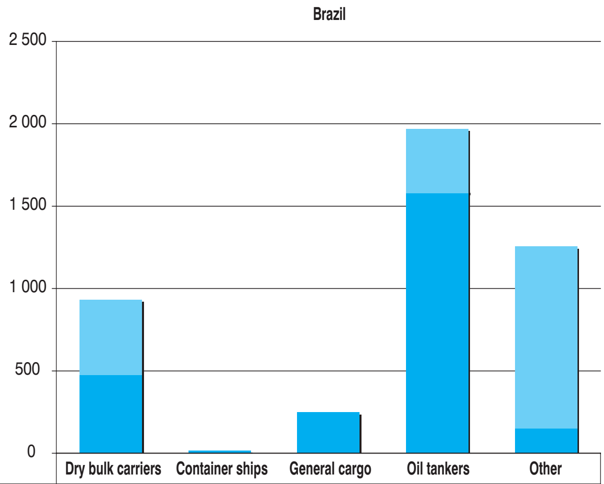
The Saudi Arabia-controlled fleet of 12.9 million dwt consists almost entirely (95 per cent) of oil tankers, 97 per cent of which is foreign flagged.

The market share of the Malaysia-controlled fleet grew from 0.68 per cent in 2007 to 1.08 per cent in 2008, mostly due to additional oil tankers. The total fleet of owners from Malaysia now amounts to 11.2 million dwt. The fleet is 34 per cent foreign flagged, which is a significant increase over the previous year, where only 6 per cent of the tonnage was foreign flagged. The Malaysia-controlled fleet consists mostly of oil tankers (7.3 million dwt), other ships (2.4 million dwt),

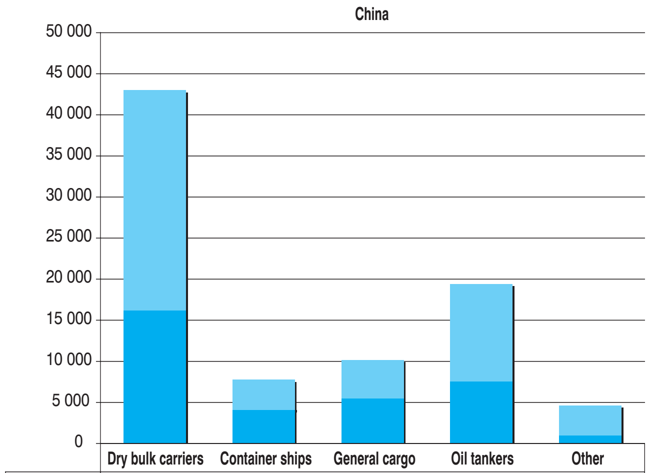
Figure 11

Largest fleets controlled by developing and transition economies, by principal vessel types, 2008[a]

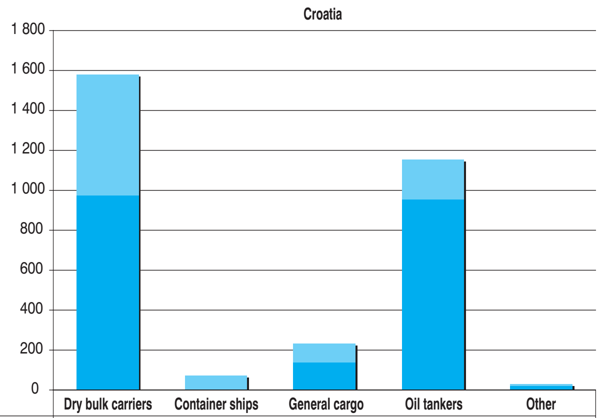
(Thousands of dwt)



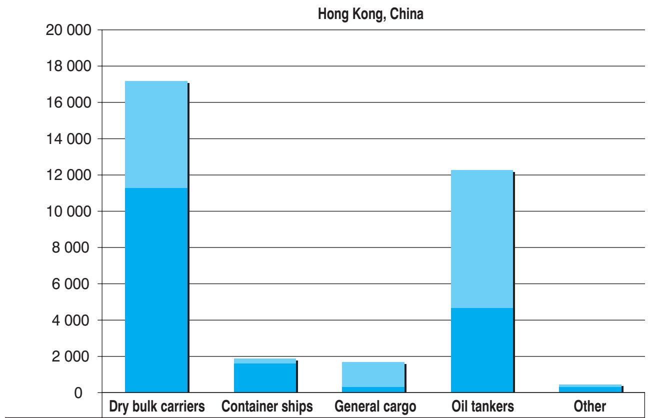
	Dry bulk carriers	Container ships	General cargo	Oil tankers	Other
Foreign flag	456	0	0	388	1 105
National flag	475	17	249	1 581	150



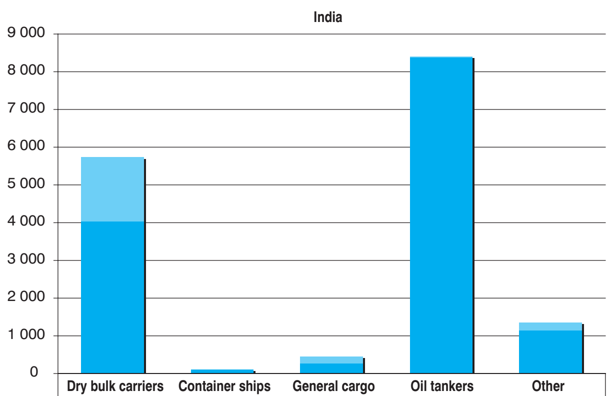
	Dry bulk carriers	Container ships	General cargo	Oil tankers	Other
Foreign flag	26 792	3 658	4 633	11 835	3 612
National flag	16 181	4 079	5 508	7 591	992



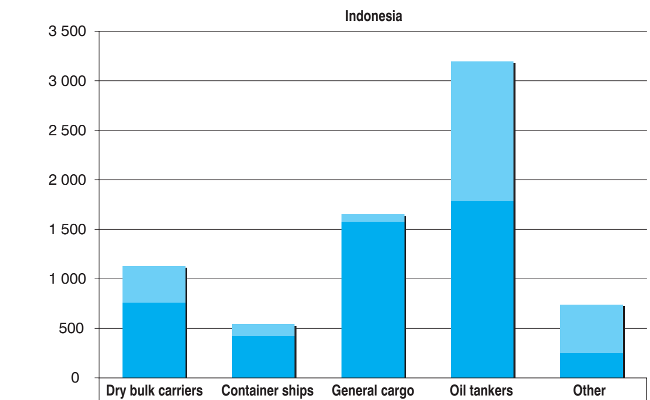
	Dry bulk carriers	Container ships	General cargo	Oil tankers	Other
Foreign flag	606	71	95	200	8
National flag	974	0	137	954	21



	Dry bulk carriers	Container ships	General cargo	Oil tankers	Other
Foreign flag	5 883	244	1 371	7 581	117
National flag	11 292	1 634	304	4 664	335

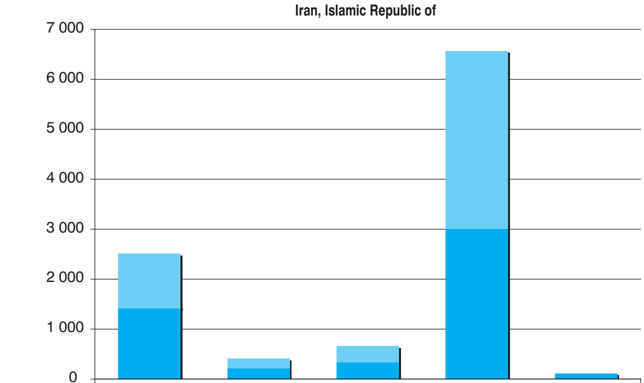


	Dry bulk carriers	Container ships	General cargo	Oil tankers	Other
Foreign flag	1 702	0	175	20	201
National flag	4 037	107	278	8 384	1 152

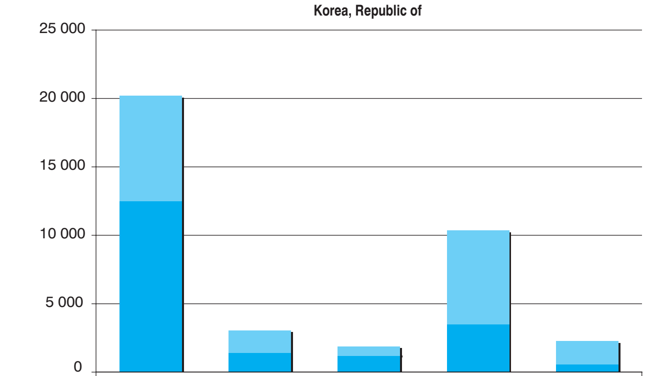


	Dry bulk carriers	Container ships	General cargo	Oil tankers	Other
Foreign flag	366	119	75	1 405	485
National flag	763	421	1 578	1 792	255

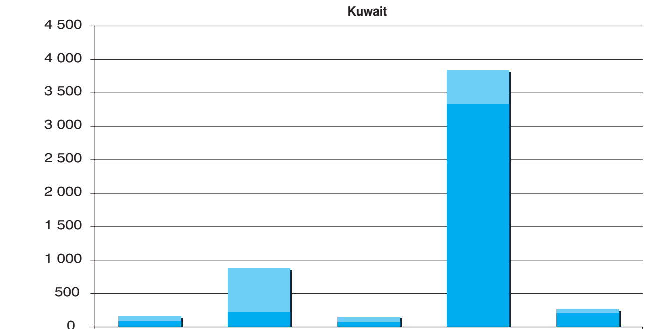
Figure 11 (continued)



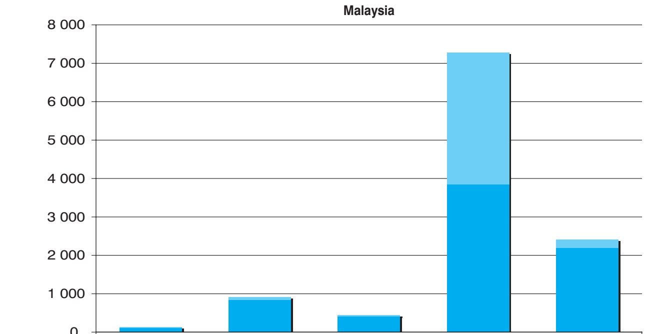
	Dry bulk carriers	Container ships	General cargo	Oil tankers	Other
Foreign flag	1 095	198	320	3 563	2
National flag	1 416	211	338	3 004	111



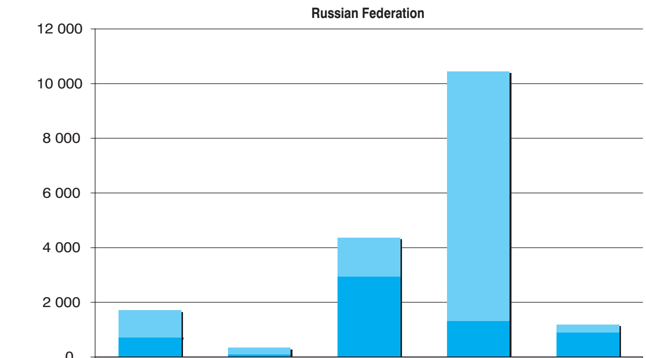
	Dry bulk carriers	Container ships	General cargo	Oil tankers	Other
Foreign flag	7 690	1 651	681	6 857	1 702
National flag	12 494	1 392	1 193	3 487	557



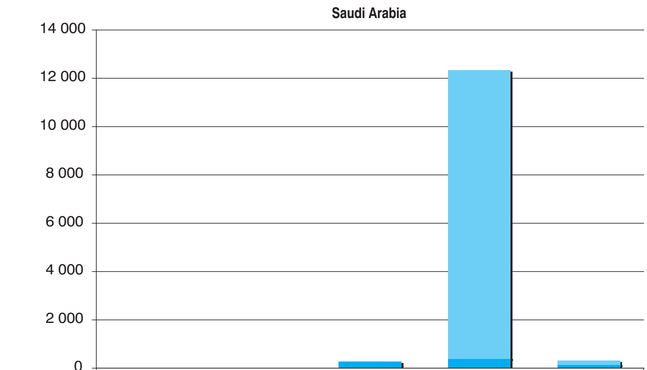
	Dry bulk carriers	Container ships	General cargo	Oil tankers	Other
Foreign flag	69	654	71	505	50
National flag	93	227	80	3 337	216



	Dry bulk carriers	Container ships	General cargo	Oil tankers	Other
Foreign flag	19	75	30	3 435	210
National flag	114	836	417	3 839	2 194

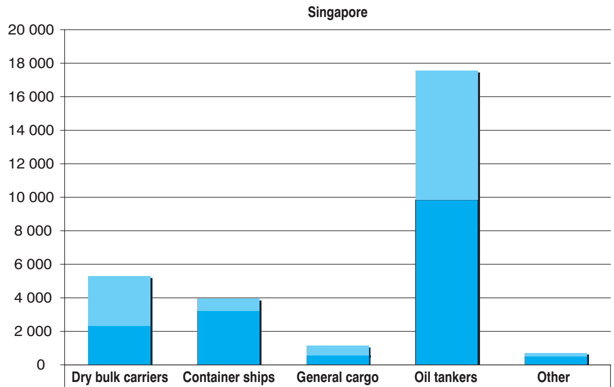


	Dry bulk carriers	Container ships	General cargo	Oil tankers	Other
Foreign flag	995	239	1 410	9 116	292
National flag	716	92	2 952	1 331	896

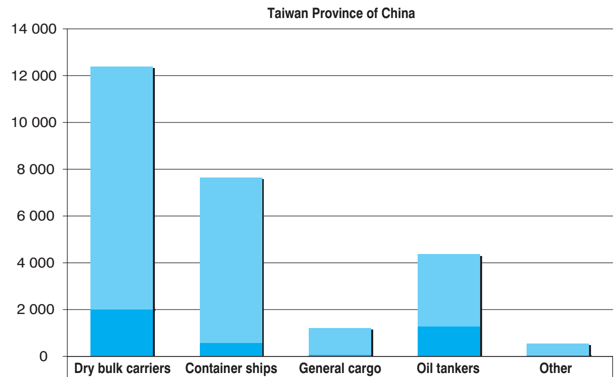


	Dry bulk carriers	Container ships	General cargo	Oil tankers	Other
Foreign flag	2	0	2	11 957	183
National flag	0	0	286	380	136

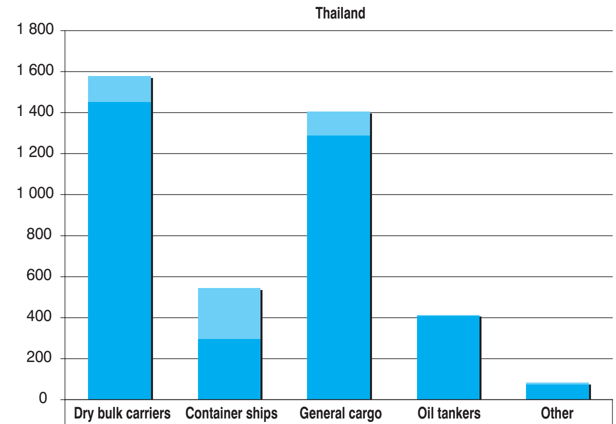
Figure 11 (continued)



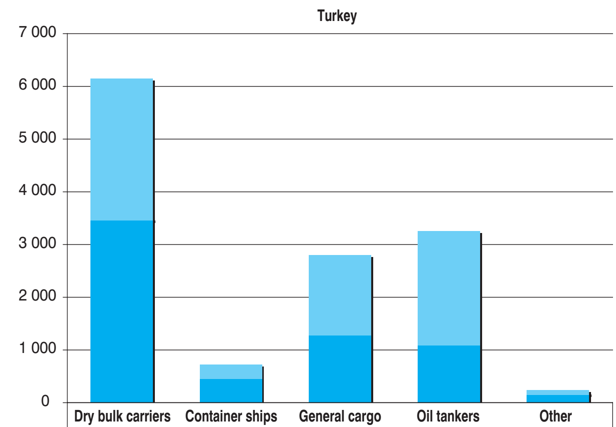
	Dry bulk carriers	Container ships	General cargo	Oil tankers	Other
Foreign flag	2 982	729	567	7 713	201
National flag	2 309	3 221	559	9 845	506



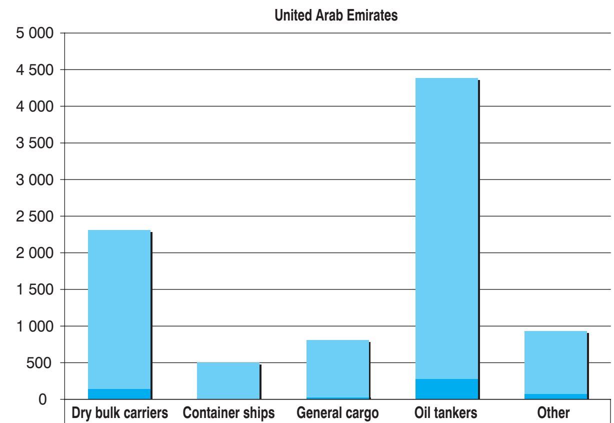
	Dry bulk carriers	Container ships	General cargo	Oil tankers	Other
Foreign flag	10 374	7 071	1 135	3 081	502
National flag	2 016	564	79	1 279	48



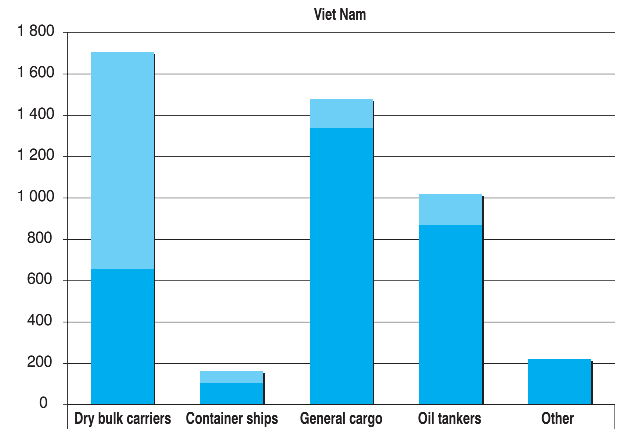
	Dry bulk carriers	Container ships	General cargo	Oil tankers	Other
Foreign flag	125	247	116	5	8
National flag	1 453	297	1 288	408	74



	Dry bulk carriers	Container ships	General cargo	Oil tankers	Other
Foreign flag	2 685	268	1 518	2 168	89
National flag	3 456	454	1 278	1 092	151



	Dry bulk carriers	Container ships	General cargo	Oil tankers	Other
Foreign flag	2 164	499	785	4 103	853
National flag	141	0	24	282	75



	Dry bulk carriers	Container ships	General cargo	Oil tankers	Other
Foreign flag	1 049	55	138	150	2
National flag	658	107	1 338	869	220

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

[a] Vessels of 1,000 GT and above.

containerships (0.9 million dwt), general cargo ships (0.4 million dwt) and dry bulk carriers (0.1 million dwt). Forty-seven per cent of oil tankers are foreign flagged.

During 2007, an important proportion of the Islamic Republic of Iran's controlled tonnage of oil tankers was newly registered in Malta. This led to a decline of the nationally flagged tonnage, from 89 per cent at the beginning of 2007 to just 50 per cent at the beginning of 2008. The country's fleet consists of 6.6 million dwt oil tankers, 2.5 million dwt dry bulk carriers, 0.7 million tons general cargo ships, 0.4 million dwt containerships and 0.1 million dwt other ships. 54 per cent of the oil tanker tonnage is foreign flagged.

A total of 424 ships with 8.9 million dwt are reported to be controlled by companies or nationals of the United Arab Emirates. This fleet includes 4.3 million dwt of oil tankers, 2.3 million dwt of dry bulk carriers, 0.9 million dwt of other ships, 0.9 million dwt of general cargo ships and 0.5 million dwt of containerships. Of the United Arab Emirates-controlled fleet, 94 per cent is foreign flagged.

Owners from Indonesia control 7.3 million dwt, including 3.1 million dwt of oil tankers, 1.7 million dwt of general cargo vessels, 1.1 million dwt of dry bulk carriers, 0.7 million dwt other ships and 0.5 million dwt containerships. 34 per cent of the fleet is foreign flagged; the foreign flagged share is higher for oil tankers (44 per cent) than for general cargo ships (5 per cent), which are more often used for cabotage traffic.

The Kuwait-controlled fleet of 5.3 million dwt consists largely of oil tankers, totalling 3.8 million dwt, as well as 0.9 million dwt of containerships, under 0.3 million dwt of other vessels, under 0.2 million dwt of dry bulk carriers and under 0.2 million dwt of general cargo ships. Of the Kuwait-controlled fleet, 25 per cent is foreign flagged; the foreign flagged share is highest among containerships, with 74 per cent registered abroad.

> Trade profiles often match the nationally controlled fleet. Oil exporters, for example, are also among the main providers of tanker capacity.

Viet Nam controls a fleet of 4.6 million dwt, of which 30 per cent is foreign flagged. The controlled fleet includes 1.7 million dwt dry bulk carriers, 1.5 million dwt general cargo vessels, 1.0 million dwt oil tankers, 0.2 million dwt other ships and under 0.2 million dwt containerships. The foreign flagged share is highest among dry bulk carriers (61 per cent) and lowest among general cargo and other ships.

Brazil controls a fleet of 4.4 million dwt, including 1.9 million dwt oil tankers, 1.3 million dwt other types of vessels, 0.9 million dwt dry bulk carriers and under 0.3 million dwt of general cargo and containerships. Forty-four per cent of its fleet is foreign flagged; the foreign flagged share among Brazil-controlled oil tankers is only 20 per cent.

The Thailand-controlled fleet of 4.0 million dwt is 12 per cent foreign flagged. The fleet includes 1.5 million dwt dry bulk carriers, 1.4 million dwt general cargo ships, 0.5 million dwt containerships and 0.4 million dwt oil tankers. Forty-five per cent of the container tonnage is foreign flagged.

Vessel owners from Bermuda control 62 ships with a total of 3.2 million dwt, including 1.5 million dwt of oil tankers, 1.2 million dwt dry bulk carriers and 0.4 million dwt general cargo ships. Although Bermuda itself is among the top 10 open and international ship registries, none of the 62 ships whose owners are from Bermuda also flies the country's flag. Instead, 100 per cent of the Bermuda-controlled fleet is foreign flagged, registered in the Bahamas, Croatia, Marshall Islands, Philippines and the Spanish international registry CSR.

2. Participation of countries in the controlled fleets of different vessel types

Many countries' trade profiles match in some way their maritime profiles. Among the economies represented in figure 11, those with the largest shares of oil exports are Kuwait (93 per cent of its exports are fuels and mining products), Saudi Arabia (90 per cent), Islamic Republic of Iran (88 per cent), Russian Federation (68 per cent), United Arab Emirates (53 per cent) and Indonesia (38 per cent), and all of them also have the highest share of their nationally-controlled fleets in oil tankers.

In Figure 11, the countries with the highest shares of agricultural exports are Brazil (29 per cent of its exports are agricultural products), Viet Nam (21 per cent), Indonesia (18 per cent), Thailand (16 per cent), India (12 per cent) and Turkey (10 per cent). Among those countries, Thailand, Turkey and Viet Nam also have the highest shares of dry bulk carriers, and the other three countries also have important dry bulk fleets. In China, Hong Kong (China), Republic of Korea and Taiwan Province of China, the dry bulk fleet has the highest share, reflecting the large import demand of iron ore, grains and other dry bulk products.

A different picture emerges if we look at manufactured goods, which are mostly traded in containerized liner shipping services. These services call in numerous countries' ports, unlike oil tankers and bulk carriers, which are usually employed on direct port-to-port voyages. Containerships are often operated by companies different from the vessel owner (the latter charters the ship to the company that provides the actual liner shipping service). All these aspects may explain why there does not appear to be a correlation between a country's trade in manufactured goods and its nationally-controlled containership fleet. Among the countries represented in figure 11, none has a particular large share in container shipping. Even China, which accounts for about 25 per cent of world containerized exports, has only a very small share of containerships among its nationally-controlled fleet.

The largest nationally-controlled fleets that also fly the national flag include (a) oil tankers from Brazil, India, Kuwait and Thailand; (b) dry bulk carriers from Hong Kong (China), India, the Republic of Korea, and Thailand; and (c) general cargo ships from Indonesia, the Russian Federation, Thailand and Viet Nam. In several cases, these nationally flagged and nationally-controlled ships are employed in cabotage trades, often legally requiring the use of the national flag, or they are nationally flagged as a consequence of some public involvement in the vessel-owning companies.

C. REGISTRATION OF SHIPS

1. Flags of registration

The 35 economies with the largest fleets registered under their flag are ranked in table 13 according to deadweight tonnage.[70] Together, they account for 1,033 million dwt, corresponding to 92.42 per cent of the world fleet, an increase of 0.4 percentage points. The top 5 registries together account for 49.3 per cent, and the top 10 registries account for 69.5 per cent of the world's dwt. Both shares also represent increases over the previous year's figures.

> One third of the world fleet is registered in Panama and Liberia.

The largest flag of registration continues to be Panama, with 252.6 million dwt (22.6 per cent of the world), followed by Liberia (117.5 million dwt, 10.5 per cent). These two leading registries are followed by five flags with between 55 and 61 million dwt (close to 5 per cent of the world fleet) each; they are Greece, the Bahamas, the Marshall Islands, Hong Kong (China) and Singapore. As regards the nationally flagged number of ships, the largest fleets belong to Japan (6,447 ships), the United States (6,419), Indonesia (4,477), China (3,816) and the Russian Federation (3,461). These include a large number of general cargo and other smaller vessels employed in coastal shipping.

The largest percentage growth in 2007 was recorded for the tonnage registered in the French International Registry (Registre International Français) (59.9 per cent), Republic of Korea (27.8 per cent), Germany (14.1 per cent), Malta (12.5 per cent), Liberia (11.7 per cent) and Greece (11.3 per cent). The growth of the French International Registry is partly due to the transfer of tonnage from the Kerguelen registry.

The 10 largest open and international registries that cater almost exclusively to foreign-controlled ships are Panama, Liberia, the Bahamas, the Marshall Islands, Malta, Cyprus, the Isle of Man, Antigua and Barbuda, Bermuda, and Saint Vincent and the Grenadines. Although they are in principle open to vessels from practically any country, most of them in fact specialize in some countries of ownership, or in certain vessel types. More than half the tonnage registered in Antigua and Barbuda is on containerships, mostly from German owners. The registries that cater mostly for dry bulk carriers are Bermuda, Cyprus, Malta, Panama and Saint Vincent and the Grenadines; Panama alone accounts for 33.3 per cent of the world dry bulk tonnage, mostly from Japanese owners. Oil tankers account for the largest tonnage in the registries of the Bahamas, the Isle of Man, Liberia and the Marshall Islands.

> Among the top 35 registries, 15 cater almost exclusively to nationals of their own country, while others specialize above all in foreign controlled tonnage.

Among the top 35 registries, 15 cater almost exclusively for nationals of their own country. They are Greece,

Table 13

The 35 flags of registration with the largest registered deadweight tonnage, as of 1 January 2008[a]

Flag of registration	Number of vessels	Share of world total, vessels	Deadweight tonnage, 1000 dwt	Share of world total, dwt	Cumulated share, dwt	Average vessel size	Dwt growth 2008/2007, per cent
Panama	7 616	7.81	252 564	22.60	22.60	33 162	8.79
Liberia	2 173	2.23	117 519	10.51	33.11	54 081	11.68
Greece	1 477	1.52	61 384	5.49	38.60	41 560	11.31
Bahamas	1 422	1.46	59 744	5.34	43.95	42 014	8.16
Marshall Islands	1 097	1.13	59 600	5.33	49.28	54 330	9.07
Hong Kong, China	1 238	1.27	59 210	5.30	54.57	47 827	8.96
Singapore	2 243	2.30	55 550	4.97	59.54	24 766	8.83
Malta	1 442	1.48	45 218	4.05	63.59	31 358	12.48
China	3 816	3.91	37 124	3.32	66.91	9 728	6.30
Cyprus	982	1.01	29 431	2.63	69.54	29 971	-0.66
Korea, Republic of	2 962	3.04	21 141	1.89	71.44	7 137	27.82
Norway (NIS)	595	0.61	20 501	1.83	73.27	34 455	1.06
India	1 420	1.46	15 041	1.35	74.61	10 593	6.00
Germany	881	0.90	15 031	1.34	75.96	17 061	14.11
Japan	6 447	6.61	14 810	1.32	77.28	2 297	-1.81
Isle of Man	339	0.35	13 850	1.24	78.52	40 856	-2.63
United Kingdom	1 631	1.67	13 840	1.24	79.76	8 486	8.04
Italy	1 559	1.60	13 267	1.19	80.95	8 510	-0.09
United States	6 419	6.58	12 139	1.09	82.03	1 891	-1.74
Antigua and Barbuda	1 124	1.15	11 183	1.00	83.04	9 949	7.52
Denmark (DIS)	438	0.45	10 904	0.98	84.01	24 895	9.00
Bermuda	153	0.16	9 870	0.88	84.89	64 513	5.44
Malaysia	1 150	1.18	9 448	0.85	85.74	8 216	10.24
St. Vincent and the Grenadines	1 043	1.07	8 503	0.76	86.50	8 153	-0.57
France (RIF)	164	0.17	7 413	0.66	87.16	45 201	59.89
Turkey	1 251	1.28	7 300	0.65	87.82	5 836	1.07
Russian Federation	3 461	3.55	7 135	0.64	88.45	2 062	-6.26
Indonesia	4 477	4.59	6 859	0.61	89.07	1 532	7.30
Philippines	1 778	1.82	6 659	0.60	89.66	3 745	-0.67
Belgium	243	0.25	6 467	0.58	90.24	26 612	-7.54
Netherlands	1 248	1.28	6 217	0.56	90.80	4 982	6.68
Iran (Islamic Republic of)	495	0.51	5 222	0.47	91.27	10 549	-41.68
Cayman Islands	142	0.15	4 358	0.39	91.66	30 690	-6.03
Taiwan Province of China	632	0.65	4 308	0.39	92.04	6 816	-2.04
Thailand	860	0.88	4 224	0.38	92.42	4 911	-2.24
Total (Top 35 flags of registration)	64 418	66.08	1 033 035	92.42		16 036	7.71
World total	97 481	100.00	1 117 779	100.00	100.00	11 467	7.24

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

[a] Ships of 100 GT and above.

China, the Republic of Korea, India, Germany, Japan, Italy, the United States, Malaysia, Turkey, the Russian Federation, Indonesia, Belgium, the Islamic Republic of Iran, Taiwan Province of China, and Thailand. A low participation of foreign-controlled tonnage may be due to two reasons. First, the country's laws may not allow for the use of its national flag if there is no adequate "genuine link" between flag and ownership. Second, although the country's registry might in theory be open to foreigners, its tax or employment regime or other regulations may make the registry unattractive to foreign ship owners.

Some countries also provide their flag to both their own nationals and a significant share of foreigners. The largest such registries are Hong Kong (China) and Singapore; for both registries, about two thirds of the registered tonnage are foreign-controlled. In Cyprus, about nine tenths of registered tonnage is foreign-controlled. About half of the tonnage that is registered under the flag of the United Kingdom belongs to foreign owners, as does about two fifth of the tonnage registered in the Netherlands.

Finally, among the top 35 flags of registration, there are three "second" or "international" registries, i.e. registries that allow for the use of the national flag, albeit under conditions that are different from those applicable for the first national registry. They include notably the Norwegian International Ship Register (NIS), the Danish International Register of Shipping (DIS), and the French International Register (RIF). While the DIS is almost only used by Danish-controlled ships, both the NIS and the RIF also cater to some foreign-controlled tonnage.

Table 14 presents the percentage distribution of the world fleet by vessel type and country groupings. Excluding the 10 major open and international registries, 18.5 per cent of the world fleet is registered in developed economies, with a particularly high share (27.9 per cent) in the containership fleet. Transition economies account for 1.2 per cent of the total world fleet, with 4.9 per

Table 14

Percentage distribution of dwt capacity of different vessel types, by country groups, 2008 [a]

(Beginning-of-year figures)

	Total fleet	Oil tankers	Bulk carriers	General cargo [c]	Container ships	Other types
World total	100.00	100.00	100.00	100.00	100.00	100.00
Developed economies	18.54	20.31	11.66	17.03	27.90	29.84
Transition economies	1.15	0.80	0.63	4.92	0.10	2.62
Developing economies	25.51	24.18	27.40	35.07	18.03	23.68
of which:						
Africa	0.57	0.43	0.29	1.71	0.13	2.13
America	1.98	2.19	1.45	4.09	0.28	4.07
Asia	22.57	21.23	25.26	28.57	17.60	16.50
Oceania	0.39	0.33	0.40	0.69	0.03	0.99
Other, unallocated	0.45	0.33	0.23	1.80	0.05	1.23
10 major open and international registries [b]	54.35	54.38	60.09	41.17	53.92	42.62

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

[a] Vessels of 100 GT and above.

[b] The 10 major open and international registries are the 10 largest fleets with more than 90 per cent foreign-controlled tonnage. See table 15 for the list of registries.

[c] Including passenger/cargo.

cent of the general cargo vessels. The table also shows that less than 1 per cent of the world's tonnage is registered in developing economies in Africa and Oceania. Two per cent of the world fleet is registered in developing economies in America, including in several minor open registries, such as Barbados, Belize, Bolivia, Dominica, Honduras, Jamaica, and Saint Kitts and Nevis. With 22.6 per cent of the world fleet, developing economies in Asia account for a higher market share in vessel registration than developed economies, holding a particularly high share in the general cargo fleet (28.6 per cent) and dry bulk carriers (25.3 per cent). The 10 major open and international registries have their highest shares among dry bulk carriers (60 per cent) and oil tankers (54.4 per cent).

The following section looks at the links between ownership and registration for the 10 largest registries with a high share of foreign owned tonnage and the 35 major countries of ownership in more detail.

2. Nationality of controlling interests

Table 15 presents the controlling nationality of the dwt registered in the largest 10 open and international registries for the 35 largest countries of ownership. It must be noted that the figures for the ownership, i.e. the nationality of the ships' controlling interests, is not always precise. Stockholding companies may be owned by a large number of nationals from different countries. A company may be holding less than 100 per cent of shares in companies in third countries. Especially in container shipping, there exists a common distinction between the vessel owners and the operators, who charter the vessel and sell liner shipping services under their own name. Nevertheless, for most ships it is possible to identify the country under which flag it is registered and the country from where the ship is controlled commercially.

> Many registries specialize in some owners. More than half of the Panama-registered fleet is controlled by Japanese interests, while the registry of Liberia is mostly used by owners from Germany, Greece, the Russian Federation and Saudi Arabia.

As can be seen from table 15, most open and international registries specialize in certain countries of ownership. The flag of the world's largest registry, Panama, is predominantly used by vessel owners of Japan, who account for more than half of the registry's tonnage (123 million dwt of ships of 1,000 GT and above), followed by China (20.4 million dwt), Greece (19.9 million dwt) and the Republic of Korea (16.6 million dwt). More than half of the Panama-registered tonnage is on dry bulk carriers. The world's second-largest registry, Liberia, is predominantly used by owners from Germany (mostly for containerships) as well as from Greece, the Russian Federation and Saudi Arabia (mostly for oil tankers). Saudi Arabia relies on Liberia to provide the flag for more than half of its nationally-controlled fleet. Liberia supplies the flag for more than 10 per cent of the world's dwt, albeit only for 6 per cent of the number of ships, due to the large average vessel size of Liberia-registered ships.

Apart from Panama and Liberia, there are four registries – the Bahamas, Malta, Antigua and Barbuda, and Saint Vincent and the Grenadines – with less then 1 per cent of registered ships controlled by interests from the same country. They, too, specialize in certain countries of ownership. Three quarters of the dwt registered in Malta are owned by Greek nationals, more than 90 per cent of the fleet of Antigua and Barbuda is owned by German nationals, and around 60 per cent of the dwt of Saint Vincent and the Grenadines belongs to nationals of Greece and China.

D. SHIPBUILDING, DEMOLITIONS AND THE SECOND-HAND MARKET

1. Delivery of newbuildings

Newbuilding activities reached the highest level ever recorded in terms of deadweight tons, with deliveries totalling 81.9 million dwt in 2007 (see table 16), a further increase over previous year's historical record of 71.1 million dwt. During 2007, 2,782 cargo carrying commercial vessels of 100 GT and above were delivered, a historical record, too, and an increase of 16 per cent over 2006. As regards the tonnage and vessel types, the deliveries of oil tankers of 10,000 dwt and above account for 36 per cent of delivered dwt, dry bulk carriers of 10,000 dwt and above for 30 per cent and other vessels for 34 per cent; the latter category includes all kinds of commercial vessels of 100 GT and above. As regards the number of vessels, 75 per cent of vessels delivered in 2007 belong to the category of "other vessels", as compared to 13 per cent for large oil tankers and 11 per cent for large dry bulk carriers.

In 2007, the deliveries of oil tankers reached a historical record in terms of vessel numbers (369 units of 10,000 dwt) and also in terms of delivered deadweight tonnage (29.5 million dwt). The average vessel size of oil tankers increased in 2007, for the first time since 2000. The trend of dry bulk carrier vessel sizes follows an opposite trend for oil tankers; the dwt per unit had increased continuously over the last years, reaching 81,290 dwt in 2006, and then again somewhat decreased in 2007, to an average vessel size of 78,413 dwt. In total, there were 315 dry bulk carriers delivered in 2007, with a combined tonnage of 24.7 million dwt. 2007 also saw a record in the number and tonnage of other vessel types delivered, including car carriers, containerships, LNG tankers and general cargo ships, reaching a total of 2,098 units with a combined tonnage of 27.7 million dwt.

In 2007, deliveries of oil tankers reached a historical record of 29.5 million deadweight tons.

2. Demolition of ships

The trend in the demolition and recycling of ships is correlated with the trend in the delivery of ships; while 2007 saw record highs in newbuildings, it also saw record lows in demolitions. In total, demolitions were equivalent to only 0.4 per cent of the existing world fleet (see table 17). This is only one ninth of the percentage that was demolished in 2002. Tanker tonnage continues to assume the highest share among the vessel types demolished in 2007, with 2.0 million dwt, corresponding to half the year's total. The category of other vessel types increased its share to almost half, reaching 1.9 million dwt in 2006, while hardly any dry bulk carriers were demolished in 2007, a reflection of the high demand for older tonnage of this type of vessel, which is used to carry the main dry commodities, including grains.

Two sides of the same coin: While 2007 saw record highs in newbuildings, it also saw record lows in demolitions.

The average age of demolished ships in 2007 was highest for general cargo vessels (34.9 years), followed by tankers (31.4 years), containerships (29.6 years) and dry bulk carriers (29.1 years) (see table 18). For all vessel types, the average age at demolition has increased significantly since the beginning of the decade, albeit with some fluctuations. In general, scrapping activity is negatively correlated to developments in freight rates, as high freight rates reduce the economic interest of owners to sell their vessels to scrap yards. Hence, while the boom in shipping is creating new jobs in shipbuilding countries such as China, Japan and the Republic of Korea, employment is lost in countries with high ship scrapping activity, such as Bangladesh, India and Pakistan.

3. Tonnage on order

With historically high demand in 2007 for shipping capacity – especially for key commodities such as iron ore, grains and coal – the shipping industry responded by ordering new tonnage, especially in the dry bulk sector. Tonnage on order as per 31 December 2007 consisted of 222 million dwt of dry bulk carriers (44.8 per cent of the world total dwt on order), 125 million dwt oil tankers (25.2 per cent), 8 million dwt of general cargo vessels (2.7 per cent), 78 million dwt of containerships (15.8 per cent) and 57 million dwt of other vessel types (11.5 per cent). Total tonnage on order was at its highest level ever, reaching more than 10,000 vessels with a total tonnage of almost 500 million dwt (see table 19). This represents 28 per cent of merchant fleet by number of vessels over 1,000 GT or, a 44 per cent in terms of volume. Figure 12 illustrates the development of the main vessel types over the last seven years.

The tonnage of dry bulk ships on order at the end of 2007 was 12 times higher than it was in June 2002; since mid-2007, dry bulk orders have outstripped those for any other vessel type. The 222 million dry bulk tonnage on order represents 57 per cent of the existing dry bulk fleet; for the dry bulk vessels of 100,000 dwt and above, the tonnage on order even represents 87 per cent of the existing fleet. Oil tankers continue to be the largest vessels ordered, although the average vessel size decreased from 142,001 dwt in December 2000 to 110,470 dwt in December 2007. The average size of containerships on order attained the historical high of 54,598 dwt in December 2007. With 1,435 vessels, containerships on order reached a historical record, too. Containerized tonnage on order at the end of 2007 was six times higher than five years earlier.

The current financial crisis has started to have a bearing upon ship building and charter markets. The daily charter rates for large bulk carriers in September 2008 were only one third of the peak reached earlier in the year. Owners are finding it increasingly difficult and costly to raise

Table 15

True nationality of 10 major open and international registry fleets, as of 1 January 2008[a]

Country or territory of domicile	Panama			Liberia			Bahamas		
	No. of vessels	1 000 dwt	%	No. of vessels	1 000 dwt	%	No. of vessels	1 000 dwt	%
Greece	511	19 876	8.8	360	21 916	20.2	209	12 229	23.0
Japan	2 236	123 046	54.4	114	6 729	6.2	67	4 156	7.8
Germany	39	5 088	2.2	770	35 330	32.5	48	2 711	5.1
China	501	20 411	9.0	15	378	0.3	12	900	1.7
Norway	68	1 505	0.7	41	2 340	2.2	254	6 262	11.8
United States	173	2 916	1.3	122	4 088	3.8	115	4 595	8.6
Republic of Korea	302	16 594	7.3	3	449	0.4	0	0	0.0
Hong Kong (China)	137	6 622	2.9	59	3 648	3.4	5	213	0.4
Singapore	106	3 596	1.6	39	4 301	4.0	15	363	0.7
Denmark	35	894	0.4	13	392	0.4	73	913	1.7
Taiwan Province of China	296	10 220	4.5	84	6 282	5.8	0	0	0.0
United Kingdom	58	1 824	0.8	27	766	0.7	76	1 991	3.7
Canada	21	2 739	1.2	5	684	0.6	80	7 670	14.4
Russian Federation	17	177	0.1	90	7 760	7.1	5	26	0.0
Italy	20	497	0.2	43	2 676	2.5	9	416	0.8
India	26	659	0.3	2	154	0.1	1	8	0.0
Turkey	76	647	0.3	6	158	0.1	7	349	0.7
Saudi Arabia	14	456	0.2	24	6 062	5.6	19	3 479	6.5
Belgium	3	77	0.0	3	52	0.0	14	191	0.4
Malaysia	15	72	0.0	0	0	0.0	13	88	0.2
Iran (Islamic Republic of)	5	41	0.0	0	0	0.0	0	0	0.0
United Arab Emirates	118	2 520	1.1	25	1 697	1.6	22	1 058	2.0
Netherlands	28	286	0.1	34	483	0.4	36	1 557	2.9
Cyprus	19	1 248	0.6	5	442	0.4	16	644	1.2
Indonesia	39	795	0.4	1	79	0.1	3	102	0.2
Sweden	10	135	0.1	10	422	0.4	7	60	0.1
France	18	358	0.2	5	249	0.2	28	693	1.3
Kuwait	2	93	0.0	0	0	0.0	0	0	0.0
Viet Nam	16	514	0.2	5	226	0.2	0	0	0.0
Spain	60	400	0.2	0	0	0.0	14	1 393	2.6
Brazil	6	1 099	0.5	3	456	0.4	2	109	0.2
Thailand	9	52	0.0	0	0	0.0	4	99	0.2
Switzerland	32	730	0.3	12	333	0.3	3	105	0.2
Bermuda	0	0	0.0	0	0	0.0	13	833	1.6
Croatia	4	78	0.0	3	74	0.1	1	54	0.1
Total 35 countries	5 020	226 265	100.0	1 923	108 625	100.0	1 171	53 265	100.0
Percentage share among 35 countries	15.6	22.9		6.0	11.0		3.6	5.4	

Table 15 (continued)

Marshall Islands			Malta			Cyprus			Country or territory of domicile
No. of vessels	1 000 dwt	%	No. of vessels	1 000 dwt	%	No. of vessels	1 000 dwt	%	
244	14 227	26.7	449	22 835	57.5	272	13 953	50.0	**Greece**
10	522	1.0	4	136	0.3	19	535	1.9	**Japan**
221	10 451	19.6	76	2 679	6.7	196	4 847	17.4	**Germany**
2	7	0.0	12	207	0.5	9	215	0.8	**China**
69	6 051	11.4	93	744	1.9	23	785	2.8	**Norway**
158	10 791	20.3	13	176	0.4	9	51	0.2	**United States**
7	480	0.9	12	637	1.6	3	23	0.1	**Republic of Korea**
4	61	0.1	2	24	0.1	2	36	0.1	**Hong Kong (China)**
16	893	1.7	0	0	0.0	4	131	0.5	**Singapore**
15	717	1.3	22	335	0.8	3	52	0.2	**Denmark**
1	259	0.5	1	19	0.0	0	0	0.0	**Taiwan Province of China**
14	874	1.6	17	333	0.8	18	879	3.2	**United Kingdom**
6	308	0.6	2	11	0.0	2	60	0.2	**Canada**
6	147	0.3	57	560	1.4	47	1 689	6.1	**Russian Federation**
4	291	0.5	46	900	2.3	6	52	0.2	**Italy**
0	0	0.0	3	199	0.5	1	175	0.6	**India**
41	1 427	2.7	165	3 122	7.9	0	0	0.0	**Turkey**
5	1 561	2.9	0	0	0.0	0	0	0.0	**Saudi Arabia**
0	0	0.0	11	136	0.3	1	9	0.0	**Belgium**
4	38	0.1	0	0	0.0	0	0	0.0	**Malaysia**
0	0	0.0	51	4 688	11.8	3	438	1.6	**Iran (Islamic Republic of)**
17	566	1.1	8	273	0.7	11	461	1.7	**United Arab Emirates**
12	620	1.2	4	26	0.1	29	236	0.8	**Netherlands**
35	809	1.5	23	634	1.6	111	2 829	10.1	**Cyprus**
1	70	0.1	0	0	0.0	0	0	0.0	**Indonesia**
4	31	0.1	2	14	0.0	1	5	0.0	**Sweden**
0	0	0.0	4	45	0.1	3	110	0.4	**France**
0	0	0.0	0	0	0.0	0	0	0.0	**Kuwait**
0	0	0.0	0	0	0.0	0	0	0.0	**Viet Nam**
1	94	0.2	2	27	0.1	6	267	1.0	**Spain**
1	280	0.5	0	0	0.0	0	0	0.0	**Brazil**
0	0	0.0	0	0	0.0	0	0	0.0	**Thailand**
12	321	0.6	25	447	1.1	3	48	0.2	**Switzerland**
11	1 255	2.4	0	0	0.0	0	0	0.0	**Bermuda**
5	112	0.2	12	506	1.3	0	0	0.0	**Croatia**
926	53 264	100.0	1 116	39 712	100.0	782	27 887	100.0	**Total 35 countries**
2.9	5.4		3.5	4.0		2.4	2.8		**Percentage share among 35 countries**

Table 15 (continued)

Country or territory of domicile	Isle of Man			Antigua & Barbuda			Bermuda			Saint Vincent & the Grenadines		
	No. of vessels	1 000 dwt	%	No. of vessels	1 000 dwt	%	No. of vessels	1 000 dwt	%	No. of vessels	1 000 dwt	%
Greece	47	4 244	31.5	2	4	0.0	2	152	2.7	82	2 014	30.8
Japan	4	13	0.1	0	0	0.0	2	164	2.9	0	0	0.0
Germany	57	821	6.1	913	9 870	93.8	21	768	13.4	3	16	0.2
China	0	0	0.0	0	0	0.0	12	1 606	28.1	99	2 271	34.7
Norway	51	1 983	14.7	7	49	0.5	5	58	1.0	21	91	1.4
United States	5	297	2.2	8	26	0.3	23	333	5.8	24	153	2.3
Republic of Korea	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Hong Kong (China)	0	0	0.0	0	0	0.0	4	593	10.4	7	83	1.3
Singapore	0	0	0.0	0	0	0.0	0	0	0.0	7	128	2.0
Denmark	53	430	3.2	18	120	1.1	0	0	0.0	16	42	0.6
Taiwan Province of China	0	0	0.0	0	0	0.0	0	0	0.0	4	5	0.1
United Kingdom	85	5 487	40.8	8	138	1.3	8	562	9.8	14	166	2.5
Canada	0	0	0.0	0	0	0.0	0	0	0.0	1	3	0.0
Russian Federation	0	0	0.0	5	21	0.2	0	0	0.0	22	301	4.6
Italy	0	0	0.0	0	0	0.0	0	0	0.0	18	296	4.5
India	0	0	0.0	0	0	0.0	0	0	0.0	6	53	0.8
Turkey	2	7	0.1	6	28	0.3	0	0	0.0	21	124	1.9
Saudi Arabia	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Belgium	0	0	0.0	0	0	0.0	2	9	0.2	14	63	1.0
Malaysia	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Iran (Islamic Republic of)	0	0	0.0	0	0	0.0	0	0	0.0	3	7	0.1
United Arab Emirates	1	2	0.0	0	0	0.0	0	0	0.0	20	347	5.3
Netherlands	2	4	0.0	19	81	0.8	0	0	0.0	7	12	0.2
Cyprus	2	75	0.6	2	31	0.3	0	0	0.0	1	6	0.1
Indonesia	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Sweden	3	97	0.7	1	5	0.0	19	1 464	25.6	2	8	0.1
France	1	4	0.0	1	4	0.0	1	7	0.1	19	60	0.9
Kuwait	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Viet Nam	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Spain	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Brazil	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Thailand	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Switzerland	0	0	0.0	4	145	1.4	0	0	0.0	14	178	2.7
Bermuda	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Croatia	0	0	0.0	0	0	0.0	0	0	0.0	9	115	1.8
Total 35 countries	313	13 462	100.0	994	10 521	100.0	99	5 716	100.0	434	6 542	100.0
Percentage share among 35 countries	1.0	1.4		3.1	1.1		0.3	0.6		1.3	0.7	

Table 15 (continued)

Total major 10 open and international registries					Total national controlled fleet, 1 000 dwt	Major 10 registries as % of total national controlled fleet	Country or territory of domicile
No. of vessels	% of vessels	1 000 dwt	% of dwt	Average vessel size			
2 096	17.0	109 437	20.3	52 212	174 570	62.7	Greece
2 456	19.9	135 302	25.1	55 090	161 747	83.7	Japan
2 341	19.0	72 565	13.5	30 998	94 223	77.0	Germany
563	4.6	23 724	4.4	42 138	84 882	27.9	China
611	4.9	19 776	3.7	32 367	46 872	42.2	Norway
626	5.1	23 273	4.3	37 177	39 828	58.4	United States
327	2.6	18 182	3.4	55 603	37 704	48.2	Republic of Korea
213	1.7	11 198	2.1	52 571	33 424	33.5	Hong Kong (China)
180	1.5	9 285	1.7	51 581	28 633	32.4	Singapore
232	1.9	3 853	0.7	16 606	27 435	14.0	Denmark
382	3.1	16 780	3.1	43 926	26 150	64.2	Taiwan Province of China
311	2.5	12 854	2.4	41 331	26 002	49.4	United Kingdom
116	0.9	11 472	2.1	98 895	18 748	61.2	Canada
227	1.8	10 379	1.9	45 723	18 038	57.5	Russian Federation
128	1.0	4 833	0.9	37 755	17 740	27.2	Italy
33	0.3	1 195	0.2	36 198	16 053	7.4	India
303	2.5	5 738	1.1	18 936	13 160	43.6	Turkey
62	0.5	11 558	2.1	186 421	12 946	89.3	Saudi Arabia
34	0.3	474	0.1	13 949	12 155	3.9	Belgium
32	0.3	199	0.0	6 211	11 169	1.8	Malaysia
59	0.5	5 167	1.0	87 579	10 257	50.4	Iran (Islamic Republic of)
202	1.6	6 575	1.2	32 551	8 925	73.7	United Arab Emirates
164	1.3	3 292	0.6	20 072	8 636	38.1	Netherlands
213	1.7	6 711	1.2	31 506	7 313	91.8	Cyprus
44	0.4	1 046	0.2	23 774	7 258	14.4	Indonesia
57	0.5	2 231	0.4	39 147	6 918	32.3	Sweden
61	0.5	1 469	0.3	24 083	6 526	22.5	France
2	0.0	93	0.0	46 560	5 301	1.8	Kuwait
21	0.2	740	0.1	35 237	4 586	16.1	Viet Nam
83	0.7	2 181	0.4	26 272	4 498	48.5	Spain
12	0.1	1 945	0.4	162 073	4 421	44.0	Brazil
13	0.1	151	0.0	11 630	4 022	3.8	Thailand
91	0.7	2 130	0.4	23 402	3 579	59.5	Switzerland
24	0.2	2 088	0.4	87 007	3 217	64.9	Bermuda
25	0.2	824	0.2	32 975	3 065	26.9	Croatia
12 344	100.0	538 718	100.0	43 642	990 003	54.4	Total 35 countries
38.3		54.4					Percentage share among 35 countries

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

[a] Ships of 1 000 GT and above.

Table 16

Deliveries of newbuildings, selected years [a]

Year	Oil tankers [b]			Dry bulk carriers [b]			Others [c]			Total		
	No. of vessels	Million dwt	Average vessel size	No. of vessels	Million dwt	Average vessel size	No. of vessels	Million dwt	Average vessel size	No. of vessels	Million dwt	Average vessel size
1980	99	7.0	70 707	135	4.7	34 815	552	4.4	7 971	786	18.0	22 901
	13	*39*		*17*	*26*		*70*	*24*		*100*	*100*	
1985	72	3.9	54 167	339	14.7	43 363	539	5.7	10 575	950	25.0	26 316
	8	*16*		*36*	*59*		*57*	*23*		*100*	*100*	
1990	81	8.7	107 407	119	9.6	80 672	523	4.0	7 648	723	23.0	31 812
	11	*38*		*16*	*42*		*72*	*17*		*100*	*100*	
1997	69	7.5	108 696	299	18.8	62 876	699	10.5	15 021	1 067	36.8	34 489
	6	*20*		*28*	*51*			*29*		*100*	*100*	
1998	120	12.6	105 000	217	11.6	53 456	704	11.1	15 767	1 041	35.3	33 910
	12	*36*		*21*	*33*		*68*	*31*		*100*	*100*	
1999	161	19.1	118 634	195	13.0	66 667	589	8.8	14 941	945	40.5	42 857
	17	*47*		*21*	*32*		*62*	*22*		*100*	*100*	
2000	154	20.8	135 065	188	13.1	69 681	1 202	10.5	8 735	1 544	44.4	28 756
	10	*47*		*12*	*30*		*78*	*24*		*100*	*100*	
2001	112	14.4	128 571	310	21.0	67 742	1 048	9.8	9 351	1 470	45.2	30 748
	8	*32*		*21*	*46*		*71*	*22*		*100*	*100*	
2002	182	23.4	128 571	226	14.1	62 389	1 131	11.5	10 168	1 539	49.0	31 839
	12	*48*		*15*	*29*		*73*	*23*		*100*	*100*	
2003	281	29.4	104 626	161	11.2	69 565	1 265	8.6	6 798	1 707	49.2	28 822
	16	*60*		*9*	*23*		*74*	*17*		*100*	*100*	
2004	294	27.0	91 837	266	19.8	74 436	1 262	7.9	6 260	1 822	49.4	27 113
	16	*55*		*15*	*40*		*69*	*16*		*100*	*100*	
2005	315	29.0	92 063	308	23.2	75 325	1 341	16.8	12 528	1 964	70.5	35 896
	16	*41*		*16*	*33*		*68*	*24*		*100*	*100*	
2006	329	24.7	74 948	307	25.1	81 759	1 762	21.3	12 110	2 398	71.1	29 648
	14	*35*		*13*	*35*		*73*	*30*		*100*	*100*	
2007 [d]	369	29.5	79 946	315	24.7	78 413	2 098	27.7	13 183	2 782	81.9	29 424
	13	*36*		*11*	*30*		*75*	*34*		*100*	*100*	

Source: Compiled by the UNCTAD secretariat on the basis of data from Fearnleys *Review*, various issues, and Lloyd's Register – Fairplay.

[a] Percentage shares per vessel type are shown in italics.

[b] Vessels over 10,000 dwt.

[c] Seagoing, cargo-carrying vessels of over 100 GT.

[d] Provisional.

Table 17

Tonnage reported sold for breaking, by types of vessel, 2000–2007

(Millions of dwt and percentage shares)

Years	Million dwt					Total as percent of world fleet	Percentage share				
	Tankers	Combined carriers	Bulk carriers	Others	Total		Tankers	Combined carriers	Bulk carriers	Others	Total
2000	13.5	1.0	4.6	3.1	22.2	2.7	60.9	4.3	20.8	14.0	100.0
2001	15.7	0.8	8.1	3.2	27.8	3.4	56.5	2.7	29.1	11.7	100.0
2002	18.1	1.6	5.9	4.9	30.5	3.6	59.3	5.2	19.3	16.1	100.0
2003	18.4	0.5	3.3	3.4	25.6	3.0	71.9	2.0	12.9	13.3	100.0
2004	7.8	0.5	0.5	1.8	10.6	1.2	73.6	4.7	4.7	17.0	100.0
2005	4.5	-	0.9	0.9	6.3	0.7	71.4	-	14.3	14.3	100.0
2006	2.7	0.2	1.3	1.8	6.0	0.6	45.0	3.3	21.7	30.0	100.0
2007	2.0	-	0.1	1.9	4.0	0.4	50.0	-	2.5	47.5	100.0

Sources: Compiled by the UNCTAD secretariat on the basis of data supplied by Fearnleys *Review*, various issues, and Lloyd's Register – Fairplay.

Table 18

Average age of broken-up ships, by type, from 2001 to 2007 [a]

Year	Tankers	Dry bulk carriers	Container ships	General cargo ships
2001	28.0	26.7	26.9	27.4
2002	28.3	26.6	26.0	28.2
2003	29.3	26.5	25.5	29.3
2004	29.5	27.3	30.5	32.9
2005	31.5	28.1	30.6	31.9
2006	30.0	28.9	28.1	32.3
2007	31.4	29.1	29.6	34.9

Source: Compiled by the UNCTAD secretariat on the basis of data from Institute of Shipping Economics and Logistics, *Shipping Statistics and Market Review*, Volume 52 No 1/2 - 2008, Table 2.2.

Table 19

World tonnage on order, 2000–2007[a]

Beginning of month	Tankers			Bulk carriers			General cargo ships		
	1 000 dwt	Ships	Average vessel size, dwt	1 000 dwt	Ships	Average vessel size, dwt	1 000 dwt	Ships	Average vessel size, dwt
December 2000	40 328	284	142 001	31 208	486	64 214	3 966	446	8 892
March 2001	44 361	319	139 061	27 221	439	62 007	3 963	441	8 986
June 2001	45 123	339	133 105	26 103	400	65 258	4 154	419	9 914
September 2001	48 386	381	126 998	21 944	337	65 115	3 967	393	10 094
December 2001	51 894	399	130 060	22 184	353	62 845	3 826	372	10 286
March 2002	47 836	404	118 405	19 027	300	63 425	3 758	357	10 525
June 2002	49 564	425	116 622	18 132	283	64 069	3 932	353	11 139
September 2002	47 774	431	110 845	18 869	283	66 676	3 979	369	10 782
December 2002	47 591	488	97 523	28 641	391	73 251	2 832	257	11 018
March 2003	50 284	515	97 639	32 019	441	72 605	2 958	263	11 249
June 2003	55 771	540	103 279	33 408	455	73 425	2 592	250	10 368
September 2003	57 856	580	99 752	41 499	575	72 172	2 841	269	10 562
December 2003	61 123	631	96 867	46 732	640	73 019	3 068	295	10 400
March 2004	62 096	615	100 969	48 761	671	72 670	3 021	312	9 683
June 2004	66 652	649	102 699	50 545	696	72 623	2 838	317	8 954
September 2004	66 969	661	101 314	52 768	703	75 061	2 921	323	9 043
December 2004	71 563	701	102 087	62 051	796	77 953	3 306	370	8 935
March 2005	68 667	679	101 129	63 404	792	80 055	3 312	388	8 536
June 2005	70 520	686	102 799	65 326	801	81 556	4 079	456	8 945
September 2005	68 741	693	99 193	63 495	788	80 578	4 777	521	9 170
December 2005	70 847	724	97 855	66 614	805	82 750	5 088	584	8 712
March 2006	83 385	791	105 417	63 829	784	81 415	5 798	634	9 145
June 2006	93 277	887	105 160	69 055	859	80 390	7 370	683	10 791
September 2006	106 912	987	108 321	73 226	898	81 543	7 602	715	10 632
December 2006	118 008	1 078	109 470	79 364		80 328	8 004	737	10 860
March 2007	120 819	1 113	108 553	100 256	1 204	83 269	9 561	843	11 342
June 2007	122 429	1 107	110 595	143 795	1 657	86 781	10 782	885	12 184
September 2007	124 758	1 149	108 580	183 574	2 137	85 903	12 042	956	12 597
December 2007	124 845	1 134	110 093	221 808	2 573	86 206	13 360	1 035	12 908
Percent of total, December 2007	25.2	11.3		44.8	25.6		2.7	10.3	

Table 19 (continued)

Container vessels			Other ships			Total			Beginning of month
1 000 dwt	Ships	Average vessel size, dwt	1 000 dwt	Ships	Average vessel size, dwt	1 000 dwt	Ships	Average vessel size, dwt	
16 140	394	40 964	8 870	1 087	8 160	100 513	2 697	37 268	**December 2000**
17 350	435	39 884	10 154	1 132	8 970	103 048	2 766	37 255	**March 2001**
18 393	441	41 708	11 790	1 138	10 360	105 563	2 737	38 569	**June 2001**
16 943	413	41 025	12 181	1 153	10 564	103 421	2 677	38 633	**September 2001**
16 550	393	42 111	13 501	1 201	11 242	107 955	2 718	39 719	**December 2001**
14 476	355	40 776	12 839	1 200	10 700	97 936	2 616	37 437	**March 2002**
14 793	362	40 865	15 415	1 324	11 643	101 836	2 747	37 072	**June 2002**
14 509	338	42 927	15 342	1 292	11 875	100 473	2 713	37 034	**September 2002**
13 000	296	43 919	16 174	1 386	11 669	108 238	2 818	38 409	**December 2002**
16 281	326	49 943	16 199	1 365	11 868	117 742	2 910	40 461	**March 2003**
18 296	367	49 853	17 085	1 367	12 498	127 152	2 979	42 683	**June 2003**
27 216	503	54 107	18 062	1 484	12 171	147 475	3 411	43 235	**September 2003**
30 974	580	53 403	19 277	1 492	12 920	161 174	3 638	44 303	**December 2003**
35 840	658	54 468	20 068	1 520	13 203	169 786	3 776	44 965	**March 2004**
38 566	724	53 268	22 833	1 682	13 575	181 434	4 068	44 600	**June 2004**
41 172	808	50 956	24 368	1 714	14 217	188 198	4 209	44 713	**September 2004**
43 904	880	49 891	27 361	1 898	14 416	208 185	4 645	44 819	**December 2004**
49 624	1 006	49 328	27 328	1 940	14 087	212 335	4 805	44 190	**March 2005**
53 605	1 101	48 688	29 884	2 002	14 927	223 414	5 046	44 275	**June 2005**
52 378	1 132	46 271	31 209	2 158	14 462	220 600	5 292	41 686	**September 2005**
50 856	1 124	45 245	33 147	2 285	14 506	226 551	5 522	41 027	**December 2005**
49 749	1 130	44 026	36 750	2 373	15 487	239 512	5 712	41 931	**March 2006**
53 876	1 185	45 465	39 768	2 522	15 768	263 347	6 136	42 918	**June 2006**
54 676	1 199	45 601	42 322	2 714	15 594	284 738	6 513	43 718	**September 2006**
51 717	1 143	45 247	45 612	2 962	15 399	302 706	6 908	43 820	**December 2006**
55 144	1 229	44 869	49 245	3 327	14 802	335 025	7 716	43 420	**March 2007**
63 063	1 305	48 324	52 382	3 562	14 706	392 451	8 516	46 084	**June 2007**
76 804	1 412	54 394	56 767	3 864	14 691	453 945	9 518	47 693	**September 2007**
78 348	1 435	54 598	56 947	3 876	14 692	495 309	10 053	49 270	**December 2007**
15.8	14.3		11.5	38.6		100.0	100.0		**Percent of total, December 2007**

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

[a] Ships of 100 GT and above.

funds to finance new buildings, and ship yards have seen some orders cancelled. According to LLR-Fairplay, in January 2008 more than 600 new vessels were ordered, while by September this had slowed to just 127 contracted.

By end of May 2008, the global containership newbuildings order book reached its highest level ever, standing at 1,528 ships with a total container carrying capacity of 6.7 million TEUs. Among those, there were 54 ships on order, with a capacity of 13,000 TEUs and above. The largest containerships on order were eight 13,350 TEU units ordered by COSCON (China) and eight 13,000 TEU units ordered by China Shipping (China), all for delivery between December 2010 and 2012. The other known operators for which 13,000 plus containerships were on order were MSC (Switzerland), Maersk (Denmark), Hanjin (Republic of Korea), and CGM–CMA (France). The 54 ships with 13,000 plus TEUs are all built in shipyards in China and the Republic of Korea, and they are scheduled to be registered in China, Germany, Liberia, Marshall Islands and Panama.

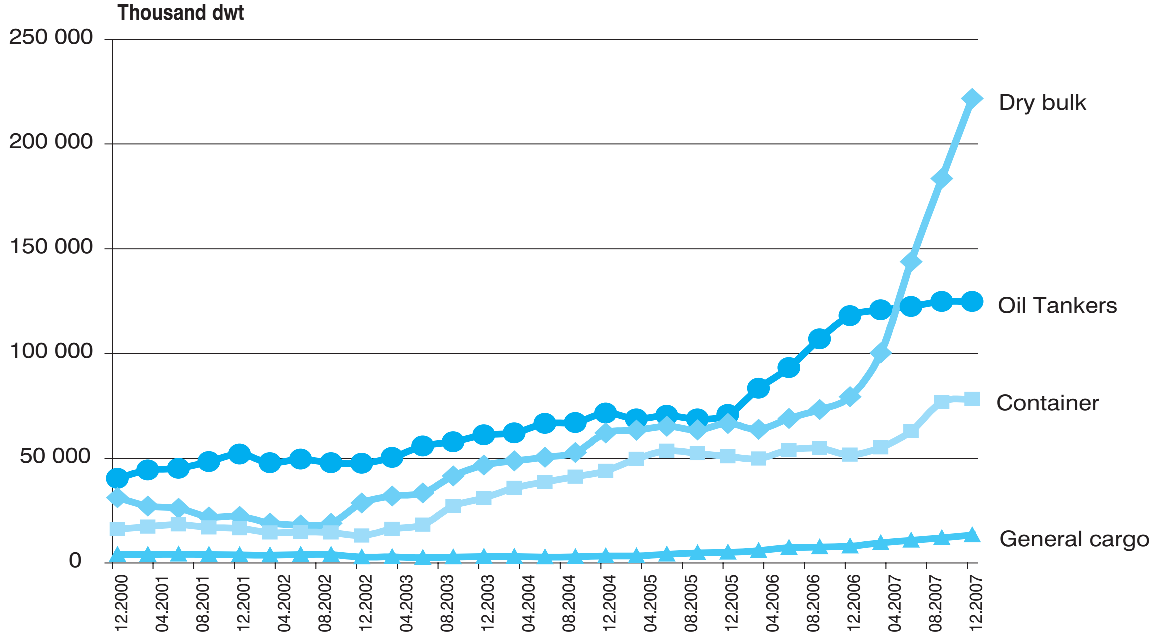
> The present order book has raised concerns whether the supply of qualified seafarers will grow sufficiently quickly to sustain the fleet that will enter into service in coming years.

The present order book has raised concerns whether the supply of qualified seafarers will grow sufficiently quickly to sustain the fleet that will enter into service in coming years. It is estimated that manning the 10,000 ships presently on order requires 400,000 newly trained crew. Already in 2007, carriers reported an acute shortage of officers, and the shortage is expected to escalate. Some of the maritime accidents that happened in 2007 are thought to be the consequence of the employment of insufficiently experienced on-board personnel. Specialized ships, such as LNG tankers, require a specialized workforce, and officers are increasingly seeking employment ashore, where job opportunities in the area of port operations and maritime administrations are also growing in line with the booming trade.

In past decades, traditional "maritime nations" would have their own national shipping companies, vessel registrations and seafarers, and if there was a shortage of the last, there would have been a need for a national solution, possibly involving support to nautical schools and more attractive working conditions. Today, the global shortage of seafarers

Figure 12

World tonnage on order, 2000–2007[a]



Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.

[a] Ships of 100 GT and above.

requires a global solution, where carriers and trading nations need to provide a framework that makes maritime training and education a worthwhile investment.

4. Prices of newbuildings and second-hand tonnage

Today, due to a shortage of capacity, second-hand vessels are more expensive than newbuilding contracts.

Newbuilding prices for most vessel types continued to increase in 2007 compared to the previous year's figures, the exception being a slight decrease for 110,000 dwt tankers, albeit following a historical high in 2006, and a stable price (in nominal United States dollars) for 150,000 m^3 LNG tankers. The rising prices for newbuildings reflect the continuing high demand, as well as the surge in the price of steel and the costs of local currency inputs if measured in dollars.

The highest increase was recorded for containerships: a 2,500 TEU vessel cost 43.5 per cent more in December 2007 than it did a year earlier. Dry bulk carriers also recorded high increases, reaching record prices. A 170,000 dwt dry bulk carrier fetched $97 million in December 2007, 39 per cent more than a year before, and 2.4 times the price paid in 2000 (see table 20).

The most expensive new ships continue to be LNG carriers, which in 2007 cost $220 million, equivalent to almost $1500 per m^3. Prices per dwt depend heavily on ship sizes, implying significant economies of scale. At $483, the price per dwt on a 300,000 dwt tanker was only 42 per cent of the price per dwt on a 45,000 dwt tanker, and was in fact the lowest price per dwt of all ship types in the table. In the case of dry bulk carriers, the price per dwt on a 170,000 dwt vessel was $571, two thirds of the price per dwt on a 45,000 dwt vessel. An 8,000 TEU containership in 2007 cost $20,000 per TEU, less than two thirds of the TEU price on a 4,000 TEU ship.

Prices for second-hand tonnage fluctuate more than prices for newbuildings. Prices for five-year-old dry bulk carriers grew more than six-fold between 2001 and 2007, reaching levels that were in fact significantly higher than the corresponding newbuilding prices (see tables 20 and 21). A five-year-old 170,000 dwt dry bulk carrier in 2007 cost $152 million, compared to just $97 million for a newbuilding contract for a vessel of the same type.

Table 20

Representative newbuilding prices in selected years

(Millions of dollars, end of year figures)

Type and size of vessel [a]	1985	1990	1995	2000	2005	2006	2007	Percentage change 2007/ 2006
45,000 dwt dry bulk carrier	11	24	25	20	28	31	39	25.8
72,000 dwt dry bulk carrier	14	32	29	23	35	40	54	35.0
170,000 dwt dry bulk carrier	27	45	40	40	59	70	97	38.6
45,000 dwt tanker	18	29	34	29	43	47	52	10.6
110,000 dwt tanker	22	42	43	41	58	81	72	-11.1
300,000 dwt tanker	47	90	85	76	120	130	145	11.5
150,000 m^3 LNG	200	225	245	165	205	220	220	0.0
78,000 m^3 LPG	44	78	68	60	89	92	93	1.1
20,000 dwt general cargo	12	24	21	19	18	24	25	4.2
2,500 TEU full containership	26	52	50	35	42	46	66	43.5
4,000 TEU full containership	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	130	n.a.
8,000 TEU full containership	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	160	n.a.

Source: Compiled by the UNCTAD secretariat on the basis of data from *Lloyd's Shipping Economist*, various issues.

[a] Vessel sizes for different years do not always coincide completely.

Table 21

Second-hand prices for five-year-old ships, 2000–2007

(Millions of dollars, end of year figures)

Type and size of vessel	2000	2001	2002	2003	2004	2005	2006	2007	Percentage change 2007/2006
40,000 dwt tankers	27.0	25.5	24.0	28.0	40.0	45.0	47.5	50.0	5.3
95,000 dwt tankers	39.0	33.0	30.0	38.0	57.0	59.5	66.0	68.0	3.0
150,000 dwt tankers	50.0	43.0	42.0	48.0	74.0	76.0	85.0	88.7	4.4
300,000 dwt tankers	71.0	60.0	53.0	75.0	107.0	108.0	121.0	130.0	7.4
45,000-52,000 dwt dry bulk carrier	15.0	12.0	15.0	20.5	30.0	26.5	40.5	75.5	86.4
70,000 dwt dry bulk carrier	16.0	13.5	17.0	28.0	41.0	30.0	46.0	91.5	98.9
170,000 dwt dry bulk carrier	25.0	25.0	29.0	46.0	65.0	58.0	81.0	152.0	87.7

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Fearnleys *Review*, various issues.