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Chapter IV

TRADE AND FREIGHT MARKETS

This chapter describes the conditions and trends in trade and freight markets, covering the major liner and bulk cargo sectors, gives liner freight rates as a percentage of commodity prices and estimates freight payments and freight costs as a percentage of import value in world trade.

A. CRUDE OIL AND PETROLEUM PRODUCTS SEABORNE FREIGHT MARKET

(a) Seaborne trade in crude oil and petroleum products

72. The expansion of OPEC crude oil production quotas in March, June and September 2000 followed several years of depressed tanker freight rates. These rates encouraged record-level demolition for 1999 (see table 11) and during the first half of 2000, when about two-thirds of the demolition activity for the year took place. The expansion of crude oil production fuelled prospects of increased shipments of crude oil which, coupled with the steady growth of shipment of petroleum products, aligned supply and demand for the different types and sizes of tankers deployed on the several routes outlined in Chapter I.

(b) Tanker freight rates

73. Therefore, 2000 was a good year for tanker owners. In addition to demolition activity other factors also contributed to this result. First, the slow and modest consolidation process that affected the larger sized vessels of the world tanker fleet — about 45 per cent of the total in terms of dwt. It is estimated that the Tanker Pool controls about 11 per cent of VLCC tonnage while the Alliance Suezmax controls about 19 per cent. Moreover, the Erika disaster off the French Coast (see Box 2) encouraged charterers to seek environmentally friendly tonnage to comply with the upgraded MARPOL regulations that were finally agreed in April 2001.

74. The effect is apparent in the increased freight indices for the five groups of vessels engaged in transporting crude oil and petroleum products (see table 31).

Very large crude carriers (VLCC)

75. Spot rates from the Middle East to Japan that starting the year at WS 55 and those heading west at WS 48 doubled by July. By August there was no tonnage available and freight rates to the east remained steady at WS 138, while bookings to the West stood at WS 116. In routes across the Mediterranean, rate levels were reported to be at WS 145 corresponding to owners' potential earnings in excess of \$60,000 per day. The booking of the Iran Nesa by Stasco for loading at Ceyhan (Turkey) and discharging on the United Kingdom-Continent was made at that level. Similar levels were witnessed in routes from West African as illustrated by the fixture for the 1999-built Christina booked by Koch at WS 134 for discharging in the United States Gulf.

76. Rates continued to rise to WS 170 and WS 132 in November for the main routes heading east and west out of the Middle East Gulf. They eased somewhat by the end of the year to WS 155 and WS 129. There was a lack of modern vessels and thus Euronav/Luxembourg was able to demand WS 195, approximately \$100,517 per day, for its 2000-built Limburgh.

Table 31

Tanker freight indices,^a 1998–2001

Period	VLCC/ULCC				Medium-size crude carriers				Small crude and product carriers				Handy-size dirty carriers				All-size clean carriers			
	1998	1999	2000	2001	1998	1999	2000	2001	1998	1999	2000	2001	1998	1999	2000	2001	1998	1999	2000	2001
January	55	62	48	152	105	92	93	217	142	114	126	346	171	159	146	277	155	164	148	371
February	69	49	54	117	97	94	108	206	133	137	141	230	176	144	154	323	147	168	170	400
March	72	38	58	87	106	89	116	158	146	128	164	239	162	158	167	295	161	177	189	348
April	70	41	70	95	92	86	135	171	122	121	196	272	155	157	186	299	157	210	197	264
May	75	49	81	81	98	76	127	160	120	124	177	190	152	165	187	296	171	196	205	263
June	74	42	96	61	105	74	136	132	136	113	174	183	161	159	194	242	167	160	210	264
July	75	41	101	52	100	73	153	112	129	108	245	141	160	148	261	230	168	162	218	224
August	60	47	106	53	89	71	197	114	120	110	266	130	152	151	243	224	165	154	234	214
September	47	50	129	51	79	83	191	111	107	111	269	148	151	150	230	204	158	142	255	218
October	54	45	136		82	91	165		117	106	194		161	144	217		147	147	265	
November	49	48	134		88	93	205		120	126	267		182	148	241		133	146	258	
December	59	53	138		96	108	209		138	141	273		166	170	244		161	154	262	
Annual average	63	47	96		95	86	153		127	120	208		162	154	207		157	165	218	

Note: All indices have been rounded to the nearest whole number.

^a Compiled and published by Lloyd's Ship Manager. Worldscale = 100, as effective in each year. For tankers vessel size groups are as follows: VLCC/ULCC: 150,000 dwt and upwards; medium-sized crude carriers: 70,000-150,000 dwt; small crude and product carriers: 30,000-70,000 dwt; handy-size dirty carriers below 35,000 dwt and all sizes clean carriers.

77. Over the year the rates for shipment from the Middle East Gulf to Japan and Europe had increased by 280 per cent. The time-charter equivalents at the end of the year were \$81,100 and \$74,400 per day. The rates also reflected increased shipments from West Africa to Asia, a trend that had started in the previous year when VLCC tonnage became unemployed due to reduced OPEC output and displaced Suezmax vessels from this route.

78. The strong market is expected to continue for the time being, on the back of optimistic forecasts. The vast majority of crude oil output capacity is still found in the Middle East while expansion of other producing regions, such as West Africa, could take some time to fully develop. As production from mature regions such as the North Sea declines, long transport distances and a higher market share for these vessels could result. Current low world oil inventories will also keep pressure on demand.

Medium-size crude carriers

79. During the year the increases in freight rates for Suezmax and Aframax tonnage were also important, albeit they did not increase as much as the VLCC tonnage. The monthly average for spot rates for Suezmax vessels trading from West Africa to North America Gulf and East Coasts were WS 96 in January, and WS 158 in June — an increase of 60 per cent for the half year. During the second half of the year there was a further 40 per cent increase and the monthly average of spot rates closed the year at WS 225 — an increase of 220 per cent over the level at the beginning of the year. For a new 140,000 dwt Suezmax average time-charter equivalents of spot rates were \$20,800 per day in January and \$63,700 in December.

80. The firm growth in West Africa rates affected other regions. Suezmax tonnage obtained rates between WS 110 to WS 125 or even higher for voyages from the North Sea, Black Sea or Mediterranean. The market became very buoyant at the end of the year with rates reaching more than WS 200 for certain cross-Mediterranean journeys. In the Middle East Gulf Suezmax vessels reached levels of WS 185 for trips to India.

81. Three factors explain the reason for the high rates. The first one stems from the Erika disaster and the decision by the French charterer TotalFina-Elf and others not to engage tankers over 20 years old and to ban entry of older vessels to their terminals (see Box 2 on the Erika disaster). West African loading ports, critical to the Suezmax market, as well as French discharge ports were affected. The second factor was the tight supply of Suezmax vessels and their concentration in a single pool. Out of 300 vessels, there are only 90 available for spot trading that are less than 20 years old with the Alliance Suezmax controlling roughly half of them. The third factor is that only 17 vessels are expected for delivery in 2001.

82. Average monthly spot rates for Aframax tonnage followed similar pattern. Vessels trading across the Mediterranean Sea and within North West Europe saw rates increase from WS 116 to WS 120 range in January and from WS 210 to WS 234 range in December. This end of year range was equivalent to \$41,700 to \$50,400 per day. In October, the 1987-built Ragnhild Knutsen was booked by Karran to travel from Butinge to the United Kingdom-Continent for WS 257.5. In the Mediterranean, modern vessels were quoted from around WS 225 to WS 240 range with older ships taking a cut of 20 points and double-hull ones gaining a bonus of up to 10 points. Overall, rates along these routes increased 220 per cent. Across the Atlantic in the routes from the Caribbean to North America Gulf and East Coast 80,000 dwt vessels were better off. The average WS increased from 125 in January to 355 in December, an increase of 260 per cent. However, rates were volatile and peaked four times during the year. The dirty spot price for liftings in the 70,000 to 100,000 tons range from Curaçao to Houston moved up from \$4.70 to \$13.20 per ton — 280 per cent higher.

Small crude and product carriers

83. These vessels also had a good year. In the Caribbean dirty spot rates for vessels in the 40,000–60,000 dwt range trading to North America East Coast went up from WS 137 in January to WS 306 in December. Increases in clean spot rates were similar — 45,000 dwt vessels trading along the same route went up from WS 150 to WS 334 over the year. The increase was also pronounced in the Far East routes — clean spot rates for a 39,000 dwt carrier trading from Singapore to Japan went up from WS 203 to WS 438. Also clean spot rates for a 55,000 dwt from the Middle East Gulf to Japan went up from WS 166 to WS 370.

Box 2

The impact of Erika

The Maltese-flagged tanker Erika broke up in stormy seas at 07:20 GMT on 12 December 1999 off the French coast. The ship had left Dunkirk (France) loaded with about 30,000 tons of viscous fuel oil and was bound to Leghorn (Italy). It was owned by Tevere Shipping of Italy and after recent approval by an Italian surveying society had been found fit for service and chartered by TotalFinaElf, a major French oil group. The vessel was the second of a series of eight built in the period 1974–1978 by a Japanese shipyard. The oil spill contaminated large sections of the French coast causing heavy environmental damage and losses to economic activities along the coast.

The investigation carried out indicated that the likely reason for the disaster was an initial crack in the lower part of the hull. The seriousness of the crack was misjudged and subsequently developed due to several contributing factors, to the point where it caused progressive structural failure and loss of the vessel.

Soon after the disaster there was increased chartering activity by independent oil traders, and fixtures where charterers were not reported also increased. Oil companies tightened their procedures for chartering vessels and charters of less than 10-year old tankers increased.

The European Union stated its intention to legislate the accelerated phasing out of single hull tankers. The International Maritime Organization also acted by drafting plans to amend Annex I Regulation 13G of the MARPOL Convention for accelerated phasing out of such tankers. Discussion started in the October meeting of the Marine Environment Protection Committee. An increase of 50 per cent in the limits of compensation payable to victims of pollution under the International Convention on Civil Liability for Oil Pollution Damage (CLC Convention) and the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (IOPC Fund) was agreed.

Final measures were agreed in the 46th meeting held in London in April 2001 whereby the three categories of tankers identified will mostly be phased-out by 2015. Power was given to member States to ban entry of single hull tankers over 25-year old to ports and to implement Condition Assessment Schemes (CAS) with the objective to tighten structural inspection of vessels of category one after 2005 and of vessels of category two after 2010.

Source: UNCTAD secretariat from *Lloyd's List* articles 1999 and 2000 and IMO Press Release, 30 April 2001.

Handy-size dirty and clean carriers

84. The rates for clean handysize tonnage were impressive in spite of a large number of old vessels — 40 per cent of the fleet was built in the 1970s. In the route Caribbean to East Coast of North

America the rates went up from WS 189 to WS 425 over the year, reaching a time charter equivalent of \$31,000 per day. Similar increases were found in routes from Singapore to East Asia — from WS 200 to WS 436 over the year. In the Mediterranean trades large rate increases were experienced — rates for 28,000 dwt tanker increased from WS 133 to WS 358.

85. Demand for handy-sized product tankers trading out of the Middle East into Europe is expected to more than double by 2003 due to two factors. Firstly, there will be increased European demand for environmentally friendly petroleum products. This means that the high production cost European refineries would need to invest about \$35 billion to meet low sulphur emission standards and some small ones will likely be decommissioned. Secondly, existing low cost refineries in the Middle East Gulf will have spare capacity as newly built refineries in India and the Far East move into full production, the Gulf refineries will upgrade their facilities to supply environmentally friendly products. Thus product imports into Europe, which have fallen from 50 million tons a year in the 1980s to around 10 million tons in 2000, are expected to rise again.

86. Early signs of this trade increase are evident. In the Middle East-Europe route many owners have found it necessary to ballast back. This partly explains the high rate differential seen recently between United Kingdom/Continent-Mediterranean and the United Kingdom/Middle East.

Tanker-period charter market

87. The market was severely restricted by the high levels reached by spot rates. Ship owners were simply not interested in fixing tonnage even for a few months as rates continued to rise. The high level of spot rates started to trigger revision clauses of charter parties. Three modern Suezmax tankers chartered in 1997 by a major company for seven years were affected. The agreed minimum daily base time charter rate of \$22,000 was revised quarterly by a broker panel that recommended an additional daily hire of \$4,079, \$11,701, and \$26,153 for the first three quarters of the year. In fact, the third quarter increase exceeded the base hire of \$22,000.

B. DRY BULK SHIPPING MARKET

(a) Dry bulk trade

88. The main activity in this market was along the iron ore routes from Australia to the Far East and from Brazil to the Far East and Europe, over which Capesize tonnage was mostly deployed. The coal routes from Australia to the Far East and from South Africa to the Far East and Europe also attracted the same size tonnage. Panamax tonnage was also deployed in several routes: the Transatlantic coal and iron ore routes from East Coast of North America and Canada respectively; ore exports from West Africa to Europe; iron ore and coal routes within Asia, with origins in India, China and Indonesia; and within Europe with origin in Sweden.

89. Panamax tonnage together with other smaller vessels, such as Handymax, were deployed in the grain routes from North America Gulf and East Coast of South America. Handysized tonnage was employed for several grain destinations notably for ports with restricted drafts. This tonnage was also used in bauxite, alumina and rock phosphate routes.

(b) Dry bulk freight rates

90. In 2000, the freight rates for all sectors and sizes of dry bulk carriers finished at levels above those prevailing at the beginning of the year. The Baltic Dry Index increased 23 per cent after reaching a peak of 30 per cent in November 2000. As shown in table 32, the dry cargo tramp time-charter and trip charter indices increased during the year to 108 and 199, corresponding to percentage increases of 25.5 and 4.8 respectively.

Table 32

Dry cargo freight indices (1998–2001)
(monthly figures)

Period	Dry cargo tramp time-charter ^a (1995 = 100)				Dry cargo tramp trip-charter ^b (July 1965 to June 1966 = 100)			
	1998	1999	2000	2001	1998	1999	2000	2001
January	71	46	86	105	189	166	190	193
February	62	49	89	103	186	170	191	198
March	68	60	101	108	171	169	190	195
April	68	59	107	108	173	172	191	200
May	64	68	108	109	173	173	193	206
June	60	64	106	106	177	176	202	205
July	55	63	108	93	167	179	202	205
August	53	66	113	72	165	178	203	192
September	52	70	122		164	185	206	
October	57	79	121		165	185	207	
November	56	80	122		170	195	206	
December	50	82	107		168	192	208	
Annual average	60	66	108		172	178	199	

Note: All indices have been rounded to the nearest whole number

^a Compiled by the German Ministry of Transport.

^b Compiled and published by Lloyd's Ship Manager.

91. The increase in time-charter rates was pronounced during the third and early fourth quarters when the index was 40 per cent above January's, but it then fell back to the July levels by the end of the year. The rate for trip-charters increased progressively during the year.

92. The increase of cargo volumes for the five main bulk commodities and particularly for iron ore and coal goes a long way to explain the increase in freight rates. The pooling of tonnage, such as that done by Bocimar and A.P. Moller for Capesize vessels, also contributed to this. Other factors affecting freight rates included increases in the price of bunkers. By the third quarter the average posted prices at nine ports collected by Lloyd's Ship Manager stood at \$174.7 per ton for intermediate fuel oil (IFO) 180. Delays in some ports due to congestion also contributed in maintaining higher rates.

93. Increases of freight rates were more apparent for Capesize tonnage to the extent that by late in the year some contract fixtures were reported that protected charterers from further increases. Rates for Panamax tonnage weakened earlier than Capesize and Handimax. Chartering activity was concentrated in the Far East with about 40 per cent of contracts being in that region and 20 per cent in Europe.

Dry bulk time-charter (trips)

94. Rates improved during the course of the year for vessels of different sizes. At the beginning of the year Capesize tonnage was chartered for round trips over the transatlantic and Singapore-Japan to Australia routes at rates of \$16,500 and \$16,900 per day. By the end of the year the corresponding rates were \$20,800 and \$21,100 per day respectively. Again, Panamax tonnage chartered at the beginning of the year for round trips Northern Europe to East Coast of South America and Far East to East Coast of

Australia had rates of \$8,750 and \$9,600 per day. In December, rates were \$10,150 and \$11,515 per day respectively. The market for smaller vessels, Handymax and Handysize, was similar. Over the route Far East to Australia, a Handymax rate for a round trip increased from \$7,000 per day in January to \$8,350 per day in December. For a round trip Continent to West Africa, the rate for a Handysize increased from \$5,850 per day in August to \$6,500 per day in December.

Dry bulk time-charter (periods)

95. Rates increased only for Capesize tonnage, based on a 12-month charter period and prompt delivery. For instance, vessels less than 5-years old and in the range of 150,000–160,000 dwt were fixed at \$18,500 per day in December 2000, a 23.3 per cent increase from the January level. There was no increase in freight rates for Panamax tonnage — staying at \$10,000 per day. For smaller tonnage, rates actually decreased. Rates for Handimax tonnage between 10 to 15 years old were estimated at \$8,000 per day, 3.0 per cent lower than the beginning of the year estimate.

Dry bulk trip-charter

96. For Capesize tonnage, freight rates increased over the year in the iron ore and coal trades. For the transport of iron ore from Brazil and Australia to Europe, rates increased from \$6.15 to \$7.95 per ton and from \$8.50 to \$10.70 respectively. For coal from South Africa and East Coast of North America to Antwerp/ Rotterdam/Amsterdam range the rates increased from \$7.60 to \$10.10 and from \$5.90 to 7.70 respectively. Grain rates, for cargo typically carried in Panamax or smaller vessels also showed improvements. For United States Gulf to Continent, rates for Panamax tonnage increased from \$12.25 to \$14.10 per ton during the year. From the same origin to other destinations carried in handy-sized vessels the rates also increased. For instance, to Algeria from \$20.50 to \$22.70 per ton and to Venezuela from \$10.50 to \$12.95 per ton.

C. LINER SHIPPING MARKET

(a) Developments in liner markets

General developments

97. The impact of containerization on liner trades is greater than that implied by the size and growth of the containership fleet analysed in Chapter III. Containerships make up about 70.0 per cent of total seaborne container carrying capacity of the world, which is estimated at 6.8 million TEU at the end of 2000. The balance is accounted for by other vessels. Single-deck and multi-deck general cargo ships make up about 20.0 per cent of the world container carrying capacity. Another 5.0 per cent is supplied by ro-ro ships and ro-ro and cargo passenger ships with the remainder being provided by bulk carriers and special and reefer vessels.

98. Moreover, the accelerated growth of the fully cellular containership fleet mentioned in Chapter II showed an expanding share of larger vessels. During the first half of 2000, 53 containerships were delivered, while only three ships were retired from operations. The additional 50 ships included 14 post-Panamax ships and 9 over 2,500 TEU. As indicated in table 33, since 1996 the segment of larger vessels, those over 4,000 TEU has been growing faster than any other segment. Apparently the trend will continue unabated: the 12,000 TEU ship designed by Samsung Heavy Industries has attracted considerable interest as well as smaller versions ranging from 8,000 to 10,000 TEU. High occupancy level of slots are required to make these large vessels profitable. To achieve high load factors, liner operators work within alliances to ensure enough cargo volumes on a continuous basis.

99. Owners providing services on the major routes are the main users of the large vessels and gradually are phasing out their smaller ships. Fleets dominated by ships of 4,000 TEU or more will restrict the options of these carriers. This will leave openings for enterprising smaller operators to

pioneer different routes using smaller tonnage displaced by the new deliveries, and serve regional ports bypassed by the big ships.

100. The complex operation and management of container systems encompassing different types and sizes of ships and their containers, sea and inland terminals and inland transport networks require considerable skill and flexibility. The constant adaptation of transport activities to serve the large number of customers making use of liner shipping services with different and changing trading needs is transforming sea carriers and transport operators into logistics operators better tuned to the needs of the trade.

Table 33

Average growth of container fleet by TEU size class, 1996–2000

Vessel size	Average percentage growth from 1996 to 2000
Up to 999 TEU	+6.1
1,000–1,999 TEU	+7.2
2,000–3,999 TEU	+10.5
Over 4,000 TEU	+30.3

Source: UNCTAD secretariat, compiled from *Shipping Statistics and Market Review*, (Bremen), June 2000.

Concentration in liner shipping

101. The concentration process of recent years is resulting in increased carrying capacity being deployed by the biggest liner operators. Over the last quarter of 2000, the top 10 liner operators increased their carrying capacity by 3.5 per cent to 2.8 million TEU, which amounted to almost 42 per cent of the world total container carrying capacity (see table 34). Similarly, the share of the top 20 liner operators increased by 3.4 per cent to 3.9 million TEU — almost 60 per cent of the world total container carrying capacity. Moreover, for the first time in several years there were no new entrants to the top 20 operators. This is a clear reflection of the momentum of the industry consolidation.

Table 34

Leading 20 container service operators (January 2001) on the basis of number of ships and total shipboard capacity (TEUs)

Ranking Operator	Country/Territory	No. of ships in 2001	TEU capacity in 2001	TEU capacity in 2000 ^a	
1	Maersk-SeaLand	Denmark	297	694 054	682 411
2	P&O Nedlloyd	United Kingdom/Netherlands	138	343 554	301 686
3	Evergreen Group	Taiwan Province of China	129	325 385	317 940
4	Hanjin/DSR-Senator	Republic of Korea/Germany	82	258 023	246 397
5	Mediterranean Shipping	Switzerland	138	246 708	229 074
6	NOL/APL	Singapore	81	224 344	213 790
7	COSCO	China	113	206 120	210 289
8	NYK	Japan	86	170 608	170 907

Ranking	Operator	Country/Territory	No. of ships in 2001	TEU capacity in 2001	TEU capacity in 2000^a
9	CP Ships Group	Canada	80	147 995	148 745
10	CMA-CGM Group	France	81	141 842	141 652
Total 1-10			1 225	2 758 633	2 662 891
11	MOL	Japan	65	138 573	137 379
12	K line	Japan	62	136 460	124 655
13	Zim	Israel	75	131 776	135 199
14	OOCL	Hong Kong, China	48	129 121	120 096
15	Hapag-Lloyd Group	Germany	32	116 112	108 156
16	Yang Ming	Taiwan Province of China	45	112 649	103 358
17	China Shipping	China	92	110 159	103 876
18	Hyundai	Republic of Korea	32	106 150	109 303
19	CSAV	Chile	54	96 932	105 035
20	Hamburg-Süd	Germany	45	79 989	76 614
Total 1-20			1 775	3 916 734	3 786 562
World fleet			7 009	6 661 963	6 411 947

Source: UNCTAD secretariat, compiled from *Containerisation International* and www.bpparis.com/newsletters/liners/liner_nl/index.html.

Note: All subsidiaries are consolidated

^a As of September 2000

(b) Freight level of main liner services

Containership market development

102. Global liner shipping market developments are best reflected in the movements of containership charter market. This market is largely dominated by German owners, and more particularly by members of the Hamburg Shipbrokers' Association (VHSS), who control some 75 per cent of all container ship charter tonnage available in the free market. Since 1998, the association has published the "Hamburg Index" providing a market analysis of containership time charter rates. ² Rates on 14-tons slot (TEU) per day are published on a monthly basis for three gearless and six geared size group and compared to those obtained on average in 1997. The year 1997 was chosen as the reference year because it was the last year when a remunerative rate level was achieved. The development of time charter rates is reflected in table 35.

103. For 2000 the average time charter rates for nearly all groups of containership were higher than the corresponding averages for 1999 and some as much as 44 per cent, the exception being the group of gearless containerships with capacity 200–299 TEU. For these gearless vessels rates actually decreased by 6 per cent. However, most of these rates are still below the 1997 levels with the gap being less

² See website www.vhss.de/englisch/hax.html.

pronounced for groups including larger vessels. Interestingly, rates for geared containerships in the range 1,600–1,999 TEU are similar to those applied to gearless ships with capacity over 2,000 TEU.

104. The boost for improved rates for 500 TEU plus vessels has come from the intra-Asian routes, with a notable upturn in the cross-Asian route to India and Pakistan, and from increasing North-South trades, with the South American trades making the major contribution. The emergence of Asia/Americas operators covering both the North and South American markets has also boosted demand for these ships. The strong prices available for 2,000 TEU plus vessels were due to temporary needs of sea carriers wanting to add new loops before new ships were delivered.

Table 35

Containership average time charter rates
(US dollars per 14-ton slot/day)

Ship type	1997	1999	2000	2001								
				January	February	March	April	May	June	July	August	
Gearless												
200–299 TEU	21.80	16.70	15.71	16.03	15.59	15.95	15.85	15.20	14.82	15.36	15.81	
300–500 TEU	16.79	13.96	14.52	14.46	15.44	15.68	15.67	14.47	13.49	13.58	15.02	
2 000 plus TEU	9.31	7.56	10.02	9.63	9.18	11.37	9.99	9.40	9.61	8.85	7.73	
Geared												
200–299 TEU	22.00	17.23	17.77	18.01	18.00	17.90	18.17	18.33	18.00	18.64	17.74	
300–500TEU	17.24	12.76	14.60	15.11	16.21	16.21	14.22	14.87	16.17	04.05	14.93	
600–799 TEU ^a	13.87	9.32	12.21	13.00	12.43	12.33	12.01	12.01	12.64	11.98	10.99	
600–799 TEU ^b	14.08	9.63	11.90	12.22	13.25	12.43	12.23	14.43	12.16	11.59	10.60	
1 000–1 299 TEU	12.47	8.24	11.87	10.47	10.23	9.87	10.21	10.04	10.10	9.39	8.49	
1 600–1 999 TEU	10.50	7.54	10.35	9.13	9.26	9.69	9.57	9.70	9.29	7.92	8.31	

Source: Vereinigung Hamburger Schiffsmakler und Schiffsagenten (VHSS), Hamburg, Germany.

^a 16–18 knots.

^b Over 18 knots.

105. For the first quarter of 2001, the downward trend of the time charter rates for gearless vessels stopped. For geared vessels the picture was mixed with rates recovering for small size vessels and remaining depressed for larger ones.

106. Time charter rates for containerships larger than 2,000 TEU have moved downward as a result of the attractive newbuilding prices quoted by shipyards over the last years. Evidence indicates that rates could be up to 30 per cent lower than the rates quoted in table 35 for the largest gearless vessels. Thus Maersk- SeaLand is reported to have paid \$26,300 a day to retain the Hansa Pacific (4,322 TEU capacity) for three years. Brokers also report that APL has chartered three 3,100 TEU new buildings for two years at a rate of almost \$23,000 a day, which is considered a good price. Another five geared 2,500 TEU units are reported to have been fixed at \$18,250, with two taken for 18 months and the other three for two years. During the first months of 2001 the time charter rates for gearless larger vessels, has continued to drop, improving in March and thereafter declining.

107. By the end of 2000 the level of freight rates in the main containerized routes — transpacific, transatlantic and Asia-Europe — were mostly above the levels that prevailed at the end of 1999 (see table 36). The eastbound legs connecting Asia with North America and North America with Europe were the only ones showing a deterioration in rates: 11.7 per cent over the Pacific and 4.3 per cent decrease over the Atlantic. The westbound legs showed healthy rate improvements of 11.7 per cent

across the Pacific and of 11.3 per cent over the Atlantic. The westbound leg linking Asia to Europe showed a marginal increase of 0.3 per cent, considerably less than the 2.7 per cent increase in rates along the eastbound one.

108. In the transpacific route, the freight rates of westbound leg improved during most of the year reaching a ceiling during the third quarter of \$939 per TEU. The fourth quarter saw a deterioration of 7.7 per cent. The opposite was true in the eastbound leg where rates came down during the year, except the third quarter when they increased by 5.0 per cent to reach \$2,041 per TEU. Rate restoration measures were announced in August and probably helped to achieve the rate levels of the third quarter and were fuelled by the lasting recovery in Asia and the persistent expansion of the United States economy. However, the results of the fourth quarter showed that rates recovery was ephemeral, in spite of the effects of increased bunker surcharges, rate restoration and peak season surcharges recommended by the Transpacific Stabilization Agreement (TSA).

109. Similar results were found in the transatlantic trade. In the more dominant westbound direction, rates improved during the year to a ceiling of \$1264 per TEU in the third quarter with only a marginal drop of 0.1 per cent in the last quarter. In the weaker eastbound direction a 9.0 per cent drop in the first quarter was followed by increases with a peak of \$1,022 per TEU during the third quarter. At year end, rates dropped by 3.4 per cent. The difference between the average rates in each direction is much less pronounced than in other trades, thus reflecting a more balanced trade situation. During the year the Trans Atlantic Conference Agreement (TACA) announced freight rate increases. Rate levels also appear to reflect increased carrier concentration. In July, the three largest groupings of carriers (Grand Alliance, Maersk-SeaLand and Canada Maritime/Cast/OOCL) controlled 44 per cent of the total trade capacity. By October and after a reshuffle the three new groups (Grand Alliance/Lykes/TMM, Maersk-SeaLand/New World Alliance and Canada Maritime/Cast/OOCL) controlled more than 58 per cent of trade capacity. Thus, in spite of consolidation and restoration measures, rates still weakened.

110. In the Asia-Europe trade, volatility was less pronounced in the more dominant westbound leg where freight rates were stable during the first half of the year with up and down fluctuations being observed in the third and fourth quarter respectively. The upward movement reflected expanded shipments from China. The reduced volatility was a result of the use of long-term service contracts by major shippers. In the eastbound leg, a growing segment of cargo also moved under long-term contracts. After an initial drop of 14 per cent, the eastbound rates from Europe to Asia increased by 7 and 12 per cent for two consecutive quarters. There was strong improvement in traffic with very high levels of slot utilization and further increases appeared to be underway following the Far Eastern Freight Conference's announcement of rate restoration measure of October. During the last quarter there was a marginal increase of 0.5 per cent that seemed to indicate the end of sudden shifts in demand following currency fluctuation.

111. During the year, rate restoration programmes were applied by agreements or conferences to recover eroded rates or to realize rate increases that were not implemented. These programmes attempt to counter excess supply or weakened demand by an across-the-board increase in freight rates or by reasserting former tariffs.

Table 36

Freight rates (market averages) on the three major liner trade routes 1999–2000
(US dollars per TEU)

	Transpacific		Europe -Asia		Transatlantic	
	Asia- United States	United States -Asia	Europe - Asia	Asia- Europe	United States- Europe	Europe - United States
1999						
First quarter	1 619	832	716	1 512	1 165	1 100
Change (%)	0.3	-1.2	-11.3	3.2	-11.0	-7.4
Second quarter	2 018	871	723	1 525	1 111	1 045
Change (%)	24.6	4.7	1.0	0.9	-6.2	-5.0
Third quarter	2 203	818	730	1 568	1 040	1 054
Change (%)	9.2	-6.1	1.0	2.8	-6.4	0.9
Fourth quarter	2 188	736	776	1 612	1 031	1 127
Change (%)	-1.0	-10.0	6.0	3.0	-1.0	6.9
2000						
First quarter	2 125	751	664	1 594	939	1 148
Change (%)	-3.0	2.0	-14	-1.0	-9.0	2.0
Second quarter	1 953	852	710	1 597	958	1 148
Change (%)	-8.0	13.0	7.0	0.0	2.0	4.0
Third quarter	2 041	939	793	1 673	1 022	1 264
Change(%)	5.0	10.0	12.0	5.0	7.0	6.0
Fourth quarter	1 932	867	797	1 618	987	1 255
Change (%)	-5.3	-7.7	-0.5	-3.3	-3.4	-0.1
2001						
First quarter	1 874	877	826	1 566	938	1 290
Change (%)	-3.0	1.1	3.6	-3.2	-5.0	2-8
Second quarter	1 765	869	760	1 468	943	1 236
Change (%)	-5.8	-1.0	-7.9	-6.2	0.5	-4.2

Source: UNCTAD secretariat on the basis of data from *Containerisation International*, various issues, and other specialized sources.

Notes: Information from six of the trades' major liner companies. All rates are all-in, including the inland intermodal portion, if relevant. All rates are average rates of all commodities carried by major carriers. Rates to and from the United States refer to the average for all three coasts. Rates to and from Europe refer to the average for North and Mediterranean Europe. Rates to and from Asia refer to the whole of Southeast Asia, East Asia and Japan/Republic of Korea.

(c) Supply and demand in respect of main liner services

112. Supply and demand for each of the major routes on the dominant leg were well balanced in 2000. However, there are some indications that the short-term alignment of demand and supply in certain routes and directions may be altered in two or three years due to volume of ship ordering and the increased size of newbuildings.

113. In 2000, the transpacific trade saw a growth of 14 per cent for eastbound cargo volumes to 6.9 million TEU with a number of carriers reporting average space utilization levels of almost 95 per cent. However, carriers face difficulties in handling the current two-to-one imbalance in favour of eastbound cargoes. A recent report of the Pacific Maritime Association valued the transpacific trade at \$53.7 billion for 2000 with more than three quarters of that being attributed to eastbound cargo, mostly toys, cosmetics and other seasonal gift items. In the future, eastbound cargo growth is expected to expand at 5 to 6 per cent which is lower than earlier predictions of 10 per cent. However there is no end in sight to the structural trade imbalance. The largest westbound commodity group measured in value-term are machinery, appliances, computers and "related items" with farm, agricultural and forest products rounding off the list.

114. The high slot utilization indicated a tight balance between supply and demand. Since early 2000 ship capacity deployed eastbound across the Pacific increased by 10 per cent to an estimated 10.2 million TEU — equivalent to 49 vessels of 4,000 TEU sailing each week from Asia to North America. The market share in 2000 of each of the three major alliances decreased (see table 37).

Table 37

Capacity share for the transpacific trade

Operator	Percentage share	
	2000	1999
New World Alliance	19.9	23.7
Cosco/K Line/Yangming	14.7	16.2
Grand Alliance	14.4	15.1
United Alliance (Hanjin, Senator Lines, Cho Yang)	12.5	15.0
Maersk-Sealand	11.5	12.6
Hanjin/Yangming (US east coast all-water service)	2.3	2.9
Total	75.3	85.5

Source: Compiled by the UNCTAD secretariat.

115. In the transatlantic routes, trade is estimated to have grown 8 per cent in 2000 with vessels improving slot-utilization levels more in the westbound direction than in the eastbound one. Total carrier capacity is believed to have grown by 7 per cent during the second half of the year to reach 41,500 TEU a week – equivalent to 2.2 million TEU per year. For 2001 cargo growth is expected to be about 6 per cent with capacity only expanding by 3 per cent.

116. On the Europe-Asia trade routes carrying capacity increased by 4.6 per cent on the eastbound route (Europe to Asia) and by 4.5 per cent on the westbound (Asia to Europe) route, for 2000. The demand supply balance could be upset and future profitability reduced if cargo does not grow at the same pace.

(d) Liner freight index

117. Table 38 indicates the developments of liner freight rates on cargoes loaded or discharged by liners at ports in the Antwerp/Hamburg range for the period 1998–2000. The overall index for the year 2000 went up by 31 points from the 1999 level to reach 117 points (1995 base year 100), reflecting the strong growth situation in both the homebound and outbound trade. In the homebound trade, the average level in 2000 increased by 20 points to reach 115 points. The increases were almost continuous peaking at 128 points and declining during the final two months of the year. This upward trend is mainly attributable to the numerous rate restoration programmes in place on all liner trading routes. The outbound index also increased dramatically by 42 points from the average level in 1999. The index went up by 24 points until May, then dropped to 118 in July and rebounded to 133 in October/November.

Table 38

Liner freight indices, 1998–2001
(monthly figures: 1995 = 100)

Month	Overall index				Homebound index				Outbound index			
	1998	1999	2000	2001	1998	1999	2000	2001	1998	1999	2000	2001
January	97	77	104	119	91	86	106	113	103	69	101	125
February	96	79	103	121	91	88	102	115	101	70	104	126
March	97	80	105	121	92	90	104	116	102	71	105	127
April	96	83	113	122	91	91	110	118	100	74	116	126
May	92	83	119	121	90	92	114	116	94	74	125	126
June	92	84	116	119	90	94	110	112	93	76	121	125
July	90	86	115	117	90	94	111	111	89	78	118	123
August	88	87	122	112	89	98	122	107	87	77	122	117
September	83	90	127		86	99	125		81	82	128	
October	81	92	130		85	99	128		77	86	133	
November	82	96	130		87	102	126		77	89	133	
December	80	98	125		86	105	122		75	92	129	
Annual average	89	86	117		9	95	115		90	78	120	

Source: UNCTAD secretariat on the basis of the Liner Index of the German Ministry of Transport. Monthly weighted assessments of freight rates on cargoes loaded or discharged by liners of all flags at ports of the Antwerp/Hamburg range.

(e) Liner freight rates as percentage prices for selected commodities

118. Table 39 provides data on freight rates of liner services as a percentage of market prices for selected commodities and trade routes over the period 1970 and 2000. The average f.o.b. price for rubber sheet increased by 7.9 per cent in 2000 while freight rates were affected only by BAF surcharges. The f.o.b. price for jute, lower than that of other commodities, rose by 3.6 per cent while freight rates increased by 12.3 per cent. This explains the relatively high freight ratio of 37 per cent for the year 2000. The ratio of liner freight rate to f.o.b. price for tea increased from 5.0 to 5.9 per cent. The c.i.f. price of coconut oil decreased in 2000 by 46 per cent resulting in a substantial increase in the freight ratio to 25.9 per cent. The freight rate ratio for coffee from Brazil to Europe increased dramatically by 47.7 per

cent when the ratio increased from 2.8 per cent to 4.4 per cent due to the slump in coffee prices. During the year 2000 no cocoa beans were shipped by container from Brazil and no freight rate was filed in the conference tariff. Export of cocoa beans from Ghana maintained the same ratio as in 1999 at 4.8 per cent. Freight ratio for coffee export from Columbia to Europe decreased to 3.3 per cent for Atlantic and 3.5 per cent for Pacific.

Table 39

Ratio of liner freight rates to prices of selected commodities

Commodity	Route	Freight rate as percentage of price ^a						
		1970	1975	1980	1985	1990	1999	2000
Rubber	Singapore/Malaysia-Europe	10.5	18.5	8.9	n.a.	15.5	16.3	15
Jute	Bangladesh-Europe	12.1	19.5	19.8	6.4	21.2	33.9	37
Cocoa beans	Ghana-Europe	2.4	3.4	2.7	1.9	6.7	4.8	4.8
Coconut oil	Sri Lanka-Europe	8.9	9.1	12.6	12.6	n.a.	15.6	25.9
Tea	Sri Lanka-Europe	9.5	10.4	9.9	6.9	10.0	5.0	5.9
Coffee	Brazil-Europe	5.2	9.7	6.0	5.0	10.0	2.8	4.4
Coffee	Columbia (Atlantic)-Europe	4.2	4.7	3.3	6.7	6.8	3.7	3.3
Cocoa beans	Brazil-Europe	7.4	8.2	8.6	6.9	11.0	6.0	n.a.
Coffee	Columbia (Pacific)-Europe	4.5	6.3	4.4	6.1	7.4	3.9	3.5

Sources: UNCTAD secretariat on the basis of data supplied by the Royal Netherlands Shipowners' Association (data for 1970–1989) and conferences engaged in the respective trades (data for 1990–2000).

^a C.i.f. (cost, insurance and freight) prices are quoted for coffee (Brazil-Europe and Colombia-Europe) and coconut oil. For cocoa beans (Ghana-Europe and Brazil-Europe) and tea, the average daily prices in London is quoted. Prices of the remaining commodities are quoted f.o.b. terms. The freight rates include, where applicable, bunker surcharges and currency adjustment factors, and a tank cleaning surcharge (for coconut oil only). Conversion of rates to other currencies is based on parities given in International Financial Statistics, published by the International Monetary Fund (IMF). Annual freight rates were calculated by taking a weighted average of various freight quotes during the year, weighted by their period of duration. For the period 1990–2000, the prices of the commodities were taken from UNCTAD, Monthly Commodity Price Bulletin, October 2000 and March 2001.

D. ESTIMATES OF TOTAL FREIGHT COSTS IN WORLD TRADE

Trends in global import value and freight costs

119. International trade involves various services such as sourcing, production, marketing, transaction and transport and the related flow of information. In the transport sector, graph 8 and table 40 provide estimates of total freight payments for imports and the percentage of freight payments of total import value by country groups. In 1999, the world total value of import (c.i.f) increased by 5.0 per cent, while total freight paid for transport services declined by 0.4 per cent. The share of global freight payments as a percentage of import value decreased to 5.4 per cent from 5.7 per cent in 1998. In 1980, the share of freight costs in import value stood at 6.6 per cent or nearly 30 per cent higher than the average ratio in the 1990s. The regional comparison indicates that freight costs incurred for the imports of developing countries continued to be almost double that of developed market-economy countries,

with the difference between the two groups tending to widen slightly. For 1999, the total value of imports by developed market-economy countries increased by 5.3 per cent while total freight costs decreased by a 1.9 per cent, thus standing at 4.5 per cent (4.8 per cent in 1998) as compared to 8.2 per cent (8.3 per cent in 1998) in developing countries. This difference is mainly attributable to global trade structures, regional infrastructure facilities, logistics systems, and the more effective distribution strategies of shippers of developed market-economy countries.

Regional trends

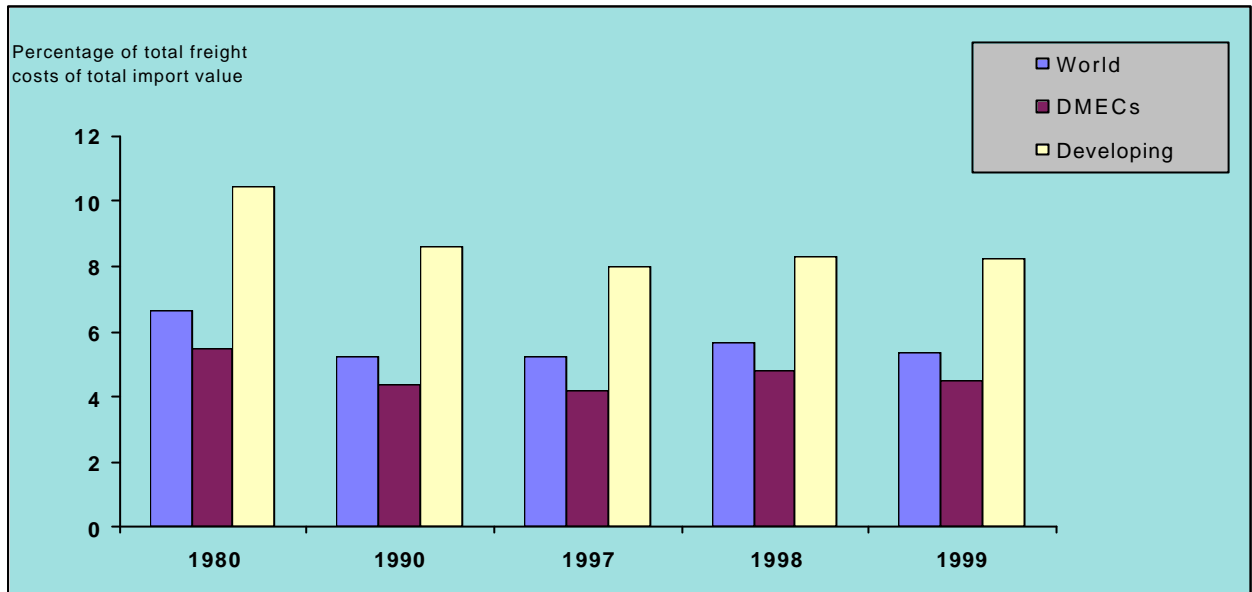
120. Freight costs of developing countries decreased slightly from 8.3 per cent in 1998 to 8.2 in 1999. Within this group, freight costs in African developing countries, however, continued slowly but steadily on an upward trend from 11.5 per cent in 1998 to 12.0 per cent in 1999. This trend toward higher ratios reflects insufficient infrastructure facilities and inadequate management practices, specifically for transit transport, and low productivity of inland transport and terminal equipment. The subregional breakdown shows that the freight costs of West Africa slightly increased to 13.8 per cent in 1999 while those of Eastern and Southern Africa including Indian Ocean remained constant at 13.4 per cent. The ratio of Northern Africa is calculated at 10.3 per cent, reflecting a relatively more efficient transport system compared to those of other African subregions. The imports to African landlocked countries continued to suffer from high freight costs, which primarily reflects inefficient transport organization and facilities, poor utilization of assets and weak managerial, procedural, regulatory and institutional systems, plus inadequate transport infrastructure. Freight ratios for Burkina Faso, Burundi, Chad, Ethiopia, Malawi and Mali were all greater than 20 per cent.

121. Developing countries in Asia accounted for 61.4 per cent of import value and also of freight payments of all developing countries as compared to 59.3 per cent in 1998. The freight factor of this region has fluctuated around 8 per cent since 1990 and was at 7.8 per cent in 1999, as compared with 8.3 per cent in 1998. The freight factor in the Middle East was 8.7 per cent in 1999 (9.2 per cent in 1998). The remainder of Asia saw the ratio drop from 8.1 per cent in 1998 to 7.6 per cent in 1999.

122. Developing countries in the Americas had their freight cost ratio increase to 7.9 per cent in 1999 compared to 7.4 per cent in 1998. This freight ratio is largely attributable to Mexico, the biggest trading nation in the region, which had a freight factor of 6.2 per cent in 1999. Mexico accounted for 85.8 per cent of the total c.i.f. value of imports of the subregion (43.7 per cent of developing countries of the Americas). The countries of the South American western seaboard paid relatively high freight costs of 10.2 per cent in 1999 as compared to 10.0 per cent in 1998. The countries of the South America eastern seaboard registered a rate of 8.6 per cent. For the landlocked countries of the Americas, Paraguay continued to pay high freight rates at 11.3 per cent while Bolivia's rate was 12.1 per cent.

123. Developing countries in Europe for the year 1999 had a slight decrease in freight rates to 8.4 per cent while small island developing countries in Oceania paid slightly higher freight rates at 12.2 per cent. The long distance from major trading partners, low cargo volumes, transshipment and feeder costs also contribute to the high levels of freight costs for island developing countries.

Graph 8

Estimates of total freight costs for imports in world trade by groups

Source: Table 40.

Table 40

Estimates of total freight costs for imports in world trade ^a by country groups
(millions of dollars)

Year	Country group	Estimate of total freight costs imports		Value of imports (c.i.f)	Freight costs as a percentage of import value
1980	World total	123	264	1 856 834	6.64
	Developed market-economy countries	78	286	1 425 979	5.49
	Developing countries — total		44 978	430 855	10.44
	<i>of which in:</i>				
	Africa		10 432	77 757	13.42
	Americas		10 929	123 495	8.85
	Asia		21 979	211 089	10.41
	Europe		1 320	16 037	8.23
Oceania		318	2 477	12.84	
1990	World total		173 102	3 314 298	5.22
	Developed market-economy countries		117 004	2 661 650	4.40
	Developing countries — total		56 098	652 648	8.60
	<i>of which in:</i>				
	Africa		9 048	81 890	11.05
	Americas		9 626	117 769	8.17
	Asia		35 054	427 926	8.19
	Europe		1 909	21 303	8.96
Oceania		461	3 760	12.26	
1998	World total		285 888	5 028 629	5.69
	Developed market-economy countries		184 060	3 807 351	4.83
	Developing countries — total		101 828	1 221 278	8.34
	<i>of which in:</i>				
	Africa		12 073	104 868	11.51
	Americas		26 874	361 696	7.43
	Asia		60 073	724 548	8.29
	Europe		2 192	25 128	8.72
Oceania		616	5 038	12.23	
1999	World total		284 869	5 280 577	5.39
	Developed market-economy countries		180 528	4 010 305	4.50
	Developing countries — total		104 341	1 270 272	8.21
	<i>of which in:</i>				
	Africa		12 625	105 178	12.00
	Americas		28 411	357 671	7.94
	Asia		60 782	779 686	7.80
	Europe		1 894	22 605	8.38
Oceania		628	5 133	12.24	

Source: UNCTAD secretariat estimates based on data supplied by IMF.

^a The estimate for the world total is not complete, since data for countries that are not members of the IMF, the countries of Central and Eastern Europe and Republics of the former Soviet Union, and the socialist countries of Asia are not included for lack of information or other reasons.