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UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

# REVIEW OF MARITIME TRANSPORT 2013

*Report by the UNCTAD secretariat*

## *Chapter 3*



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# 3

## FREIGHT RATES AND MARITIME TRANSPORT COSTS

*This chapter covers the development of freight rates and maritime transport costs. Section A encompasses some relevant developments in maritime freight rates in various market segments, namely containerized trade, liquid bulk and dry bulk shipping in 2012 and in early 2013. It highlights significant events leading to major price fluctuations, discusses recent industry trends and gives a selective outlook on future developments of freight markets. Section B provides a brief overview of recent developments in ship finance and the growing role of private equity as a new source of finance in the sector.*

## A. FREIGHT RATES

In general terms, the demand and the supply of maritime transport services interact with each other to determine freight rates. While there are countless factors affecting supply and demand, the exposure of freights rates to market forces is inevitable.

Cargo volumes and demand for maritime transport services are usually the first to be hit by political, environmental and economic turmoil. Factors such as a slowdown in international trade, sanctions, natural disasters and weather events, regulatory measures and changes in fuel prices have an impact on the world economy and global demand for seaborne transport. These changes may occur quickly and have an immediate impact on demand for maritime transport services. As to the supply of maritime transport services, there is generally a tendency of overcapacity in the market, given that there are no inherent restrictions on the number of vessels that can be built and that it takes a long time from the moment a vessel order is placed to the time it is delivered, and is ready to be put in service.

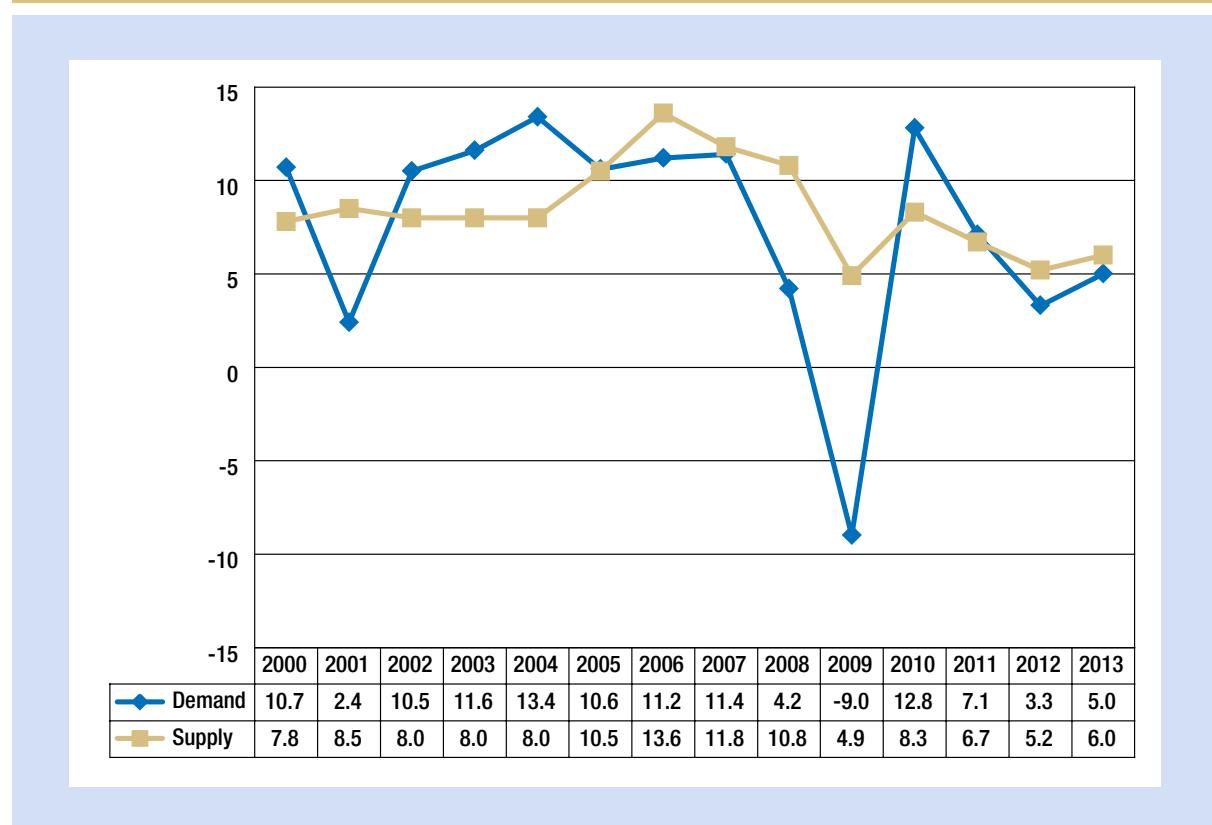
Therefore, maritime transport is very cyclical and goes through periods of continuous busts and booms, with operators enjoying healthy earnings or struggling to meet their minimum operating costs.

In 2012, the maritime sector continued to experience low and volatile freight rates in its various segments because of surplus capacity in the global fleet generated by the severe downturn in trade in the wake of the 2008 economic and financial crisis. The steady delivery of newbuild vessels into an already oversupplied market, coupled with a weak economy, has kept rates under heavy pressure, as described below.

### 1. Container freight rates

In 2012, shrinking cargo volumes, mainly on the main East-West containerized trade routes, combined with an oversupply of tonnage, in particular of large container ships, inevitably led to volatile container freight rates and a weaker market in general, while charter rates remained on the decline.

**Figure 3.1. Growth of demand and supply in container shipping, 2000–2013 (Annual growth rates)**



Source: Compiled by the UNCTAD secretariat on the basis of data from *Clarkson Container Intelligence Monthly*, various issues.

Note: Supply data refer to total container-carrying fleet capacity, including multi-purpose and other vessels with some container-carrying capacity. Demand growth is based on million TEU lifts. The data for 2013 are projected figures.

As seen in chapters 1 and 2, there has been an imbalance between the growth rates of demand and supply in the container market. As illustrated in figure 3.1, global container trade witnessed continuous downturn trends, with a growth in volume of 3.3 per cent in 2012, compared with 7 per cent in 2011. At the same time, the large influx of new vessels continued to affect the container shipping markets throughout 2012, with global container supply growing 5.2 per cent, outpacing global demand.

In an attempt to handle the imbalance between excessive supply and low demand, carriers deployed less capacity on routes where trade was declining, such as the main headhaul East–West routes, where trade was 5 per cent less compared with 2011. They deployed more capacity on the growing North–South routes, where trade grew by 4 per cent, and on interregional trade, which grew by

7 per cent, stimulated by increased consumer demand in emerging economies in 2012. (See chapter 1.)

Given the widening gap between the supply of vessel capacity and the demand for transport services, freight rates in the different container markets remained low, but improved in relative terms compared with 2011 (table 3.1). This can be attributed mainly to a change in shipping lines' strategy and the imposition of market discipline, that is, they were not seeking to gain market share and volume as in 2011 but rather to improve earnings. In 2011, rates remained low because the shipping lines were undercutting each other, seeking market share and volume. In an effort to control the slide of freight rates, carriers exercised in the first half of 2012 some degree of market power by applying a common pricing discipline known as general rate increases (GRIs).

**Table 3.1. Container freight markets and rates**

Freight markets	2009	2010	2011	2012
<b>Trans-Pacific</b>				
		(Dollars per FEU)		
Shanghai–United States West Coast	1 372	2 308	1 667	2 287
Percentage change		68.21	-27.77	37.19
Shanghai–United States East Coast	2 367	3 499	3 008	3 416
Percentage change		47.84	-14.03	13.56
<b>Far East–Europe</b>				
		(Dollars per TEU)		
Shanghai–Northern Europe	1 395	1 789	881	1 353
Percentage change		28.24	-50.75	53.58
Shanghai–Mediterranean	1 397	1 739	973	1 336
Percentage change		24.49	-44.05	37.31
<b>North–South</b>				
		(Dollars per TEU)		
Shanghai–South America (Santos)	2 429	2 236	1 483	1 771
Percentage change		-7.95	-33.68	19.42
Shanghai–Australia/New Zealand (Melbourne)	1 500	1 189	772	925
Percentage change		-20.73	-35.07	19.82
Shanghai–West Africa (Lagos)	2 247	2 305	1 908	2 092
Percentage change		2.56	-17.22	9.64
Shanghai–South Africa (Durban)	1 495	1 481	991	1 047
Percentage change		-0.96	-33.09	5.65
<b>Intra-Asian</b>				
		(Dollars per TEU)		
Shanghai–South-East Asia (Singapore)		318	210	256
Percentage change			-33.96	21.84
Shanghai–East Japan		316	337	345
Percentage change			6.65	2.37
Shanghai–Republic of Korea		193	198	183
Percentage change			2.59	-7.58
Shanghai–Hong Kong (China)		116	155	131
Percentage change			33.62	-15.48
Shanghai–Persian Gulf (Dubai)	639	922	838	981
Percentage change		44.33	-9.11	17.06

Source: Various issues of *Container Intelligence Monthly*, Clarkson Research Services.

Note: Data based on yearly averages.

As a result, average freight rates rose 51 per cent for the Far East–Europe and trans-Pacific trades in several successful rounds of GRIs, despite weak demand on the whole. Thus, rates from the Far East to the United States West Coast reached \$2,600 per FEU in June 2012, up from \$1,800 per FEU in January 2012. Comparably, rates on routes from the Far East to Northern Europe climbed from \$750 per TEU in January 2012 to a peak of \$1,900 per TEU in June 2012 (BIMCO, 2013). Nevertheless, the industry's collective resolution ceased in the second half of the year as positive operating incomes encouraged some carriers to revert to price competition and rate cutting with the aim of grabbing market share (Alphaliner, 2013). Consequently, rates to Northern Europe fell to as low as \$1,000 per TEU in November 2012 as demand continued dropping (BIMCO, 2013).

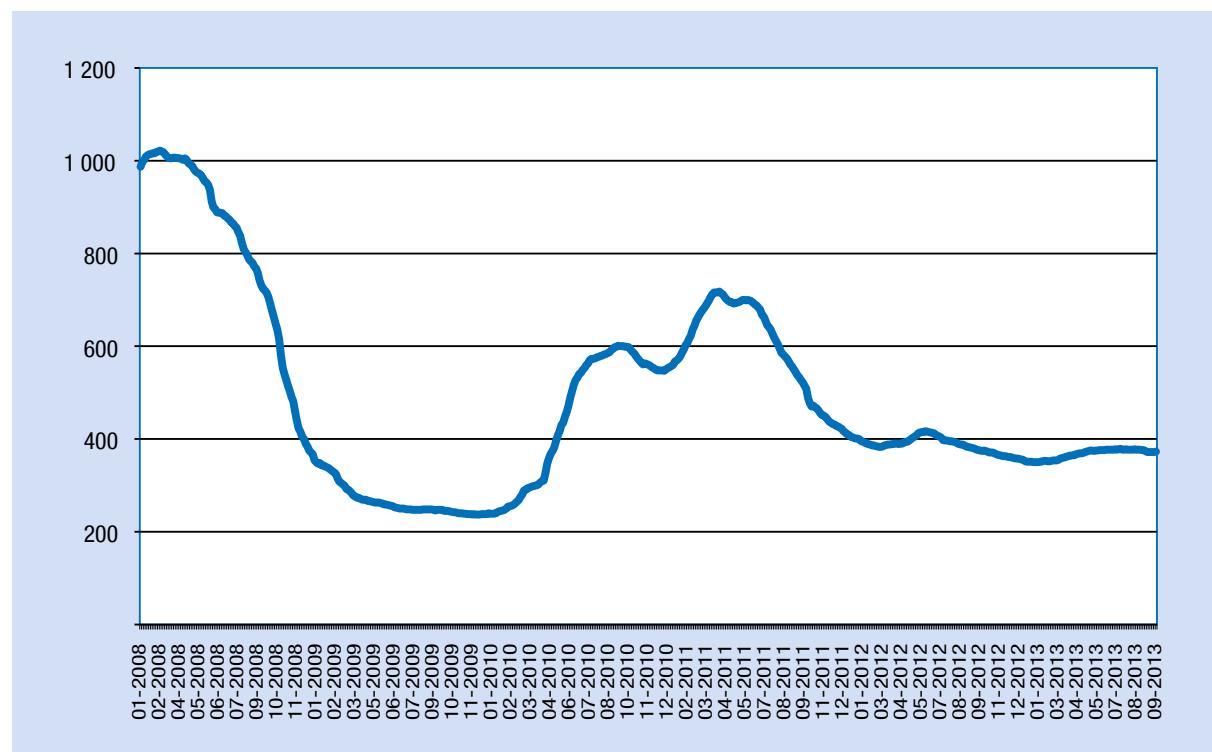
The overall low freight rates observed in 2012 reduced carriers' earnings close to, and even below operating costs, especially when bunker oil prices remained both high and volatile. Accompanied by considerable

price fluctuations, fuel costs stood at an average of \$640 per ton in 2012, representing a 4 per cent increase over the previous year.<sup>1</sup> This could partially be passed on to customers by way of bunker surcharges and only adds pressure to overall increasing operating costs and low revenues.

As a result, carriers tried to apply various strategies to remedy the situation: laying up vessels,<sup>2</sup> going for slow or super-slow steaming,<sup>3</sup> postponing newbuild deliveries, raising surcharges and cutting services, suppressing running capacity on the main lanes and scrapping.<sup>4</sup>

Nonetheless, container carriers continued to suffer another year of negative operating earnings in 2012, although less so than in 2011. A recent survey<sup>5</sup> revealed that 21 carriers of the top 30 that publish financial results reported an overall operating loss of \$239 million in 2012, with only seven carriers turning in positive results. Although only one third of the 21 carriers reported a profit, the overall result is seen as an improvement on the combined operating losses of almost \$6 billion that these same 21 companies reported in 2011.<sup>6</sup>

**Figure 3.2. New ConTex Index, 2008–2013**



Source: Compiled by the UNCTAD secretariat, using the New ConTex index produced by the Hamburg Shipbrokers' Association. See <http://www.vhss.de>.

Notes: Index base: October 2007 – 1,000 points.

New ConTex is a container ship time charter assessment index calculated as an equivalent weight of percentage change from six ConTex assessments, including the following ship sizes: 1,100, 1,700, 2,500, 2,700, 3,500 and 4,250 TEUs.

On the other hand, tonnage providers, outsourcing the operation of their vessels, were direct victims of low demand and overcapacity, as clearly illustrated by low time charter rates (see table 3.2). As measured by the New ConTex<sup>7</sup> index (figure 3.2), the containership charter rates failed to pick up. Average charter rates remained low, with 2012 disappointing charter owners for the second year in a row. As two thirds of the laid-up tonnage average was charter-owned capacity – carriers utilized their own tonnage – there is clear evidence that the charter market suffered most in the process.<sup>8</sup> The largest decline in 2012 rates was observed in the larger-size vessels, which dropped 34–48 per cent compared with the previous year (table 3.2).

Overall, surplus capacity generated by the severe downturn in trade since the 2008 economic and financial crisis has been and will remain a major threat to container shipping freight rates. The surplus of large ships (8,000+ TEUs) is leading to the cascading of capacity (redeployment over different routes) and is generating pressure on charter tonnage and freight rate volatility. Reassignment of smaller container vessels from main lanes facing declining demand to the fast growing non-main lanes has been crucial in managing the substantial delivery order of new larger ships.<sup>9</sup> This has also helped prevent the accumulation of vessel surplus capacity on the main lane routes where trade is low. (See chapter 2)

In 2013, global container trade is projected to grow by 5 per cent, and global container supply, by 6 per cent, according to June figures (Clarkson Research Services, 2013c). During the first half of 2013, several attempts by carriers to increase rates were again applied to several trade lines as a result of GRIs. Spot container shipping rates in Asia–Europe trade thus increased 165 per cent in the week of 4 July 2013 as GRIs implemented by carriers on 1 July took hold. The benchmark Shanghai–Rotterdam route was \$2,622 per FEU, up from \$990 a week earlier. On services from Asia to the West Coast of the United States, prices increased by \$269 to reach \$2,114 per FEU. From Asia to the East Coast of the United States, they increased by \$377 to \$3,361 per FEU (Lloyd's List Containerisation International, 2013). While GRIs are only temporary solutions to support comparative returns, achieving long-term market stability would enable shipping lines to deal with core market fundamentals and adjust capacity to demand.

Another important action launched by the carriers in 2013 in the face of difficult circumstances is the operational alliance called the P3 Network, agreed by

the world's three largest container shipping lines: Maersk Line, Mediterranean Shipping Company (MSC), and CMA CGM. The agreement, which will go into effect in the second quarter of 2014, would allow liners to control overcapacity and reduce rates volatility. It would call for the three liners to pool vessels equivalent to 15 per cent of global capacity on three main lane trade routes (Asia–Europe, trans-Pacific and transatlantic), with an initial capacity of 255 vessels (or 2.6 million TEUs). Maersk Line will provide about 42 per cent of the alliance's capacity – including its new Triple E ships, among the world's largest carriers – while MSC will contribute 34 per cent and CMA CGM, 24 per cent (*Financial Times*, 2013a). The P3 East–West service network initiative is considered by some analysts as a positive development for the liner industry as a whole in the drive to reduce costs and stabilize the market. The same observers see no damage to the competition, where more than 15 carriers will continue operating independently and competing on most trade routes, including those sailed by the P3 partners (Drewry Container Insight, 2013).

### **Conclusion**

In the near future, with world economies still under pressure, the sector is expected to continue facing the same weak demand volumes, especially in Europe, which would continue to have an impact on container freight rates, at least in 2013. This is compounded by surplus capacity, especially with regard to sailing larger ships on routes that have less cargo, while most of the growth is coming from non-main lane routes that require smaller ships. A major concern remains: how to reconcile the surge in supply of very large ships with trade growth generating demand for small and medium-sized units.

In the medium term, however, supply growth is likely to slow down, owing to the fewer vessel orders placed and the difficulty associated with financing new vessel builds. These variations may reduce the gap of new surplus and low demand, which would lead to improved container freight rates (Clarkson Research Services, 2013d). Likewise, changes in the world economy and in trade and seaborne shipments will influence the evolution of container freight rates.

## **2. Tanker freight rates**

The tanker market, which encompasses the transportation of crude oil, refined petroleum products (clean and dirty products)<sup>10</sup> and chemicals, witnessed an equally difficult market environment in 2012. The year saw ups and downs for the tanker industry; this

**Table 3.2. Container ship time charter rates (Dollars per 14-ton slot per day)**

Ship type and sailing speed (TEUs)		Yearly averages						Percentage change 2012/2011		
		2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>Gearless</b>										
200-299 (min 14 knots)	16.9	19.6	25.0	31.7	26.7	27.2	26.0	12.5	12.4	12.6
300-500 (min 15 knots)	15.1	17.5	21.7	28.3	21.7	22.3	20.0	8.8	9.9	10.0
2 000-2 299 (min 22 knots)	4.9	9.8	13.8	16.4	10.5	11.7	10.0	2.7	4.8	3.3
2 300-3 400 (min 22.5 knots)	6.0	9.3	13.2	13.0	10.2	10.7	10.7	4.9	4.7	6.2
<b>Gearied/gearless</b>										
200-299 (min 14 knots)	17.0	18.9	27.0	35.4	28.0	29.8	32.1	16.7	18.3	22.1
300-500 (min 15 knots)	13.4	15.6	22.2	28.8	22.0	21.3	21.4	9.8	11.7	18.1
600-799 (min 17-17.9 knots)	9.3	12.3	19.6	23.7	16.6	16.1	15.6	6.6	8.4	13.5
700-999 (min 18 knots)	9.1	12.1	18.4	22.0	16.7	16.9	15.4	6.0	8.5	11.2
1 000-1 299 (min 19 knots)	6.9	11.6	19.1	22.6	14.3	13.7	12.2	4.0	5.9	7.6
1 600-1 999 (min 20 knots)	5.7	10.0	16.1	15.8	11.8	12.8	10.8	3.5	5.0	5.7
1 600-1 999 (min 20 knots)	5.7	10.0	16.1	15.8	11.8	12.8	10.8	3.5	5.0	5.7
<b>Monthly averages for 2012</b>										
(TEUs)		Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.
		13.1	11.7	11.7	12.4	13.6	12.4	12.6	14.6	11.9
<b>Gearless</b>										
200-299 (min 14 knots)	9.8	10.0	9.6	10.6	9.8	9.7	9.8	9.8	9.6	10.4
300-500 (min 15 knots)	9.8	10.0	9.6	10.6	9.8	9.7	9.8	9.8	9.6	10.4
2 000-2 299 (min 22 knots)	3.4	3.3	3.4	3.4	3.5	3.3	3.2	3.1	3.2	3.1
<b>Gearied/gearless</b>										
200-299 (min 14 knots)	15.3	19.0	13.8	13.8	20.2	19.3	18.6	19.0	19.3	20.2
300-500 (min 15 knots)	12.3	15.2	13.1	13.0	12.7	14.5	12.6	11.4	13.3	15.8
600-799 (min 17-17.9 knots)	7.4	7.4	7.2	7.9	8.1	7.4	7.6	7.8	7.7	7.7
700-999 (min 18 knots)	7.7	7.8	7.1	7.6	7.0	7.0	7.2	7.6	8.3	7.7
1 000-1 299 (min 19 knots)	6.3	5.5	5.6	5.6	6.1	5.7	5.6	5.7	5.7	5.6
1 600-1 999 (min 20 knots)	4.1	3.9	3.9	3.8	4.0	4.1	4.1	3.9	4.1	3.6
<b>Monthly averages for 2013</b>										
(TEUs)		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.
		3.1	3.2	3.1	3.2	3.0	3.1	3.3	3.3	3.4
<b>Gearless</b>										
200-299 (min 14 knots)	13.1	11.7	11.7	12.4	13.6	12.4	12.6	12.6	12.1	13.4
300-500 (min 15 knots)	10.0	9.6	10.6	9.8	9.7	9.8	9.8	9.6	10.4	10.5
2 000-2 299 (min 22 knots)	3.4	3.3	3.4	3.4	3.5	3.3	3.2	3.1	3.2	3.1
<b>Gearied/gearless</b>										
200-299 (min 14 knots)	15.3	19.0	13.8	13.8	20.2	19.3	18.6	19.0	19.3	20.2
300-500 (min 15 knots)	12.3	15.2	13.1	13.0	12.7	14.5	12.6	11.4	13.3	15.8
600-799 (min 17-17.9 knots)	7.4	7.4	7.2	7.9	8.1	7.4	7.6	7.8	7.7	7.7
700-999 (min 18 knots)	7.7	7.8	7.1	7.6	7.0	7.0	7.2	7.6	8.3	7.7
1 000-1 299 (min 19 knots)	6.3	5.5	5.6	5.6	6.1	5.7	5.6	5.7	5.7	5.6
1 600-1 999 (min 20 knots)	4.1	3.9	3.9	3.8	4.0	4.1	4.1	3.9	4.1	3.6

Source: Compiled by the UNCTAD secretariat based on data from *Shipping Statistics and Market Review*, various issues from 2002-2013, produced by the Institute of Shipping Economics and Logistics, Bremen, Germany. See also [www.isi.org](http://www.isi.org).

Abbreviation: min – minimum

**Table 3.3. Baltic Exchange Index**

	2008	2009	2010	2011	2012	Percentage change (2012/2011)	2013 (Estimate)
<b>Dirty Tanker Index</b>	1 510	581	896	782	719	-8	638
<b>Clean Tanker Index</b>	1 155	485	732	721	641	-11	649

Source: Clarkson Research Services, Shipping Intelligence Network – Timeseries, 2013.

volatility was felt across the board in many ship sizes and as a whole but perhaps slightly less so than in 2011. The average Baltic Exchange Dirty Tanker Index for the full year 2012 dropped to 719 (8 per cent less than the annual average of 2011), whereas the average Baltic Exchange Clean Tanker Index was below 700 (11 per cent less than the annual average of 2011).<sup>11</sup> These trends reflect the successive bad years recorded in the oil chartering market, as shown in table 3.3.

The sector was affected by a combination of factors leading to overall low freight rates: weak demand, slow imports growth, a change in the structure of tanker demand, new discoveries (e.g. the shale revolution in the United States), high oil prices, and high idle and tonnage capacity.

#### ***Freight rates and earnings for different tanker markets***

Table 3.4 provides average spot freight rates quantified in Worldscale (WS), a standard measure for establishing spot rates on major tanker routes for various vessel sizes. It shows the general fall in dirty tanker rates for most routes and for most of the year, with the exception of a short peak in the last three months of 2012, which benefited from some positive rates. Large tonnage supply and lower tonnage demand pressured freight rates downwards. Despite the decline in the number of deliveries in 2012, fleet capacity remained abundant, and the new influx of dirty tankers only added to the problem, with a capacity increase of 5 per cent (OPEC, 2013).

On the demand side, most of the tanker markets bore the brunt of the weak global economic situation and the performance of large oil consumers, namely the OECD countries. Other contributing factors included a less vigorous Chinese economy and a change in the energy strategy of the United States, the world's largest consumer of petroleum. The United States started increasing its oil production and decreasing its imports accordingly (Barry Rogliano Salles, 2013).

VLCCs and the Suezmax markets were boosted somewhat in the beginning of the year, mainly when Saudi Arabia increased its production, and importers

started building inventories in anticipation of the expected embargo on Iranian oil. However, once the demand for tonnage started declining and the market began slowing down, freight rates plummeted once again (Danish Ship Finance, 2013).

Despite the downward trend, crude tanker earnings rose on average by 12 per cent from \$17,600 per day to \$19,700 per day in 2012. This increase in earnings was spread across all segments, except Suezmax, which suffered from the decline of United States imports. VLCCs experienced the largest improvement, going from \$17,000 per day to \$20,500 per day in 2012 (Danish Ship Finance, 2013). However, this could barely cover operating costs estimated at \$11,000–\$12,000, but not the return on investment for new ships. Some vessel orders exceeded \$150 million in 2008 (Barry Rogliano Salles, 2013).

For the Aframax market, 2012 has generally been a dull year. The market as a whole had come under pressure from a number of structural and unexpected challenges. The trend towards vessel upsizing, which brings vessels with capacities relatively higher than those currently deployed in respective routes, has been growing in different markets, as operators seek greater economies of scale. This has been the case of Suezmaxes taking some market share from Aframaxes, particularly in the Caribbean and the Mediterranean (Clarkson Research Services, 2013e). Moreover, the Mediterranean–Mediterranean route has proved to be particularly difficult, with rates changing from WS 130 in December 2011 to WS 85 in December 2012. A major contributing factor was the growing competition among ships for cargoes as vessels crowded into the region to take advantage of the increase in Libyan oil production and the spike in rates towards the end of 2011 (see chapter 1). Average spot earnings for Aframax across all routes were estimated to be \$14,885 per day in 2012, compared with \$13,528 in 2011 (Clarkson Research Services, 2013f). The operating costs of Aframax modern vessels run around \$8,000–\$9,000 per day.

**Table 3.4. Tanker market summary – clean and dirty spot rates, 2012–2013 (Worldscale)**

Vessel type	Routes	2010	2011	2012												Percentage change Dec. 2012/ Dec. 2011	2013				
		Dec	Dec	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.		Jan.	Feb.	Mar.	Apr.	May
VLCC/ULCC (200 000 dwt+)																					
Persian Gulf–Japan		61	59	67	52	59	63	63	44	36	35	38	37	41	48	-18.6	43	33	34	33	38
Persian Gulf–Republic of Korea		56	56	61	51	58	58	55	41	33	34	38	35	40	46	-17.9	41	31	33	31	36
Persian Gulf–Caribbean/East Coast of North America		36	37	40	34	35	42	39	30	24	23	25	23	27	28	-24.3	26	17	18	17	22
Persian Gulf–Europe		57	59	..	52	40	44	39	29	25	24	..	22	30	26	-55.9	41	20	17	18	19
West Africa–China		..	58	61	55	59	62	60	44	37	36	40	41	49	47	-19.0	43	34	36	37	37
Suezmax (100 000–160 000 dwt)																					
West Africa–North-West Europe		118	86	91	77	87	68	81	70	65	57	56	59	58	70	-18.6	62	57	59	62	53
West Africa–Caribbean/East Coast of North America		103	83	85	75	84	65	81	66	63	56	55	57	56	65	-21.7	59	52	57	57	53
Mediterranean–Mediterranean		113	86	98	86	84	73	93	85	69	64	56	62	66	67	-22.1	70	66	73	67	62
Aframax (70 000–100 000 dwt)																					
North-West Europe–North-West Europe		162	122	111	93	95	99	98	94	89	87	84	89	82	93	-23.8	88	87	94	94	80
North-West Europe–Caribbean/East Coast of North America		120	..	119	99	..	..	99	..	..	..	..	..	..	75	80	..	..	85	..	..
Caribbean–Caribbean/East Coast of North America		146	112	118	129	112	131	115	105	94	94	89	91	110	91	-18.8	84	96	102	87	110
Mediterranean–Mediterranean		138	130	105	82	104	94	87	100	95	82	76	78	79	85	-34.6	82	85	86	84	71
Mediterranean–North-West Europe		133	118	97	82	105	91	85	92	100	81	75	77	77	80	-32.2	84	86	90	79	68
Indonesia–Far East		111	104	100	90	60	85	82	86	43	90	98	94	92	90	-13.5	83	74	68	72	68
Panamax (40 000 - 70 000 dwt)																					
Mediterranean–Mediterranean		168	153	147	157	147	140	125	120	120	..	116	..	154	168	9.8	135	145	115	12	125
Mediterranean–Caribbean/East Coast of North America		146	121	124	121	118	127	137	127	105	111	114	134	126	160	32.2	98	100	104	111	100
Caribbean–East Coast of North America/Gulf of Mexico		200	133	113	148	145	131	151	141	102	..	118	105	130	156	17.3	115	133	138	113	118
All clean tankers																					
70 000–80 000 dwt Persian Gulf–Japan		125	105	100	86	84	91	88	91	99	104	96	107	122	116	10.5	88	81	93	96	80
50 000–60 000 dwt Persian Gulf–Japan		128	119	107	101	100	117	114	105	125	120	116	114	133	144	21.0	109	97	124	120	97
35 000–50 000 dwt Caribbean–East Coast of North America/Gulf of Mexico		158	155	150	165	152	155	123	..	100	108	105	117	164	162	4.5	120	126	60	120	132
25 000–35 000 dwt Singapore–East Asia		193	..	..	150	155	183	223	..	170	..	190	205	215	220	..	199	185	199	191	175

Source: UNCTAD secretariat, based on Drewry Shipping Insight, various issues.

Note: The figures are indexed per ton voyage charter rates for a tanker of 75,000 dwt. The basis is the value WS 100.

The freight levels of Panamax crude tankers were healthier than expected but still relatively low. This could be attributed to declining overall volumes of United States crude import levels, and upsizing, with charterers fixing larger vessels at the expense of the smaller Panamax tankers. Average Panamax dirty products spot earnings increased from \$10,535 in 2011 to \$14,769 in 2012 (Clarkson Research Services, 2013f). Ultimately, the dependence of the Panamax crude fleet on trade towards the United States, coupled with the shift in the crude tanker market towards larger vessels, is likely to make Panamax crude trading largely obsolete in the medium term (Clarkson Research Services, 2013f).

The product tanker market also witnessed an unstable year. The average Baltic Clean Tanker Index for 2012 was down 11 per cent from the previous year average. Weak economic growth led to low demand for oil products, thereby compounding the large oversupply of vessels. High bunker prices exacerbated the situation further. With clean capacity rising by 2 per cent (OPEC, 2013) and distance-adjusted demand growing by 0.7 per cent,<sup>13</sup> the imbalance between supply and demand persisted in 2012. However, some peak periods occurred, mainly due to demand stemming from the chartering activity of Asian countries in the Persian Gulf.

The overall decline in tanker freight rates has encouraged shipowners to reduce their operating costs considerably and in particular, bunker consumption. The trend of maximizing fleet efficiency, slow steaming, scrapping and idling some ships observed in 2011 also increased in 2012.

The overall picture of the tanker market and tanker freight rates has evolved since the 2008 global economic and financial crisis. During the boom, the tanker market was a robust one influenced by strong import growth from the North Atlantic and Asia, with supply capacities under control and freight rates relatively high. Since then, the tanker market has slipped into recession; average freight rates for most vessel sizes and routes have decreased, including eastern and western destinations. This has been compounded by high oil prices that also modified consumer behaviour, while environmental pressure and technical innovation helped improve energy efficiency and reduce demand for oil products (Clarkson Research Services, 2013e).

As a result, owners suffered from poor earnings and some have been facing default or bankruptcy. For example, the United States crude oil transportation firms, General Maritime Corporation<sup>12</sup> (Bloomberg, 2013a) and Overseas Shipholding (Bloomberg, 2013b), filed for bankruptcy protection in 2011, as they suffered from slumping freight rates and global tonnage overcapacity after having taken out big loans to fund fleet expansion.

More tanker companies may continue facing trouble and new bankruptcies may emerge, as a significant number of time charter contracts signed during the boom years in early 2008 were to end in 2013. The forecast of new bankruptcies comes after a recent poll by Lloyd's List found that 33 per cent of voters expected more than four publicly listed tanker companies to be in trouble in 2013 (Lloyd's List, 2013a). Owners who signed longer-term charters in early 2008 had been enjoying high five-year time charter values – but that is going to change. Modern 310,000 dwt VLCC contract prices halved from \$62,500 per day in August 2008 to \$31,000 in December 2012. Suezmax and Aframax rates experienced a 40 per cent drop during that period, while five-year contract prices for medium-range product tankers fell by one third (Lloyd's List, 2013b).

### **Conclusion**

In 2014 and 2015, tanker freight rates should see some improvement as cargo demand and fleet supply become more balanced. However, in the long run, several factors, mainly relating to oil demand,

production and industry developments, may influence the tanker market. These are:

- Changes in consumption patterns are taking place in the global oil market as energy efficiency and clean transport programmes are being adopted in most OECD countries and many developing countries;
- The United States, a major oil consumer, is predicted to become the world's largest oil producer by 2020;
- Refineries are moving from the West to the East, with the closure of refineries in the United States and Europe and the growth of Indian, Chinese and Middle Eastern refineries;
- Arctic routes are being opened up (North West and North East passages) and the Panama Canal is being widened and is expected to be opened to Suezmaxes in 2015 (Barry Rogliano Salles, 2013);<sup>14</sup>
- New energy efficiency measures, introduced by IMO and which came into force at the start of 2013, aim to reduce vessel energy consumption and to increase the use of environmentally less damaging fuels.<sup>15</sup>

These changes, combined with fleet development, will have an impact on the development of the tanker market, freight rates and volatility mix movement.<sup>16</sup>

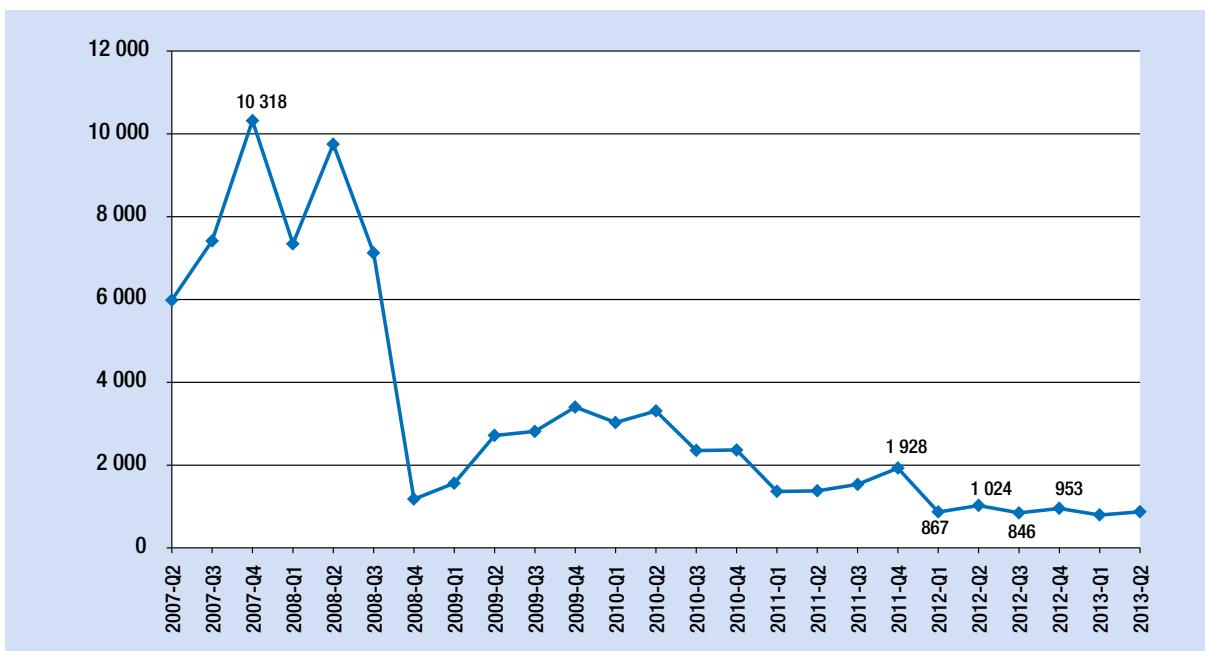
### **3. Dry bulk freight rates**

Like other shipping markets, the dry bulk market, generally categorized either as major bulk (iron ore, coal, grain, bauxite/alumina and phosphate rock) or minor bulk (agricultural products, mineral cargoes, cement, forest products and steel products), has also suffered from the severe overcapacity and slow economy growth that have sustained low freight and charter rates (Clarkson Research Services, 2013e; Barry Rogliano Salles, 2013; Danish Ship Finance, 2013). As a result, earnings in all fleet segments continued to fall. Overall, bulk carrier average earnings went down to \$6,579 per day in 2012, 41 per cent lower than in 2011 (Clarkson Research Services, 2013e).

As shown in figure 3.3, the Baltic Exchange Dry Index started 2012 with a sudden plunge from a temporal average spike of 1,928 points in the last quarter of 2011 to 867 in the first quarter of 2012. By the third quarter of 2012, the index averaged the lowest since 1998, approaching the record lows of 1986. The average Baltic Exchange Dry Index for 2012 was 923, down by some 40 per cent from the annual average of 2011.

Given these low rates, most vessels, especially in the larger segments, were running below operating costs.

**Figure 3.3. Baltic Exchange Dry Index, 2007–2013 (Index base year 1985 – 1,000 points)**

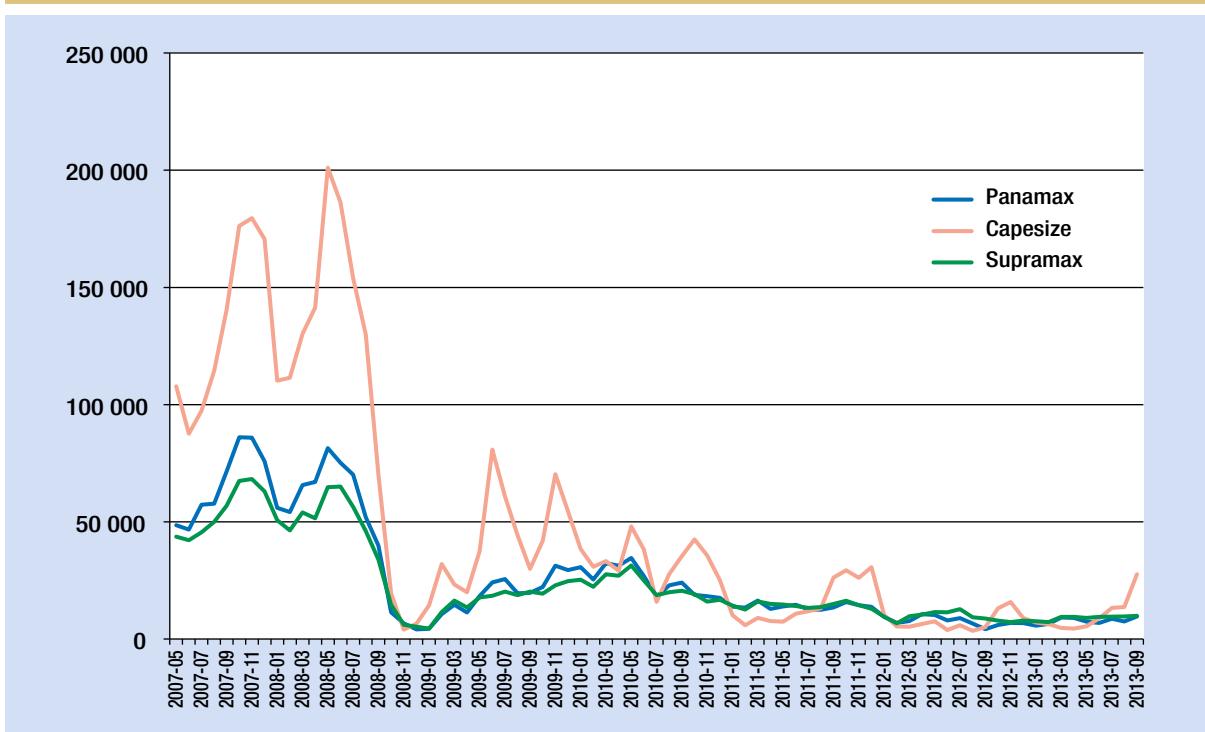


Source: UNCTAD, based on London Baltic Exchange data.

Abbreviation: Q – quarter

Note: The index is made up of 20 key dry bulk routes measured on a time charter basis. The index covers Handysize, Supramax, Panamax and Capesize dry bulk carriers, carrying commodities such as coal, iron ore and grain.

**Figure 3.4. Daily earnings of bulk carrier vessels, 2007–2013 (Dollars per day)**



Source: UNCTAD, based on data from Clarkson Shipping Intelligence Network, figures published by the London Baltic Exchange.

Note: Supramax – average of the six time charter routes; Panamax – average of the four time charter routes; Capesize – average of the four time charter routes.

Figure 3.4 illustrates daily earnings of three different vessel sizes: Capesize, Supramax and Panamax. It clearly shows that Capesize vessels was the segment that was hardest hit during a troubled and volatile year.

### **Capesize market**

The biggest surge in newbuild vessels delivery took place in the Capesize market, where more than 280 Capesizes (Barry Rogliano Salles, 2013) were delivered in 2012, exerting supply-side pressure on the market and resulting in weak earnings. With 12 per cent Capesize fleet growth in 2012, which was lower than the 19 per cent expansion recorded in 2011 (Clarkson Research Services, 2013e), it still represented more than twice the growth in iron ore trade, largely serviced by Capesize vessels. This market imbalance led to a fall in average Capesize earnings to \$8,356 per day in 2012, down 54 per cent year over year. Only the last quarter of 2012 witnessed a short peak in rates, where average earnings surpassed \$10,000 a day during the same period, with a peak of \$22,000 per day in October, sustained by a greater increase in Chinese iron ore import demand (Clarkson Research Services, 2013e).

On average, Capesize time charter rates were also lower in 2012 with a general decline over the year. At the start of 2012, the one-year time charter rate for a 170,000 dwt vessel stood at \$17,562 per day, but had fallen to \$11,750 per day by the end of December 2012, a disastrous development compared with the all-time high average of \$161,600 per day in October 2007 (Clarkson Research Services, 2013a).

### **Panamax market**

With an expansion of 13 per cent in the deployed capacity of Panamax fleets, oversupply had yet again a considerable effect on the Panamax market, despite the growth in steam coal trade, which increased 12 per cent in 2012.

With average earnings decreasing to just \$5,838 a day in 2012, down 49 per cent, shipowners were operating below the average levels required to cover benchmark expenses.

Panamax time charter rates were also exposed to significant downward pressure, with the one-year time charter rate for a 75,000 dwt bulk carrier falling from a low average of \$11,100 per day at the start of 2012, to \$7,750 per day by the end of December 2012,

compared with an average of \$79,375 per day in October 2007 (Clarkson Research Services, 2013a).

### **Handy markets**

#### *Supramax*

The Supramax markets in 2012 were affected by a combination of additional supply-side pressure and a slower growth of minor bulk trade. The average Supramax trip earnings reached \$8,857 per day, down 36 per cent year over year. Although Supramax earnings in 2012 remained above the benchmark levels required to cover operating expenses, profit margins of owners remained under substantial pressure. Earnings in the first half of 2012 were on average 20 per cent higher than in the second half, as further rapid supply growth took its toll, while trade volumes of some commodities weakened.

The average one-year time charter rate remained low, around \$8,750 per day in December 2012, compared with \$11,250 in January 2012.

#### *Handysize*

Despite slower expansion in the Handysize fleet, which stood at a mere 1 per cent in 2012, compared with previous years of strong deliveries, weaker growth in minor bulk trade contributed to a further decrease in Handysize rates in 2012.

The one-year time charter rate for a 30,000 dwt vessel began the year at an already relatively low level of \$9,750 per day. It declined slowly, but steadily, throughout 2012 to reach \$7,250 per day by the end of December. However, rates in the Atlantic Basin were significantly higher than those in the Pacific. Supramax rates in the Atlantic were about \$9,900 (\$16,500 in 2011) compared with \$7,900 in the Pacific (\$11,300 in 2011). Handysize rates were about \$8,600 in the Atlantic, compared with \$7,000 in the Pacific. These fluctuations can be explained by demand volatility induced namely by a drop in Indian iron ore trade, largely serviced by Supramaxes and Handysizes, and a large number of deliveries of new ships out of the Asian shipyards, which continued to put a heavy burden on supply.

Overall and similarly to the other segments of shipping markets, the continued deterioration of the dry bulk market pressed owners to take radical measures such as scrapping plans, deferring the delivery of new vessels, slow steaming, idling ships and implementing fuel efficiency programmes to cut costs and keep debt levels low.

Nevertheless, given the huge losses faced by the market, several owners were not able to subsist and had to file for bankruptcy. A recent example is Excel Maritime Carriers Ltd, as it could no longer service its debts. Other casualties include the United Kingdom's oldest shipping firm, Stephenson Clarke Shipping, and Italy's Deiulemar Shipping (*Reuters*, 2013).

### **Conclusion**

In the short term, market conditions are likely to remain challenging for dry bulk shipping. Thus, the strength of Chinese demand growth for dry bulk imports will remain a key influence in offsetting the supply side of the oversupplied bulk market. However, a slower pace of newbuilding deliveries and a sustained rhythm of demolition should contribute to a more balanced dry bulk market in the future.

## **B. RECENT DEVELOPMENTS IN SHIPPING FINANCE: GREATER INVOLVEMENT OF PRIVATE EQUITY**

This section provides a brief overview of recent developments in the shipping finance sector, with a special focus on private equity and its growing role in the wake of the 2008 global economic and financial meltdown.

Over the past few years, private equity funds, new players to this industry, have been showing growing interest and gaining momentum in filling the gap of traditional bank finance. Between 2011 and 2012, private equity funds financed no less than 22 shipping transactions with an aggregate magnitude of more than \$6.4 billion (*Maritime Briefing*, 2013). This new source of capital is much welcomed by the sector, which has been facing tighter credit markets, low charter rates and heavy losses since the economic and financial crisis.

### **1. The shipping finance market before and after 2008**

Prior to 2008, shipping finance was widely available as the industry was experiencing a period of sound growth and historically high shipping rates. Many shipping companies expanded and placed long-term orders for large numbers of newbuild vessels. From 2003 to 2008, the newbuild market was booming – new ships worth \$800 billion were ordered, with half of the orders placed in 2007–2008, when vessel prices

were at their peak (Stopford, 2010). Banks loans were easily accessible, up to 80 per cent of loan to value for new vessels, leaving little margin for error in vessel values. Most of the new vessels were scheduled for delivery in the years immediately following the financial crisis of 2008 (PIMCO, 2012).

However, the global recession brought about by the economic and financial crisis produced a completely new scenario. After 2008, the slow growth of global demand for goods on one hand, and a new supply of vessels entering the market on the other, sent charter rates plummeting in most markets. As a result, ship values also collapsed, causing the shipping industry to struggle with losses, loans defaults and bankruptcies. Added to this was the need to find financing for newbuild vessels under yard contracts that could not be assigned or cancelled (*Maritime Briefing*, 2013).

In turn, the banking sector struggled, dealing with default payments and decreased value for the collateral that secured their loans. However, with the price of vessels plunging to levels below outstanding debt, banks preferred to defer repayments and to restructure the terms of loans in order to avoid writing off defaulting loans and forcing vessel foreclosures. Currently, there are about \$500 billion in shipping debts. Of this, 40 top banks hold more than 90 per cent; the top 12 banks account for over half, and more than 80 per cent of shipping debt is financed by European banks (PIMCO, 2012). Losses were more pronounced for German banks, major financiers of the sector. For example, Nordbank announced that it had increased loan impairment charges by almost threefold for its ship portfolio in 2012. This situation prompted the German regulator BaFin to take action and place greater scrutiny on banks' shipping exposures in 2012 (*Maritime Briefing*, 2013).

In an effort to protect their existing assets, traditional banks have started restricting their financing or pulling out from financing the industry over the past few years. In fact, the top 10 banks in shipping have reduced their shipping loan books by over \$50 billion since 2008 (PIMCO, 2012). This has made the shipping market more difficult and influenced further price downturns for second-hand ships. Yet, at a time when many traditional European bankers such as Nordbank, Commerzbank, Société Générale, BNP Paribas, Royal Bank of Scotland and Lloyds Banking Group are downsizing their shipping exposure, other mainly non-European banks are entering the market. United States banks such as Citigroup and Bank of America Corporation have become more active.<sup>17</sup> This

may be explained by the fact that banks in the United States are less constrained than European lenders by the cost of funding in dollars and the impact of the new Basel III regulations, which are explained further below. The Commonwealth Bank of Australia and Chinese banks have also increased their focus on the shipping industry.

In the future and given the constraints encountered, banks may not intervene in financing the sector to the same extent as in the past. As the market slowed, the perceived safety of vessels as assets weakened, and lenders have grown cautious. Traditional finance may be available but subject to more stringent requirements (today banks finance up to 60 per cent loan-to-value ratio for new vessels) and regulations, including the implementation of the Basel III frameworks, which create new regulatory millstones. The Basel III agreement will require new capital ratios for banks and is expected to be implemented gradually between 2013 and 2019. One of the main outcomes of Basel III will be a significant rise in the banking industry's capital requirements, potentially requiring more core equity capital by shipowners and raising the cost of credit of traditional financing sources (KPMG, 2012).

### **The increasing role of export-import banks and export credit agencies**

The retreat of traditional bank lending reinforced the role of export credit agencies and export-import (Exim) banks in the sector. To stimulate sector development and deals, export credit agencies have strengthened their programmes to support the financing of vessels. Key credit and guarantee agencies include Japan, the Republic of Korea, Brazil, Germany and Norway, which financed deals totaling \$19.8 billion between January 2012 and April 2013 (Lloyd's List, 2013c).

On the other hand, the Export-Import Bank of China has allocated a bigger share to ship finance to help shipowners weather the current crisis. With a \$12 billion shipping portfolio in 2012, it is expected to increase its investment by 20 per cent in 2013 (Barry Rogliano Salles, 2013). Moreover, it has been actively seeking new partnerships with other ship financing banks to increase its exposure to syndicated shipping loans. The Bank has also established a policy to encourage funding orders by foreign owners in the Chinese shipyards to support shipbuilding. This is illustrated in agreements signed in May 2013 with three Greek shipping companies, Diana Shipping, Angelicouassis and Dynagas, to provide them with loans to order high-end vessels in Chinese yards (Chinadaily.com, 2013).

### **The declining role of the German limited partnership system**

An important form of shipping finance directly related to a specific country is the German limited partnership, commonly known by its acronym KG (*Kommanditgesellschaft*). In the 1970's, the KG model was established in Germany to raise private equity as a form of financing for projects. KG funds are tax-driven structures in the form of a German limited partnership that acquires funds from private investors participating in single-purpose companies and leveraged by bank loans. The KG structure is exempted from corporate tax and thus considered to be a cheaper source of financing than banks.

KG financing covers several types of assets: ships, real estate, aviation, renewable energy, natural resources, infrastructure, containers, life insurance policies, films and other media rights.

In the case of shipping, finance is used to buy a specific vessel (mainly containers) with a charter to a German owner and debt sourced from a German bank. In a typical case of KG financial structure, most often a shipowner will assign or sell and charter back the vessel to a the KG fund or special-purpose company, which is set up to primarily own the vessel during the charter hire period. The arranger (the fund) of the structure will negotiate with banks and sell the equity to a group of private German individuals, who will use the investment to reduce their income taxes. The arranger will then run the transaction and pay dividends to private investors. The fund or single-purpose company will be liquidated after the ship is sold. (See figure 3.5.).

At first, the generous tax breaks offered to investors made the scheme very popular. It has been estimated that around one third of the world's container ships was financed by such partnerships (*Journal of Commerce*, 2013).

However, following the ongoing and prolonged shipping downturn, the KG system has faced a major crisis. More than 150 single-ship funds have filed for bankruptcy in 2012, and a further 500 to 1,000 risk insolvency, according to some estimates (*Journal of Commerce*, 2013). Investors have therefore lost faith in the current KG financing model for shipping investments, and shipping companies are seeking complementary or alternative modes and sources of ship financing (KPMG, 2012).

## 2. Private equity in the shipping market

In this difficult shipping context, many private equity funds have seized the opportunity created by tight credit markets and historically low vessel values to invest in ships and shipping companies.

Private equity interest in shipping had started rather slowly, with many funds sensing an opportunity but waiting to make their investments at the bottom of the market cycle. The sector, with its cyclical and volatile charter rates markets, is not a typical private equity target. Private equity investors consider that the volatility and downside risks of the sector have made it unattractive. However, recent developments, such as the drop in asset prices, the range of investment opportunities and portfolio sales, the scarcity of available finance and the belief that the market has hit bottom, have enticed many private equity firms to enter the market. According to estimates, private equity investments in the industry accounted for about 2 per cent of the shipping companies' enterprise value in 2013. This amount could double by the end of 2014 if alternative funding markets remain unavailable (*Financial Times*, 2013b).

### **Private equity investment in the shipping industry**

Private equity funds vary greatly in size and investment objectives. Some private equity funds look for long-term returns; others seek to make high returns on short-or

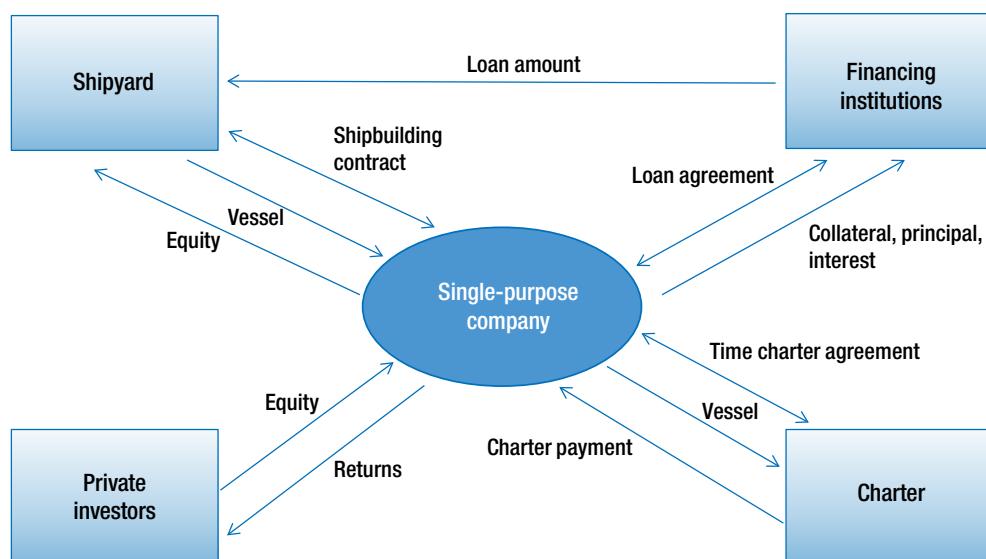
medium-term investments (three to seven years). The latter have been the main force attracting private equity funds to the shipping sector, which is cyclical and has expectations for recovery and long-term growth.

Private equity generally consists of making investments in equities of non-listed companies. Besides capital, the investors become active owners and would usually provide the companies with strategic and managerial support to create value and resell at a higher price. Value creation in private equity is primarily based on achieving increased growth and operational efficiency in acquired companies. The type of investments can include a number of different structures, as follows:

- Direct equity or investment in companies;
- Bridge financing and mezzanine financing for shipping companies needing short-term liquidity;
- Debtor in possession, which entails buying the debt of operators or buying portfolios of vessels;
- Sale-leaseback transactions, which entail vessel sales of shipping companies to leasing companies, a large cash inflow and leasing the vessel back from the leasing company in order to maintain operations;
- Joint ventures formed to acquire, manage and sell shipping businesses.

The overall objective is to sell these investments and generate above-market returns once the market rebounds. In the context of shipping, private equity

**Figure 3.5. The German limited partnership model**



**Table 3.5. Selected recent private equity investments in shipping**

<b>Investor</b>	<b>Value estimate (millions of dollars)</b>	<b>Asset type</b>	<b>Company</b>	<b>Type of investment</b>	<b>Year</b>
Riverstone Holdings LLC Zhejiang Marine Leasing Co.	18	Clean product carriers Vessel (Zhong Chang 118)	Ridgebury Tankers LLC Yangxi Zhong Chang Marine	Direct equity/investment Sale and leaseback agreement	2013
Oaktree Capital	135	Product tanker	Newco	5 medium-range product tankers from Torm	2013
Oaktree & Goldman Sachs	150		Excel Maritime Debt (from Nordea Bank)	Bank debt	2013
Kelso & Company LP	126	Containers (2 x 6 900 TEU ships)	Technomar Shipping	Joint venture	2013
Ontario Teachers Pension Plan	470	507 000 containers (795 000 TEUs)	SeaCube Container Leasing Ltd.	Direct investment	2013
Seaborne Intermodal (Lindsay Goldberg LLC)	420	Container	Buss Capital	Container acquisition (275 000 containers)	2013
Roullier, Group BPCE	147	Dry bulkers (4 x fuel- efficient Handysize bulk)	Louis Dreyfus Armateurs	Joint venture	2013
Perella Weinberg Southern Cross Latin America Private Equity Funds	220	Product tankers	Prime Marine Ultrapetrol	Joint venture Direct equity/investment	2012
Leasing company formed by Regions Bank and the Royal Bank of Scotland	59	Pure car truck carrier	International Shipholding Corporation	Sale and leaseback agreement	2012
Global Hunter Securities Trailer Bridge	15		Trailer Bridge, Inc	Debt in possession	2011
JP Morgan		Project cargo/modern and young heavy lift vessels	Harren (SUMO Shipping)	Joint venture	2011
Consortium led by WL Ross & Co. (First Reserve Corporation, China Investment Corporation)	1 000	Medium-range product tankers	Diamond S Shipping	Direct equity investment	2011
Alterna Capital Partners	100	Product Tankers/ Supramax	Solo/Western Bulk		2010– 2012
Apollo Management	200	Suezmax tankers	Principal Maritime First Ship Lease Ltd		2010
Kelso & Company	200	Supramax bulkers	Delphin Shipping LLC		2010
Littlejohn/Northern	100	Container ships	Soundview Maritime LLC		2010
Kelso & Company		Container ships	Poseidon Container Holdings LLC		2010
Carlyle	1 000	Container ships	CGI (with Seaspan)		2010
Eton Park/ Rhone Capital	175	Container ships	Euromar		2010
Greenbriar Equity Group	100	Product tankers	Seacove Shipping Partners		2009
Sterling Partners	170	Tankers and barges flying United States flag	United States Shipping		2009
Fortress Investments	100	Handysize bulkers	Clipper Bulk		2009
Blackstone/Cerberus	500	Tankers flying United States flag	American Petroleum Tankers		2008
New Mountain Capital		Project cargo flying United States flag	Intermarine	Andre Grikitis	2008

Source: Marine Money, Watson, Farley & Williams, Lloyds, McQuilling Services and other sources.

investors are capitalizing not only on the companies, but also on the projected growth of the market where companies are operating. This would require strong cooperation between shipping and private equity partners, and a good understanding of industry fundamentals and maritime dynamics and regulations, in particular of the following (Maritime Briefing, 2013):

- The shipping market is characterized largely by cyclical movements. These movements can expose investors to high volatility, which leads to high profits, but to considerable losses as well;
- Investments in shipping companies and shipping assets can expose private equity funds to liability under laws and regulations relating to competition and foreign sanctions, for example;
- The choice of a vessel entails various considerations that should be carefully weighed when buying ships (e.g. ship classifications, newbuilding ships versus ships in operation);
- The choice of flag can have a significant impact on the cost of operations, chartering modalities, financing and taxation issues;
- Expertise is required in the negotiation of yard contracts, charters, commercial and technical ship management agreements, and loan documents. Shipping is also subject to special environmental laws and regulations that can be a source of significant liability.

### ***Impacts of private equity on the shipping industry***

The growth of private equity can influence the shipping industry in several ways:

- In 2012, it was estimated that about \$65 billion in new debt and equity alone were needed to cover orders of new ships, as well as sales and purchases of existing vessels. In 2013 and 2014, the gap will be \$101 billion and \$83 billion, respectively

(Bloomberg, 2012). Untapped private equity funds, estimated to be around \$1 trillion (CNN Money, 2012) can fill this gap and help the industry generate economic growth and create new jobs;

- The emergence of private equity investment would likely lead to further consolidation in the industry. Under ongoing difficult circumstances, carriers have been struggling to make profits because of an overcapacity of vessels, slumping demand and high operating costs. This may prompt private equity investors to seek market consolidation with the aim of controlling supply of tonnage and costs, hence achieving price discipline and economies of scale;
- Vertical integration is another possibility for private equity funds. As private equity makes inroads into the sector, vertically integrated investment may be associated with its strategy for increased control and competitive advantage gain. Because of the high level of specialization in the maritime transport sector, there are significant opportunities for the vertical integration of companies into one or all parts of the transport value chain and logistics. Private equity funds that already have investments in several related activities might consider merging them into more a capital-intensive industry.

In conclusion, the role of private equity funds appears fundamental for the growth of the sector and could affect its development in several ways, including through the consolidation and vertical integration of transport services. This would call for improving the efficiency of the sector and building more financially sound companies. However, it must also be kept in mind that private equity funds are temporary investors whose overall objective is to sell or float their investments once the market rebounds. While their investment horizon is typically between three and seven years, they would wish to be able to make their own decision at any time as to the exit period in order to maximize profits.

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## ENDNOTES

- <sup>1</sup> The benchmark Rotterdam bunker price (380 centistokes) peaked at \$712 per ton in March 2012 (Clarkson Research Services, 2013a).
- <sup>2</sup> Total idle containership capacity expanded from 3.6 per cent of the fleet at the end of 2011 to 5 per cent of the fleet at the end of 2012 (Clarkson Research Services, 2013b). The most affected tonnage stands in the 3,000–5,000 TEU range, comprising 40 per cent of total unemployed capacity at the end of 2012 (Barry Rogliano Salles, 2013).
- <sup>3</sup> It has been estimated that running a 10,000 TEU containership at 18–20 knots instead of the optimal cruising speed of 20–25 knots can deliver daily savings of 175 tons of bunkers. Moreover, super-slow steaming at 15–18 knots can save an additional 100 tons per day (Lloyds Loading List.com, 2013a).
- <sup>4</sup> Scrapping activity approached the record-high level of 2009, as more than 300,000 TEUs were scrapped (Danish Ship Finance, 2013).
- <sup>5</sup> Based on Alphaliner's survey of the operating results for 21 of the top 30 carriers that have published their financial results for 2012. The survey shows that cumulative net losses of their parent companies, including the results of non-liner shipping operations and various write-offs, reached \$4.7 billion. See [http://www.alphaliner.com/liner2/research\\_files/newsletters/2013/no15/Alphaliner%20Newsletter%20no%202015%20-%202013.pdf](http://www.alphaliner.com/liner2/research_files/newsletters/2013/no15/Alphaliner%20Newsletter%20no%202015%20-%202013.pdf).
- <sup>6</sup> CMA CGM registered the largest operating profit of \$989 million, although this result includes its terminal business, which contributed \$200 million. Maersk Line came second, with a profit of \$483 million. OOCL ranked third, with \$230 million. APL was the worst performer in terms of operating profit, reporting a loss of \$279 million. In terms of margin, SITC was the best performer, with a margin of 6.6 per cent. CMA CGM was second, with 6.2 per cent, and Wan Hai third, with 4.5 per cent. CSAV was at the bottom of the list, with a margin of -5.6 per cent (Lloyds Loading List.com, 2013b).
- <sup>7</sup> ConTex stands for "container ship time charter assessment".
- <sup>8</sup> The proportion of the idle capacity owned by charter owners expanded from 45 per cent at the end of 2011 to 67 per cent at the end of 2012. (Clarkson Research Services, 2013b).
- <sup>9</sup> Vessels larger than 8,000 TEUs have constituted 68 per cent of the capacity delivered to the sector over the last two years. In recent years, smaller (2,000–3,000 TEUs) and mid-sized ships (3,000–5,100 TEUs) have been predominantly deployed on the non-main lanes that have been enjoying higher growth rates.
- <sup>10</sup> Clean products refer to light, refined oil products such as jet fuel, gasoline and naphtha. These products are usually carried in clean, coated tanks. Dirty products include refined oil products such as fuel oil, diesel oil or bunker oil. (Clarkson Research Services, 2013e:37).
- <sup>11</sup> In general, clean tankers carry refined petroleum products such as gasoline, kerosene or jet fuels, or chemicals. Dirty tankers carry heavier oils such as heavy fuel oils or crude oil. See <http://www.shipfinance.dk/en/SHIPPING-RESEARCH/Tankskibe/Produkttankskibe>.
- <sup>12</sup> As a result of its financial restructuring, General Maritime reduced its outstanding debt by some \$600 million and its annual cash interest costs by some \$42 million. In addition, the company received fresh capital of \$175 million from Oaktree Capital Management, which will now control 98 per cent of the company. It had debts of more than \$1.3 billion before the restructuring (SeeNews Shipping, 2012).
- <sup>13</sup> Total product tanker trade grew by 1.4 per cent but fell to 0.7 per cent growth in travel distances because average trading distances to Asia, Europe and North America shortened as supply shifted from long-haul trades to short-haul trades (Danish Ship Finance, 2013).
- <sup>14</sup> However, there is still very much of a debate on whether the Arctic routes will be economically viable in the coming decades, as substantial investments have to be made in the developing and maintaining of the required infrastructure by the Russian Federation, which will lead to high costs of using this route.
- <sup>15</sup> MARPOL Annex VI stipulates that from 2015, ships steaming in emission control areas will be limited to the use of fuels with no greater than 0.1 per cent sulphur content, which is anticipated to greatly increase demand for marine gas oil. Another possible avenue for future bunker demand is the use of liquefied natural gas as fuel.
- <sup>16</sup> Some of these issues are also being covered in more detail in chapters 1 and 2 of the Review.
- <sup>17</sup> One example is the seven-year \$140 million loan agreement to finance the construction of two VLCC tankers. It was signed in 2012 between Sovcomflot (SCF Group) and Citigroup and Bank of America–Merrill Lynch.