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Chapter 1

DEVELOPMENT OF INTERNATIONAL SEABORNE TRADE

This chapter provides an overview of the demand for global maritime transport services as well as a review and forecast of developments in world seaborne trade, against the background of the world economy and global trade (by sector). In 2006, strong growth in the world economy continued, fuelled by the expansion of some dynamic developing countries. Global merchandise exports and seaborne trade, which are enablers of, and are supported by, world economic growth, have also recorded solid growth.

A. WORLD ECONOMIC BACKGROUND

1. World output¹

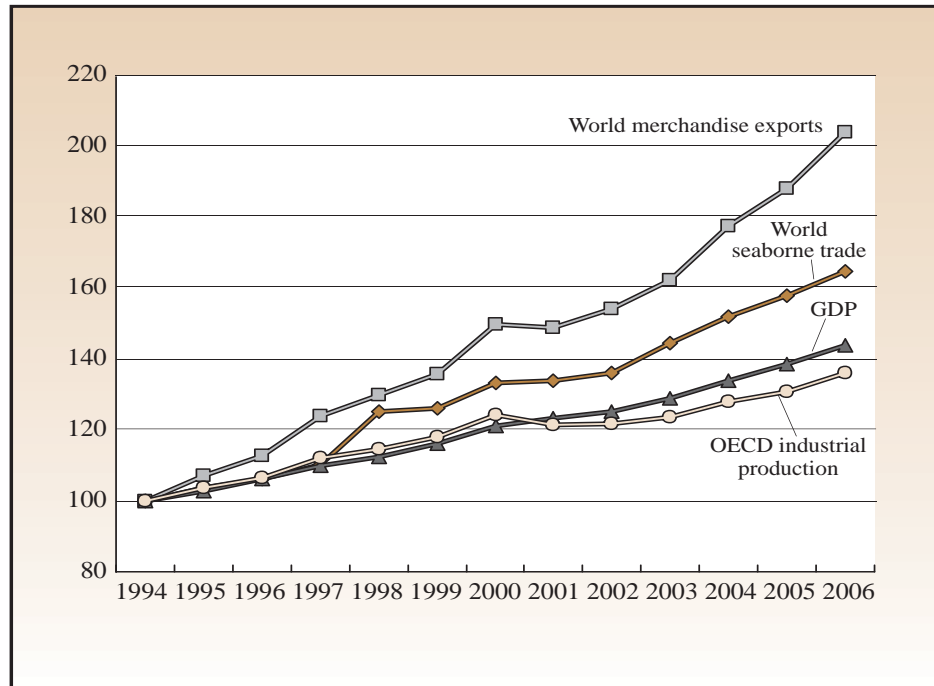
In 2006 the world economy expanded strongly, with gross domestic product (GDP) growing at 4 per cent. Growth was broad-based, with GDP in all country groupings increasing faster than the previous year. GDP grew by 3 per cent in developed countries, 6.9 per cent in developing countries and 7.5 per cent in the economies in transition. Rapid growth in emerging economies, particularly China and India, continued to set the pace. GDP in China expanded faster than in 2005, reaching 10.7 per cent, while growth remained steady at 9.2 per cent in India. With the emergence of China, India and other dynamic developing countries with strong and sustained growth, the main driver of world economic activity is no longer uniquely derived from industrial production in developed countries. This may be seen in figure 1, which shows the changing relationship between (a) world economic growth (GDP), (b) OECD countries' industrial production, (c) world merchandise exports, and

(d) world seaborne trade. While industrial production in OECD countries appears to have decelerated in recent years, world GDP, merchandise exports and seaborne shipments have continued to grow, a fact indicating that non-OECD countries are having a greater impact. Production in emerging dynamic developing countries and economies in transition is more and more driving world economic growth and seaborne trade. For example, while the 2006 average OECD industrial production index was 107.3 for the United States, 106.3 for Japan and 112.2 for Germany, it averaged 120 for Brazil, 148.6 for India and 132.8 for the Russian Federation.

In the United States, GDP grew by 3.3 per cent, while it increased by 2.2 per cent in Japan and 3 per cent in the EU (25) (see table 1). Boosted by high international prices of energy and metals and strong external demand, economies in transition grew by 7.5 per cent in 2006 as against 6.4 per cent in 2005. As for developing countries, in addition to Asia, economic expansion was fuelled by faster GDP growth in Africa (6.9 per cent) and Latin

Figure 1

Indices for world economic growth (GDP), OECD industrial production, world merchandise exports (volume) and seaborne trade (volume), 1994–2006
(1994 = 100)



Source: UNCTAD secretariat on the basis of *OECD Main Economic Indicators*, April 2006; UNCTAD GlobStat, Trade in Merchandise Database, <http://uds.unctad.org/intrastat>; UNCTAD, *Review of Maritime Transport*, various issues; and WTO, *International Trade Statistics, 2006*, Selected long-term trends, table II.1.

America (5.7 per cent). These regional growth rates, however, conceal differences in individual performances. For example, while GDP growth in North Africa accelerated in 2006, it remained steady in South Africa and decelerated in sub-Saharan Africa.

Despite the positive economic performance recorded in 2006, the world economy slowed down during the second half of the year. This deceleration is expected to last through 2007, with growth remaining subject to world economic imbalances, energy security and the hard or soft landing of the United States economy.

2. Merchandise trade²

Recent developments in international trade

In 2006, world merchandise trade recorded a robust growth of 8 per cent (see table 2). This is double the

growth rate of world GDP, and highlights the effect of globalization and the deepening of economic integration. The growth of world merchandise trade was particularly sustained by growing import demand from China and the economies in transition of the Commonwealth of Independent States (CIS). While the export growth of the economies in transition remained sluggish in 2006, exports from Asia, especially China (22 per cent), and North America (8.5 per cent) accelerated. The United States reported its best export performance in a decade (10.5 per cent) as a result of the recovery of global investment. In 2006, the United States ranked as the world's second leading exporter and first leading importer while China ranked third, in terms of both exports and imports (in value). Growing industrialization in China and the dynamic growth of other developing economies such as India have led to the emergence of new trade patterns. Developing countries and economies in transition are increasing their global market shares.

Table 1

World economic growth, 2003–2006^a

Region/country ^b	2003	2004	2005	2006 ^c
WORLD	2.6	4.1	3.4	4.0
Developed countries	1.8	3.1	2.4	3.0
<i>of which:</i>				
United States	2.5	3.9	3.2	3.3
Japan	1.4	2.7	1.9	2.2
European Union	1.2	2.3	1.7	3.0
<i>of which:</i>				
Germany	-0.2	1.3	0.9	2.8
France	1.1	2.3	1.2	2.2
Italy	0.0	1.1	0.0	1.9
United Kingdom	2.7	3.3	1.9	2.8
Developing countries	5.1	7.1	6.5	6.9
Developing countries, excluding China	4.0	6.4	5.6	5.9
Economies in transition (CIS and South-East Europe)	7.1	7.7	6.4	7.5

Source: UNCTAD secretariat calculations based on UNCTAD *Handbook of Statistics* database and UN DESA LINK *Global Economic Outlook 2007* (May 2007).

^a Calculations are based on GDP at constant 2000 dollars.

^b Region and country groups correspond to those defined in the UNCTAD *Handbook of Statistics 2004*.

^c Preliminary.

Table 2

Growth in the volume of merchandise trade, by geographical region, 2004–2006
(Percentages)

Exports			Countries/regions	Imports		
2004	2005	2006		2004	2005	2006
8.0	6.0	8.0	WORLD	n.a.	n.a.	n.a.
8.0	6.0	8.5	North America	10.5	6.5	6.5
7.0	4.0	7.5	European Union (25)	6.5	3.5	6.5
8.0	5.0	1.0	Africa and Middle East	14.0	13.0	8.5
13.0	8.0	2.0	Latin America	18.5	14.0	10.5
15.5	11.5	13.5	Asia	14.5	8.0	8.5
24.0	25.0	22.0	China	21.5	11.5	16.5
12.0	3.5	3.0	Commonwealth of Independent States	16.0	18.0	20.0

Source: WTO Press Release, World Trade 2006, Prospects 2007, April 2007.

In 2006, 13 of the top 30 leading exporters and importers (in value), included economies in transition and developing countries, mainly from Asia. They are also reinforcing their position as important suppliers of primary commodities and raw materials, including in new markets, and are emerging as important manufacturing centres. For example, Africa and Latin America are increasingly becoming important suppliers of China's primary commodity needs, while China's consumer goods are increasingly exported to Africa and Latin America. In 2005, over 80 per cent of total African imports (in value terms) into China consisted of fuel and other mining products, while close to 100 per cent of China's exports to Africa were machinery, manufactures and textiles.

Trade in manufactured goods, which in turn determines containerized seaborne trade, continues to grow significantly, in terms of volume (7 per cent) and of value (10 per cent). In 2005, the share of manufactured goods exported globally amounted to 72 per cent of the value of world exports (\$7.3 trillion out of a total of \$10.1 trillion).

For major developed countries, export growth was driven by increased global demand for capital goods. Despite currency appreciation, European exports grew at an estimated rate of 7.5 per cent, with double-digit growth rates being registered by South-East European countries that benefited from increased trade within the EU. Exports from Japan grew by 10 per cent mainly as a result of trade in capital and automobile-related goods.

The combined exports of Africa and the Middle East stagnated in 2006 for a number of reasons, including production constraints affecting some oil-producing countries and the Israeli–Lebanese conflict in the Middle East. Exports from Latin America grew by 2 per cent as compared with 8 per cent in 2005. Except for Asia, import growth in the remaining developing regions and the economies in transition outpaced growth in exports.

Demand for transport services naturally grows in tandem with growth in world trade, and receives a boost from the fragmentation and globalization of international production. As shown in figure 1, the positive correlation between GDP, merchandise exports and maritime transport is evident. Against this background, growth in world GDP and merchandise trade directly impacts on seaborne trade and demand for shipping services. As can be seen in the following section, with strong world GDP growth in 2006 and international merchandise trade growing even faster, demand for shipping services and the volume of seaborne trade have also expanded.

B. WORLD SEABORNE TRADE

1. Overall seaborne trade

In 2006, goods loaded at ports worldwide are estimated to have reached 7.4 billion tons (see table 3 and figure 2). This is equivalent to an annual growth rate of 4.3 per cent. Crude oil accounted for 26.9 per cent of total goods loaded, while petroleum products represented 9.2 per cent.

Table 3

Development of international seaborne trade, selected years (Millions of tons)

Year	Tanker cargo	Dry cargo	Main bulks ^a	Total (all cargoes)
1970	1 442	1 124	448	2 566
1980	1 871	1 833	796	3 704
1990	1 755	2 253	968	4 008
2000	2 163	3 821	1 288	5 983
2006 ^b	2 674	4 742	1 828	7 416

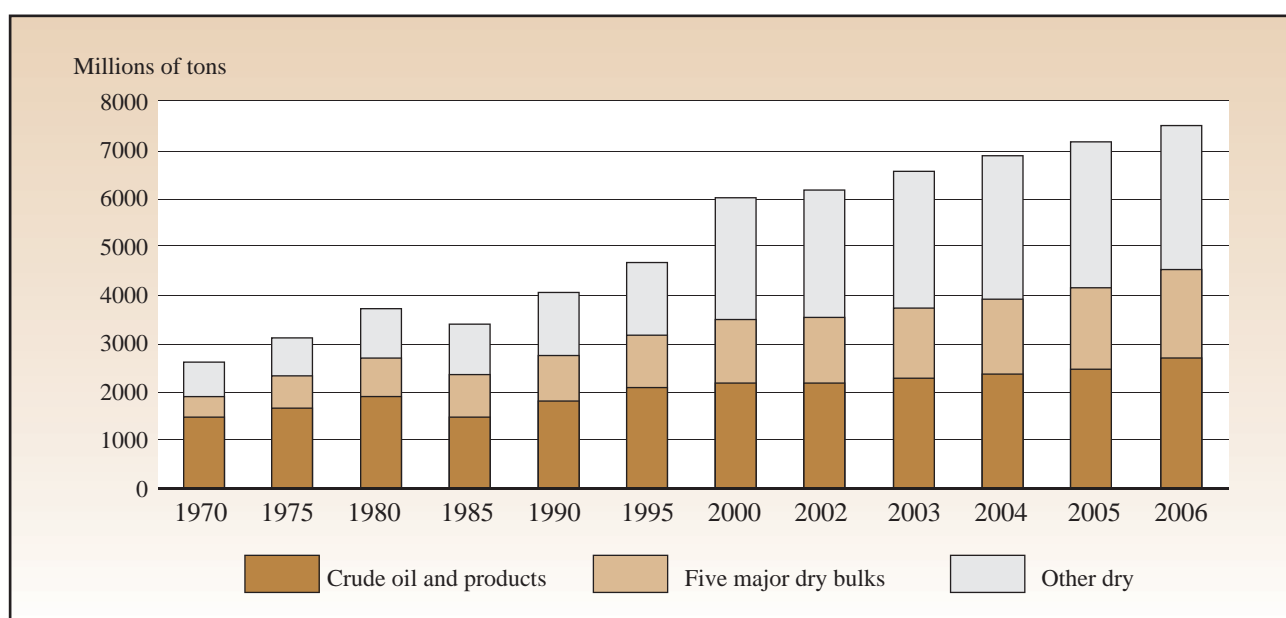
Source: Estimated by UNCTAD secretariat on the basis of annex II and data supplied by specialized sources.

^a Iron ore, grain, coal, bauxite/alumina and phosphate.

^b Estimates.

Figure 2

International seaborne trade for selected years
(Millions of tons loaded)



Source: *Review of Maritime Transport*, various issues.

The larger balance of world goods loaded (63.9 per cent) was made up of dry cargo, including bulk, breakbulk and containerized goods. A geographical breakdown of total goods loaded by continent highlights the continued preponderance of Asia, with a share of 39.1 per cent followed in descending order by America (21.5 per cent), Europe (19.6 per cent), Africa (10.7 per cent) and Oceania (9.1 per cent).

2. World shipments by country groups

The breakdown of the 7.4 billion tons of world seaborne trade by major cargo segments and country groups is shown in table 4 and figure 3. A further breakdown providing insight into the regional distribution of those shipments can be found in annex II.

Developed countries

In 2006, the share of developed countries in terms of goods loaded was 36.2 per cent, while their share of goods unloaded was 57.9 per cent. For those countries, crude oil and petroleum products accounted respectively for 5 and 27.4 per cent of world crude oil and products loaded. Europe remained the most important loading area

among developed regions, with a share of 6.3 per cent of total world oil loaded. In terms of goods unloaded, 62.2 per cent of crude oil and 51.1 per cent of petroleum products were unloaded in ports located in developed countries. North America is the largest receiver of oil (26.6 per cent), closely followed by Europe (22.3 per cent) and Japan (8.9 per cent).

In the dry bulk segment, the share of developed countries' global shipments amounted to 50.5 per cent for goods loaded and 57.2 per cent for goods unloaded. Europe remained the largest dry cargo market, accounting for, respectively, 23.3 per cent and 33.9 per cent of world dry cargo loaded and unloaded. Other loading areas included the United States (6.1 per cent), Canada (3.2 per cent), Australia (13.3 per cent) and New Zealand (0.4 per cent).

Developing countries

In 2006, the share of developing countries in world goods loaded was 61.1 per cent, while their share of goods unloaded was 41.4 per cent. Shares of developing countries were 89.5 per cent for crude oil and 66.2 per cent for petroleum products. For goods unloaded, the

Table 4

World seaborne trade in 2006, by type of cargo and country group

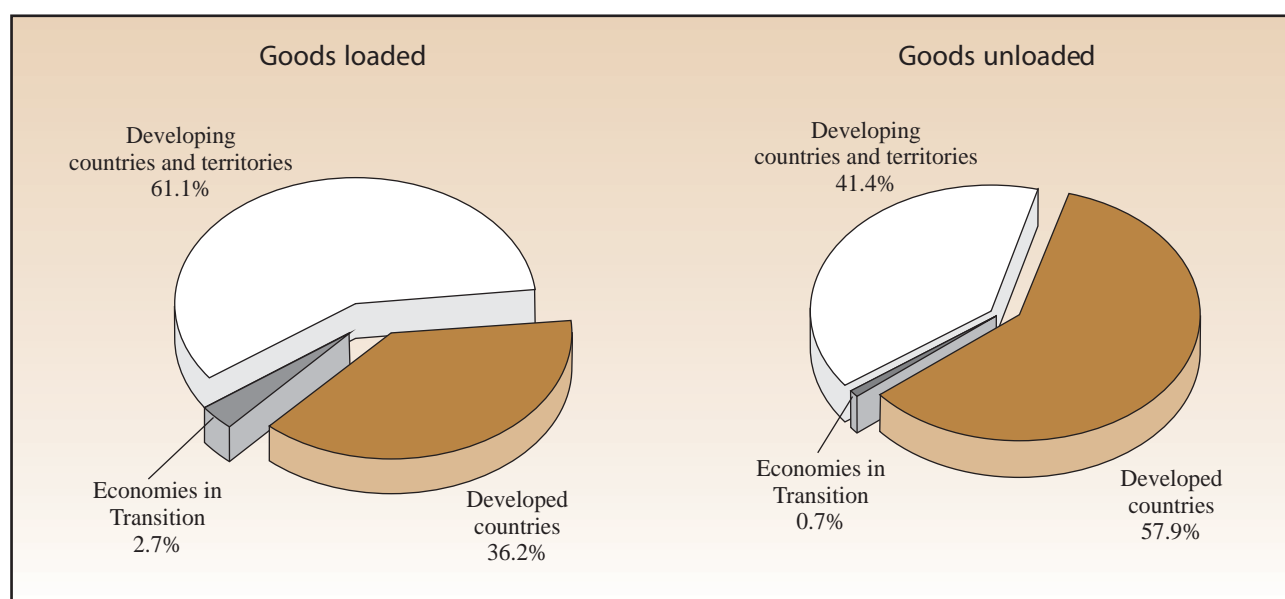
Country group	Goods loaded				Goods unloaded			
	Total	Crude	Products	Dry cargo	Total	Crude	Products	Dry cargo
Millions of tons								
World	7 415.5	1 990.8	683.0	4 741.7	7 460.4	1 940.9	683.5	4 836.0
Developed countries	2 683.1	100.0	187.3	2 395.8	4 323.0	1 207.4	349.6	2 766.0
Economies in transition	202.6	108.4	43.3	50.9	50.2	4.3	2.8	43.1
Developing countries	4 529.6	1 782.4	452.4	2 294.8	3 087.2	729.2	331.1	2 026.9
Africa	791.7	477.4	53.1	261.2	305.9	54.5	33.5	217.9
America	1 052.5	284.0	102.1	666.4	311.6	71.3	52.4	187.9
Asia	2 678.8	1 016.7	297.1	1 365.0	2 457.4	603.4	238.7	1 615.3
Oceania	6.6	4.3	0.1	2.2	12.3	-	6.5	5.8
Percentage share								
World	100.0	26.9	9.2	63.9	100.0	26.0	9.2	64.8
Developed countries	36.2	5.0	27.4	50.5	57.9	62.2	51.1	57.2
Economies in transition	2.7	5.4	6.3	1.1	0.7	0.2	0.4	0.9
Developing countries	61.1	89.5	66.2	48.4	41.4	37.6	48.4	41.9
Africa	10.7	24.6	7.8	5.5	4.1	2.8	4.9	4.5
America	14.2	14.3	14.9	14.1	4.2	3.7	7.7	3.9
Asia	36.1	51.1	43.5	28.8	32.9	31.1	34.9	33.4
Oceania	0.1	0.2	-	-	0.2	-	1.0	0.1

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by reporting countries, the port industry and other specialized sources.

Figure 3

World seaborne trade, by country group

(Percentage share in tonnage)



Source: Compiled by the UNCTAD secretariat on the basis of data supplied by reporting countries and other specialized sources.

shares were 37.6 per cent for crude oil and 48.4 per cent for petroleum products. As to world seaborne dry cargo, 48.4 per cent of this cargo was loaded at ports located in developing regions. These countries accounted for 41.9 per cent of world unloaded dry cargo. Developing countries in Asia were the largest traders, accounting for 36.1 per cent of world goods loaded and 32.9 per cent of goods unloaded. The share of developing countries in America is estimated at 14.2 per cent of world goods loaded and 4.2 per cent of goods unloaded. The shares of African countries are estimated at 10.7 and 4.1 per cent of goods loaded and unloaded respectively. Economies in transition accounted for 2.7 per cent of world goods loaded and 0.7 per cent of world goods unloaded. Oil shipments loaded at ports in those economies are estimated to have reached 5.7 per cent of total world oil loaded, reflecting in particular oil shipped from the Black and Baltic Seas. The share of developing Oceania remained negligible, and this reflects the sizes of their economies.

A breakdown by type of trade indicates the importance of developing Asia. Its shares of 2006 world loadings of crude oil and petroleum products are estimated at 51.1 per cent and 43.5 per cent, respectively. This reflects the importance of Western Asia producers and refining activity in the Far East. The second largest crude oil exporter among developing countries was Africa, with a share of world loadings estimated at 24.6 per cent, followed by developing America, with a share of 14.3 per cent. In contrast, regarding world petroleum products loaded, the share of developing America was estimated to be higher, at 14.9 per cent as against 7.8 per cent for Africa. In terms of dry cargoes loadings, developing Asia also accounted for the largest share, estimated at 28.8 per cent, followed by developing America (14.1 per cent) and Africa (5.5 per cent).

For crude oil unloaded, the share of developing countries in Asia was 31.1 per cent of the world total. America and Africa accounted, respectively, for 3.7 and 2.8 per cent. For petroleum products unloaded, the corresponding shares for developing countries in Asia, America and Africa were 34.9 per cent, 7.7 per cent and 4.9 per cent respectively. Developing Oceania imported negligible amounts of crude oil, while its share of world petroleum products imports is estimated to have reached 1 per cent in 2006.

These figures highlight the differences in the structure of trade between the various country groupings. Unlike developing countries, developed countries accounted for a larger share of world goods unloaded.

3. Demand for shipping services

Table 5 provides data on total demand for shipping services measured in ton-miles. World seaborne trade is estimated to have reached 30,686 billion ton-miles in 2006, having grown by 5.5 per cent. Demand for transportation of crude oil and oil products resulted in ton-miles for those commodities increasing by 3 per cent in 2006 (5 per cent in 2005). For all dry cargoes, the ton-miles increased by 6.8 per cent. For the five main dry bulks, ton-miles increased by 7 per cent. For the remaining dry cargoes (minor bulks and liner cargoes) ton-miles expanded by 5.3 per cent. With an increasing share of China's imports of oil products originating in Latin America and West Africa, ton-miles demand associated with this trade increased. Ton-miles may be expected to grow faster, with Australia's iron ore export capacity reaching its limits and China's iron ore imports increasingly having to be sourced from distant locations such as Brazil. Furthermore, the emergence of China as a net importer of coal means that Japan, the Republic of Korea and Taiwan Province of China may have to find alternative sources for traditional coal imports from China and increase their imports from Australia and Indonesia. Again, this is expected to result in increased ton-miles, although volumes may remain unchanged. Thus, long-haul trade of energy and raw materials in support of Asia's, and particularly China's, growth has created a demand for shipping services, a trend that is expected to continue.

C. SECTORS OF WORLD SEABORNE TRADE

As previously noted, demand for seaborne transport is driven by world economic growth and trade. The following sections consider 2006 developments affecting the various economic sectors (crude oil and petroleum products, dry bulk and other cargoes) that generate cargo to be carried by sea.

Table 5

World seaborne trade in ton-miles, selected years (1970–2006)

(Billions of ton-miles)

Year	Oil			Iron ore	Coal	Grain ^a	Five main dry bulks	Other dry cargoes	World total
	Crude	Products	Crude plus products						
1970	5 597	890	6 487	1 093	481	475	2 049	2 118	10 654
1980	8 385	1 020	9 405	1 613	952	1 087	3 652	3 720	16 777
1990	6 261	1 560	7 821	1 978	1 849	1 073	5 259	4 041	17 121
2000	8 180	2 085	10 265	2 545	2 509	1 244	6 638	6 790	23 693
2001	8 074	2 105	10 179	2 575	2 552	1 322	6 782	6 930	23 891
2002	7 848	2 050	9 898	2 731	2 549	1 241	6 879	7 395	24 172
2003	8 390	2 190	10 580	3 035	2 810	1 273	7 464	7 810	25 854
2004	8 795	2 305	11 100	3 444	2 960	1 350	8 139	8 335	27 574
2005	9 239	2 510	11 749	3 711	3 124	1 385	8 615	8 730	29 094
2006	9 516	2 635	12 151	4 120	3 372	1 436	9 341	9 195	30 686

Source: Fearnleys, *Review 2006*.

^a Includes wheat, maize, barley, oats, rye, sorghum and soya beans.

1. Seaborne trade in crude oil and petroleum products³

General developments

World shipments of tanker cargoes reached 2.67 billion tons, of which about three quarters were crude oil and the remaining share was made up of petroleum products. The share of tanker trade in total 2006 world seaborne trade amounted to 36.1 per cent. An overview presenting key oil and gas producers and major traders is provided in table 6.

Crude oil production

Crude oil production measured in million barrels per day (mbpd) increased for four consecutive years before reaching 81.7 mbpd in 2006. Although, world crude oil output grew by 1.2 per cent in 2005, it expanded at a lower rate in 2006 (0.5 per cent). Major oil producers are located in Western Asia, North America and Africa.

The members of the Organization of the Petroleum Exporting Countries (OPEC)⁴ accounted for 41.9 per cent of global oil production in 2005 and 2006. Their

production reached 34.1 mbpd in 2005 and 34.2 mbpd in 2006. Thus, non-OPEC countries continued to supply the largest share of global oil production (58.1 per cent). In 2005 production in the OECD countries declined by 4.3 per cent, while in 2006 it fell by 2.2 per cent. As a result, its market share dropped to 23.7 per cent in 2006 compared with 24.4 per cent in 2005.

OPEC members

Western Asia's and Africa's major oil producers are also members of OPEC. Oil production in Western Asian OPEC countries increased in 2005 and 2006, reaching respectively, 23.7 mbpd and 24 mbpd. The largest world oil producer, Saudi Arabia, accounted for 13.3 per cent of the world total oil production in 2006. It produced 111.1 mbpd in 2005 and 108.6 mbpd in 2006. Production in Kuwait increased by 6.5 per cent in 2005 and 2.3 per cent in 2006; this resulted in market shares of 3.2 and 3.3 per cent in 2005 and 2006 respectively. The Islamic Republic of Iran maintained its production level at 4.2 mbpd before moderately increasing to 4.3 mbpd in 2006. The United Arab Emirates increased production in 2005 and 2006 to reach about 3 mbpd. Despite an impressive performance in 2004, oil production in Iraq

Table 6

Oil and natural gas: major producers and traders, and distribution of world refineries' capacities in 2006
(World market share in percentages)

	Percentage
Major oil producers	
OPEC	41.9
OECD	23.7
Non-OPEC and Non-OECD	34.4
Major oil exporters	
Western Asia	38.6
Africa	15.6
Economies in transition	13.6
Europe	11.0
North America	10.9
Asia	7.8
Major oil importers	
North America	28.8
Europe	25.7
Japan	9.9
China	7.4
Other Asia–Pacific	21.2
Major natural gas producers	
United States and Russian Federation	39.7
Asia Pacific	21.8
West Asia	19.4
Economies in transition	16.4
Canada and Mexico	13.3
Africa	10.4
Europe	10.3
Latin America	8.3
Major natural gas exporters	
Qatar	14.9
Indonesia	14.0
Malaysia	13.3
Algeria	11.7
Australia	8.5
Nigeria	8.3
Trinidad and Tobago	7.7
Oman	5.5
Brunei	4.5
Major natural gas importers	
Asia	64.0
Europe	25.0
North America	8.3

Table 6 (continued)

	Percentage
Major refinery capacities	
OECD	53.4
Europe and economies in transition	27.8
United States	20.3
Canada and Mexico	4.4
Western Asia	8.5
China	8.2
Latin America	7.1
Japan	5.4
Africa	3.2

Source: UNCTAD secretariat on the basis on data published in *BP Statistical Review of World Energy*, June 2007, as well as other specialized sources, including the International Energy Agency and the Organization of the Petroleum Exporting Countries.

declined by 9.7 per cent in 2005, before a slight recovery in 2006, to reach 2 mbpd.

African OPEC producers increased their production in 2005 to 6.3 mbpd and maintained this level throughout 2006. Algeria produced 2 mbpd in both 2005 and 2006, while the output of the Libyan Arab Jamahiriya reached 1.7 mbpd in 2005 and 1.8 mbpd in 2006. Production in Nigeria increased by 3.1 per cent to reach 2.6 mbpd in 2005 before falling by 4.6 per cent in 2006.

OPEC members outside Western Asia and Africa (Indonesia and Venezuela) marginally increased their production in 2005 to reach about 4.1 mbpd (0.2 per cent increase). In 2006, oil output levels fell in both Venezuela and Indonesia, to 2.8 mbpd and 1 mbpd respectively.

The share of OPEC members outside Western Asia increased slightly in 2005 to 30.6 per cent before falling back to 29.8 per cent in 2006 as the result of reduced production in Nigeria, Indonesia and Venezuela.

OECD members

OECD members' production in North America dropped by 3.1 per cent in 2005 to reach 13.7 mbpd and remained steady in 2006. The United States' production fell by 4.6 per cent in 2005 and 0.3 per cent in 2006. Accordingly, its market share decreased from 9 per cent in 2004 to 8.5 per cent in 2005 and 8.4 in 2006. Similarly,

Canada's production dropped by 1.4 per cent in 2005 and 3.5 per cent in 2006, while that of Mexico decreased by 1.7 per cent in 2005 and 2 per cent in 2006. Production in the EU dropped from 2.8 mbpd in 2004 to 2.5 mbpd in 2005 and 2.3 mbpd in 2006. As a result, the group's share of global production fell back from 3.4 per cent in 2004 to 3.1 per cent in 2005 and to 2.8 per cent in 2006. Norway's production also fell — from 3.2 mbpd to 3 mbpd in 2005 and 2.8 mbpd in 2006.

Other producers

The total production of non-OPEC and non-OECD countries, including the Russian Federation, China and Brazil, reached 27.4 mbpd in 2005 before increasing by 2.6 per cent in 2006 to 28.1 mbpd. Accordingly, their market share increased slightly, reaching 34.4 per cent in 2006. The Russian Federation increased its production by 2.8 per cent to about 9.6 mbpd in 2005. Production increased further in 2006, although at a slower pace, to reach about 9.8 mbpd. These increases resulted in marginal improvements in its market share, which amounted to 11.8 per cent in 2005 and 12 per cent in 2006. Strong performances in both 2005 and 2006 included those of Angola (which joined OPEC in January 2007) and Azerbaijan. In 2005, Azerbaijan increased its oil production by 43.5 per cent to reach 4.5 mbpd, while Angola's output increased by 26.3 per cent to 1.2 mbpd. In 2006, Azerbaijan's production expanded by 44.7 per cent, while that of Angola grew at the lower rate of 14.3 per cent. Azerbaijan's market

share of world oil production doubled between 2004 to 2006. Angola's market share also increased — from 1.2 per cent in 2004 to 1.7 per cent in 2006.

Other oil producers have recorded good performances over the past two years. Brazil increased production to reach 1.8 mbpd in 2006, resulting in a market share of 2.2 per cent. China increased production by 4.2 per cent in 2005 and by 1.6 per cent in 2006. Its market share increased to 4.5 per cent in 2005 and was maintained throughout 2006. Other small producers varied in their performances, either maintaining or marginally increasing their market shares. Equatorial Guinea increased production in 2005 by 3.8 per cent and by 0.6 per cent in 2006. Despite its positive performance of 2004 (17.3 per cent increase), Viet Nam's oil production fell by 6.7 per cent in 2005 and by 7.8 per cent in 2006. Sudan increased production by 9.2 per cent in 2005 and by 11.8 per cent in 2006. Although its share of world production remains marginal at about 1.1 per cent, Peru performed well, with an increase of 18.1 per cent in 2005 and 4.5 per cent in 2006.

There were a number of developments during the year that impacted on global production trends. On the supply side, at the end of 2006, OPEC announced for the first time in two years that its members' crude oil output was going to be cut by 1.2 mbpd. It later announced another cut — of 0.5 mbpd — effective as of 1 February 2007. In terms of additional capacity, the normalization of diplomatic relations with the Libyan Arab Jamahiriya indicates a potential for increased global oil supply. During the year, the United States, restored full diplomatic relations (broken off in 1980) with that country, and lifted trade sanctions. As a result, United States investments are targeting the country's oil sector. Another development relates to the operation for the first time of Sudan's new crude oil pipeline, operated by a joint Chinese and Malaysian consortium. By linking an oil field to an export terminal and the port of Sudan, the system is expected to result in increased production.

The dominant concern in 2006 was the spike in oil prices, which reached record highs during the summer of 2006 when Brent crude reached \$78.69 per barrel. Meanwhile, the OPEC annual basket price⁵ stood at about \$61 per barrel in 2006. There is long-term pressure on oil prices: prices tend to rise as a result of intensified demand, especially from strongly growing developing economies such as China and India, and slow adjustment of supply. Furthermore, prices rose over the last year owing to the

political tension in the Middle East and production outages in Nigeria and Alaska. High volatility resulted in oil prices dropping at the end of summer and rising again by the end of the year. The OPEC monthly basket prices fell from \$68.81 in August to \$54.97 in October before moving up to \$57.97 in December. The fall in prices was due to progress made in negotiating with the Islamic Republic of Iran, increases in non-OPEC oil supply and the easing of the political conflict in Middle East.

On the demand side, the International Energy Agency (IEA) reported that world oil demand had increased marginally by 1 per cent and averaged 84.5 mbpd in 2006. Demand from NAFTA countries decreased marginally from 30.6 mbpd in 2005 to 30.5 mbpd in 2006, while OECD Pacific, China and other Asia saw their oil demand increase from 24 mbpd in 2005 to 24.5 mbpd in 2006. Oil demand in Africa remained steady at 2.9 mbpd.

Refinery developments

Total throughput of world refineries reached about 74.4 mbpd in 2005 and close to 74.9 mbpd in 2006; this represented increases of 1.5 per cent and 0.7 per cent, respectively. Over half of the world's output is produced in OECD countries' refineries, although this share marginally decreased from 55.2 per cent in 2004 to 54.2 per cent in 2005 and 53.4 per cent in 2006.

The United States continues to be the largest producer, with a production of 15.2 mbpd in 2005 and 2006 (a 1.6 per cent decrease compared with 2004). These amounts are equivalent to a marginally lower market share of 20.5 per cent in 2005 and 20.3 per cent in 2006. Canada and Mexico recorded marginal drops in 2005 and 2006, but maintained their market shares of 2.5 per cent (Canada) and 1.9 per cent (Mexico). Together, NAFTA members are responsible for about 25 per cent of the 2005 and 2006 world refineries' output.

The second largest contributor to refineries' output was Europe and the Russian Federation, with a production of 20.9 mbpd in 2005 (a 1.9 per cent increase) and 20.8 mbpd in 2006 (a 0.5 per cent decrease). These were equivalent to a market share of 28 per cent in 2005 and 27.8 per cent in 2006. Refineries in Japan temporarily reversed the 2004 declining trend and expanded production by 2.4 per cent in 2005, before decreasing again by 2.6 per cent in 2006 to reach 4 mbpd.

In 2005, the largest increase in output was achieved by China (9.9 per cent), followed by Africa (7.1 per cent). While Africa's output in 2006 dropped by 2.9 per cent to reach 2.4 mbpd, China's production continued to expand, albeit at a slower rate (4 per cent), to reach 6.1 mbpd. Their 2006 market shares were 8.2 per cent (China) and 3.2 per cent (Africa). Refineries in Latin America saw their output marginally decrease in both 2005 (a 0.5 per cent decrease) and 2006 (1 per cent). Accordingly, the region's market share dropped from 7.4 per cent in 2004 to 7.3 per cent in 2005 and 7.1 per cent in 2006. Refineries in Western Asia and Australasia evolved in opposite directions throughout 2005 and 2006, with the former increasing output and the latter recording a marked decline. The output of refineries in Western Asia expanded in both 2005 and 2006 when it reached 6.4 mbpd. In Australasia, output dropped by 7.5 per cent in 2005, reaching 0.7 mbpd before decreasing by a further 4.2 per cent in 2006. This resulted in an increased market share for Western Asia — from 8.2 per cent in 2005 to 8.5 per cent in 2006. Australasia's market share dropped further and fell below 1 per cent in 2006.

A number of initiatives that aim to expand refinery capacity have been taken in various parts of the world. For example, over the past few years, India has increased its refinery capacity through the Reliance Petroleum Jamnagar refinery. Plans to expand the refinery seek to increase capacity from 0.6 mbpd to 1.18 mbpd in 2008. Elsewhere, Saudi Aramco signed two Memorandums of Understanding with Conoco Phillips and Total to build export-oriented refineries in Saudi Arabia. The output of those refineries is expected to meet the environmental standards of the United States and the European Union.

Crude oil shipments

In 2006, crude oil seaborne shipments continued to grow and are estimated to have reached 1.99 billion tons (see table 4). Major loading areas are mainly located in developing regions, with Western Asia continuing to be at the top of the list with 897.2 million tons, followed in descending order by West Africa (221 million tons), South America's northern and eastern seaboard (133.9 million tons), North Africa (133.8 million tons), the Caribbean and Central America (120.9 million tons), and Central Africa (109.8 million tons). Major unloading areas are located in developed regions, with North American ports estimated to have received 532.9 million tons and European and Japanese ports unloading respectively 446.9 million tons and 201 million tons. Major unloading

developing regions included South and East Asia with 439.4 million tons and South-East Asia with 126.3 million tons.

In May 2006, China received its first crude oil delivery from the new 600-mile pipeline linking it to Kazakhstan. Another development related to the Memorandum of Understanding signed by Kazakhstan and Azerbaijan to enable Kazakh crude oil exports to be routed through the recently inaugurated Baku–Tbilisi–Ceyhan pipeline. The pipeline provides an export route that is independent of the Russian pipeline system and the Bosphorus and Turkish Straits.

Petroleum product shipments

In 2006, world shipments of oil products continued to grow, and are estimated to have reached 683 million tons. Overall, shipments of oil products were affected by the global refinery capacity as well as by the milder weather conditions which impact on seasonal fuel consumption. Growth has been recorded in various parts of the world. For example, imports into North America remained strong in the first six months of 2006 owing to the continued impact of the 2005 hurricane season on United States refineries. However, during the last quarter of 2006, a drop in United States oil product imports was recorded. While imports into Europe also increased, China was the largest source of product tanker demand, with most of the supply being sourced from Latin America.

Natural gas production

World production of natural gas expanded by 2.8 per cent in 2005, and by 3.1 per cent in 2006, taking the total to 2,865.3 billion cubic metres (bcm). Expressed in million tons oil equivalent, these corresponded to 2,509 and 2,586.4 respectively. Together, the Russian Federation and the United States accounted for 39.7 per cent of total world production in 2006. These shares are slightly below the 2004 share of 41.3 per cent. Production in the United States decreased by 2.8 per cent in 2005 and grew by 2.4 per cent in 2006. The Russian Federation recorded output growth of 1.2 per cent in 2005 and 2.3 per cent in 2006, and reached 612.1 bcm. Together, the United States and the Russian Federation accounted for 39.7 per cent. Other producers supplied the balance (60.3 per cent share), thus increasing production by 5.3 per cent in 2005 and 3.6 per cent in 2006 when it reached 11,729 bcm in 2006. The share of these producers in

world total gas production increased, and reached 39.2 per cent in 2006.

Major developments in 2006 affecting the liquefied natural gas (LNG) market included the efforts to nationalize the natural gas industry in Bolivia, the second largest reservoir of natural gas in Latin America, which created concern about foreign investments in this sector.

LNG shipments

LNG shipments increased by 6.1 per cent in 2005 and grew at a faster rate in 2006 (11.8 per cent) to reach 211.1 bcm. Accordingly, LNG shipments expressed as a proportion of world production have increased over the past two years. Japan continued to be one of the main destinations of LNG shipments, with its 2005 LNG imports marginally decreasing before expanding in 2006 by 7.2 per cent to reach 81.9 bcm. The second largest importer of LNG is the Republic of Korea with 30.4 bcm in 2005 and 34.1 bcm in 2006. Together, imports into Japan and the Republic of Korea accounted for 56.5 per cent of 2005 world LNG shipments and 54.9 per cent of 2006 shipments. Other sizeable importers included the United States, Spain, France and India. The latter saw its imports treble between 2004 and 2006, reaching 8 bcm (3.8 per cent market share). During the same year, China started importing LNG (1 bcm) and is reported to have received its first shipment from Chevron at the country's first LNG-receiving terminal.

In 2005, the main LNG exporters were Indonesia (31.46 bcm), Malaysia (28.52 bcm), Qatar (27.10 bcm), Algeria (25.68), Australia (14.85 bcm), and Trinidad and Tobago (14.01 bcm). Other smaller exporters included Nigeria (12.04 bcm), Oman (9.22 bcm) and Brunei (9.15 bcm). During the same year, Egypt emerged as a new LNG supplier (6.93 bcm), the main destinations being Spain and the United States. In 2006, exports from Indonesia, Malaysia and Algeria dropped respectively by 6.0, 1.7 and 3.9 per cent. Star performers in 2006 included Egypt, whose exports more than doubled to reach 14.97 bcm, Nigeria (an increase of 46 per cent), Oman (an increase of 25.2 per cent) and Australia (a 21.4 per cent increase).

LNG capacity increased in 2006 owing to full production from projects starting up in 2005 and projects completed in 2006. For example, the Bayun Undan project in Timor-Leste started in 2006, and additional production from projects in Equatorial Guinea and Norway and more production in Nigeria and Qatar are expected to come

on stream in 2007. Qatar's LNG developments are expected to export about 77 million tons in 2011. Elsewhere, Peru LNG is constructing a liquefaction plant on Peru's Pacific coast. The facility is designed with a capacity of 4.4 million tons for export to Mexico and the United States. Meanwhile, Suez Energy International, part of the French industrial and energy company Suez, proposed a \$700 million plan to supply Chilean demand. The plan envisages the construction of a regasification terminal in northern Chile to supply local power plants. LNG production is also expected to expand in Trinidad once BP plans to add three offshore gas fields have been implemented. It should be noted that although a long list of LNG projects has been announced, many were delayed in 2006, because of delays in investment decisions and financial approval. Projects such as Stockman, Sakhalin and Gorgon have had their time plans revised.

In a separate development, a dispute over price between the Russian Federation and Ukraine, which disrupted the supply of gas to Eastern European countries, gave rise to concerns about Europe's energy security. The incident highlighted the importance for Europe of diversifying its energy sources; such diversification could, in the long term, positively impact on seaborne trade by boosting demand for shipping.

Energy is increasingly at the forefront of the international agenda since ensuring sustainability and security of future energy supply is a concern common to all nations, both developed and developing. At the same time, there is increasing recognition of negative externalities associated with growing energy use and demand, in particular in the light of concerns about climate change. Future supply of fossil fuels may be less secure than has been thought. In this context note should be taken of a detailed report that was published in July 2007 by the US National Petroleum Council. The Council is an authoritative industry association whose 175 members include the world's major oil companies.⁶ The report, entitled "Facing the Hard Truths about Energy",⁷ warns of a shortage of oil and gas by 2015 and suggests that, by the year 2030, 80 per cent of existing oil production will need to be replaced. Against this background, it urges that there be massive new investment in large-scale projects to develop and deliver energy over the coming years. Reference is made in this context to estimates by the IEA in its 2006 *World Energy Outlook*, according to which \$20 trillion will be required over the next 25 years (equivalent to \$3,000 per person), with more than half of this amount needed for electricity generation and distribution.

2. Dry cargo shipments⁸

General developments

As shown in table 3, dry cargo shipments continued to increase in 2006 and are estimated to have reached 4.74 billion tons. These shipments accounted for 63.9 per cent of total goods loaded. The main five dry-bulk trade (iron ore, coal, grains, bauxite/alumina and rock phosphate) are estimated to have reached 1.83 billion tons. The difference is made up of minor bulks and liner cargoes, which together are estimated at 2.91 billion tons. Table 7 presents selected key players involved in the production, consumption and trade of some major bulks.

World crude steel production

World crude steel production increased in 2006 (8.8 per cent) to reach 1.240 billion tons. This was the third consecutive year during which production of steel had surpassed the 1 billion ton mark. Growth was particularly driven by production in China, which expanded by 18.5 per cent and reached 418.8 million tons. This growth rate is very much in line with the 2000 rate and was the first expansion rate below 20 per cent since 2001. Accordingly, China remains the strongest growth area and the largest single market, with a share of world steel production of 33.9 per cent in 2006 (31 per cent in 2005). In addition, crude steel production in Asia benefited from production growth in India (7.6 per cent), Japan (3.3 per cent) and, to a lesser extent, the Republic of Korea (1.2 per cent). The output of those countries reached 116.2, 44 and 48.4 million tons respectively. These levels were equivalent to a market share of 9.4 per cent, 3.5 per cent and 3.9 per cent respectively.

With the exception of Latin America and Western Asia, where production levels remained steady or grew at marginal rates, other regions and countries recorded noticeable output growth in 2006. In NAFTA countries, production increased by 3 per cent, a reversal of the negative performance of 2005, when production declined by 4.8 per cent. Growth was led by the United States, which increased output by 3.6 million tons over the previous year (a 3.8 per cent increase). Canada and Mexico both reversed the 2005 trend and recorded similar growth rates (0.6 per cent). Similarly, crude steel production in Europe, including the EU (25), picked up speed and expanded by 6.2 per cent in 2006 to reach 454.4 million tons (36.6 market share). Strong growth was recorded by Luxembourg (27.3 per cent), Poland

(19 per cent), Slovakia (13.3 per cent) and Belgium (12.5 per cent). Some saw their output drop, while others maintained their production at the 2005 level. For example, production decreased by 8.5 per cent and 7.2 per cent in Finland and the Netherlands, respectively, and remained steady in Hungary (2 million tons), Portugal (1.4 million tons), Norway (0.7 million tons) and Slovenia (0.6 million tons). Major producers Italy and Germany increased production by 7.5 per cent and 6.1 per cent respectively. While Germany remained the sixth largest world crude steel producer, Italy gained one place and replaced Brazil as the ninth largest world crude producer. Other smaller European producers such as Serbia and Montenegro continued to expand production at an impressive rate of 38.5 per cent, reaching 1.8 million tons in 2006.

Producers in the economies in transition of the CIS increased production by 5.8 per cent to reach 119.7 million tons (9.6 per cent market share). The Russian Federation maintained its position as the fourth largest world crude steel producer with an increase of 6.8 per cent, reaching 70.6 million tons in 2006. Accordingly, its share of the total output of CIS economies in transition increased from 58.4 per cent in 2005 to 60 per cent in 2006. While Ukraine, Belarus and Uzbekistan recorded production growth 5.7, 10 and 16.7 per cent, respectively — production in Kazakhstan fell by 6.7 per cent.

In Western Asia, crude steel production increased marginally by 0.8 per cent to reach 15.4 million tons in 2006 (market share of 12.4 per cent). The Islamic Republic of Iran increased production by 4.2 per cent to reach 9.8 million tons (63.6 per cent of the region's total 2006 output). Saudi Arabia and Qatar registered a decline in production of 5 per cent and 9.1 per cent respectively.

Africa's crude steel output expanded by 3.3 per cent and reached 18.5 million tons in 2006 (1.5 per cent market share). South Africa, the largest regional producer, increased output by 2.1 per cent to reach 9.7 million tons. Egypt and Algeria recorded increases of 1.6 per cent and 20 per cent, respectively, while production in the Libyan Arab Jamahiriya decreased by 7.7 per cent. Together, their combined output amounted to 8.4 million tons, a 5 per cent increase over the previous year. In developed Oceania, Australia increased production by 1.3 per cent to 7.9 million tons, while production in New Zealand remained steady at 0.9 million tons. Steel production in South America remained

Table 7

Major bulks: major producers, consumers and traders in 2006*(World market share in percentages)*

	Percentages
Crude steel producers	
Europe	36.6
China	33.9
Western Asia	12.4
India	9.4
Republic of Korea	3.9
Economies in transition	9.6
Japan	3.5
Republic of Korea	3.9
Africa	1.5
Latin America	3.6
Australia and New Zealand	0.7
Crude steel consumers	
Asia	54.1
China	32.0
EU (27)	16.6
NAFTA	13.9
Economies in transition	4.3
Western Asia	3.3
Latin America	2.5
Africa	1.9
Iron ore exporters	
Australia	37.7
Brazil	34.2
India	13.8
South Africa	3.9
Canada	3.1
Sweden	2.6
Mauritania	1.7
Peru	0.9
Iron ore importers	
China	45.6
Japan	18.9
Europe	18.8
Coal exporters (thermal and coking)	
Australia	32.3
Indonesia	22.0
South Africa	9.0
China	8.0
Colombia	8.0
Russian Federation	7.4
Canada and United States	6.0

Table 7 (continued)

	Percentages
Coal importers (thermal and coking)	
Europe and Japan	54.6
Republic of Korea	10.7
Taiwan Province of China	9.1
India	6.2
United States	4.2
Israel	1.8
China	1.3
Thailand	1.3
Chile	0.6
Grain exporters (excluding soybeans)	
Canada and United States	48.2
Argentina	9.4
Australia	9.5
Europe	8.8
China	3.3
Grain Importers	
Asia	33.3
Africa	21.7
Latin America	21.7
Western Asia	14.5
Europe	5.1

Source: UNCTAD secretariat on the basis of data supplied in Clarkson Research Services, *Shipping Review & Outlook*, Spring 2007, and *Dry Bulk Trade Outlook*, April and June 2007.

unchanged and totalled 45.3 million tons (3.6 market share). The drop in Brazil's production from 31.6 million tons in 2005 to 30.9 million tons in 2006 was offset by production increases by smaller producers such as Colombia (50 per cent), Peru (12.5 per cent), Chile (6.7 per cent) and Argentina (1.8 per cent).

It should be noted that 2006 was a year of worldwide growth and consolidation in the steel industry. During the year, Mittal Steel and Arcelor merged and consolidated. Arcelor-Mittal (Luxembourg) is now the leader in the steel industry with a crude steel production of 118 million tons, representing about 9.5 per cent of world steel output. Other recent steel mergers include Tata Steel (India) with Corus Group (Anglo-Dutch), the U.S. Steel purchase of Lone Star Technologies, Evraz (Russian Federation) and Credit Suisse stakes in Highveld Steel (South Africa) and Vanadium Corp (South Africa); SSAB Svenskt Staal AB (Switzerland) with Ipsco

(United States–Canada), Nucor (United States) with Harris Steel Group, Essar Global (India) with Algoma Steel (Canada) and Minnesota Steel (United States) and Ternium (Luxembourg) with Grupo Imsa (Mexico).

According to MEPS,⁹ the composite price and index for all carbon steel products increased in 2006. The global index (1997 = 100) increased from 139.2 in January to 159.3 in December 2006. This is equivalent to prices increasing from \$555 per ton in January to \$635 per ton in December 2006. A similar trend was observed with respect to all carbon steel products index and prices in the EU, North America and Asia.

In a parallel development, world production of pig iron increased by 10 per cent in 2006 and reached 871.6 million tons. Growth in Asia (14.4 per cent), contributed the most to world output expansion. Asian production was led by China, with an increase of 19.8 per

cent and a world share of 46.4 per cent. Other major producers included European countries outside the EU with an increase of 15 per cent and the economies in transition with a 6.4 per cent increase. South and Central America is the only region to record a decline in output (3.9 per cent), reaching 36.8 million tons.

World steel consumption

World apparent steel consumption expanded strongly in 2006 with a growth rate of 8.5 per cent, bringing the total to 1.113 billion tons. Steel use is expected to grow further in 2007 at a world growth rate of 5.9 per cent. While Asia, driven by China, remains the largest world consumer with a share of 54.1 per cent, consumption growth was stronger in other regions. Steel consumption in Asia expanded by 6.1 per cent, with China growing at 9 per cent. Steel consumption increased by 11.2 per cent in the EU (27), 14.9 per cent in other European countries, 12.9 per cent in the economies in transition, 11.7 per cent in Latin America, 11.1 per cent in NAFTA countries, 10.3 per cent in Western Asia and 9.7 per cent in Africa. In 2006, apparent steel consumption totalled 184.7 million tons in the EU (27), 154.9 million tons in NAFTA countries, 48.4 million tons in the economies in transition (4.3 market share), 36.8 million tons in Western Asia, 36 million tons in Latin America, 28 million tons in non-EU European countries and 21.6 million tons in Africa.

Forecasts for 2007 indicate a moderation in consumption in almost all regions with the exception of NAFTA countries, where consumption is expected to decline by 3.1 per cent, and Asia, where a rebound in Chinese consumption (13 per cent) is expected to drive upwards the entire region's demand (9.2 per cent).

Iron ore shipments

An increase in steel production stimulates the growth of iron ore shipments, which are estimated to have reached 716 million tons in 2006. Australia and Brazil accounted, respectively, for 37.7 and 34.2 per cent of world iron ore exports and together are the source of almost three quarters of world shipments. Australian iron ore exports expanded by 12 per cent and reached 270 million tons, while exports from Brazil increased by 8.9 per cent to reach 245 million tons. The balance of world iron ore exports originated in India (99 million tons), South Africa (28 million tons), Canada (22 million tons), Sweden (19 million tons), Mauritania (12 million tons) and Peru (6.5 million tons). Those countries expanded their exports at various rates, ranging from a low of 4.8 per cent for

Canada and Peru to a high of 13.2 per cent for Mauritania.

China continues to be the main destination for world iron ore shipments, with 326.3 million tons unloaded in Chinese ports — an increase of 18.4 per cent over 2005 and a world share increase to 45.6 per cent. Other noticeable importers in 2006 included Japan with 135.3 million tons (a 2.3 per cent increase) and Western Europe with 134.6 million tons, an increase of 3.8 per cent. Lesser importers in Asia such as the Republic of Korea, Taiwan Province of China, Malaysia and Indonesia recorded marginal increases of respectively 0.4, 0.9, 0.2 and 0.1 million tons. Imports into Pakistan and the Philippines remained steady at 1.9 million tons and 4 million tons, respectively. In other parts of the world, iron ore imports either declined, as in Canada and the United States (a decrease of 12.4 per cent) and Latin America (a decrease of 3.9 per cent), or marginally increased, as in Africa (a 8.1 per cent increase) and Western Asia (a 0.7 per cent increase). Thus, 2006 imports totalled 43.9 million tons in the Republic of Korea, 15.5 million tons in Taiwan Province of China, 4 million tons in Malaysia, 15.2 million tons in Western Asia, 8 million tons in Africa, 9.2 million tons in Canada and the United States, and 7.4 million tons in Latin America.

Forecasts for 2007 indicate a continued strong world demand for iron ore, especially from China and Indonesia, the Netherlands, Spain and India. Iron ore imports into North America are expected to decrease, while Latin America is forecast to maintain its 2006 level of imports.

Coal shipments

Coal shipments are estimated to have reached 728 million tons in 2006. Thermal coal is estimated at 542 million tons, representing 74.4 per cent of world coal shipments. Trade in coking coal made up the balance of coal shipments. Although shipments of coking coal have recorded no decline since 2001, their average annual growth rate over the last decade is estimated at 1.2 per cent as against 7.6 per cent for thermal coal shipments.

Together, Indonesia and Australia accounted for about 50 per cent of world thermal coal shipments. Since 2005, Indonesia has outpaced Australia as the largest thermal coal exporter, with its thermal coal exports rising by 48.7 per cent to reach 160.6 million tons in 2006 (a 22 per cent share). Thermal coal exports from Australia were estimated to have reached 110.1 million tons, an increase

of 3.5 per cent over 2005. Increased 2006 coal exports faced logistical constraints in Australia resulting in major congestion at some ports and terminals.

In addition to Indonesia and Australia, main thermal coal exporters in 2006 included South Africa (65.4 million tons), Colombia (58.3 million tons), China and the Russian Federation (53.7 million tons each), and Venezuela (7.8 million tons). With the exception of China and South Africa, which recorded a decline in their exports, the remaining exporters have either recorded growth over 2005 or maintained the same level.

Since 2005, exports of coking coal by Australia have accounted for about two thirds of world coking coal exports. Australia's exports are estimated to have marginally dropped in 2006 to 124.4 million tons as against 124.9 million tons in 2005 (a 32.2 per cent share of thermal and coking coal world shipments). A similar trend has been observed in respect of lesser exporters, such as Canada, the United States and China. Coking coal exports from those countries are said to have fallen by 2, 1.2 and 2 million tons respectively. Forecasts for 2007 point to a similar trend whereby growth in world coking coal exports is going to be stimulated by firm growth in Australian exports as well as greater expansion by minor exporters.

The main destinations of both types of coal shipments are Japan and the EU, which together accounted for about 54.6 per cent of 2006 world coal imports. In both cases, coal imports are dominated by coking coal, with a share of 65 per cent for Japan and 78.3 per cent for the EU. Lesser importers included, with respect to thermal coal, Taiwan Province of China (58.6 million tons), the Republic of Korea (56.2 million tons), the United States (30.9 million tons), India (23.4 million tons) and Israel (13 million tons). Imports into China and Thailand have almost doubled, reaching respectively 9.9 and 9.6 million tons. Imports into Chile reached 4.4 million tons, an increase of 37.5 per cent over 2005. As regards coking coal, lesser importers included India (21.9 million tons) and the Republic of Korea (21.8 million tons), which recorded a marginal increase compared with 2005, as well as Brazil, whose imports declined, reaching 10.3 million tons (a 4.6 per cent decrease).

Grain market

According to the International Grains Council (IGC), grain production, especially wheat, dropped from 1,649 million tons in 2005 to 1,602 million tons in 2006. While human consumption remained steady, industrial

demand for grain (maize) increased for biofuels production, particularly in the United States. The tight supply and the increased industrial demand resulted in higher world grain prices in 2006. Actions taken to address the shortage included, the application of greater support prices to stimulate output in India and specific measures taken by some exporters to ensure that domestic demand is adequately met. For example, it has been reported that the EU Commission reduced the rate at which it allocates grain export licences.

World grain shipments are estimated to have grown at a modest rate and were estimated to have reached 281 million tons in 2006. Wheat totalled about 109 million tons, while coarse grains such as corn, barley, soybeans, sorghum, oats, rye and millet totalled 172 million tons. In 2006, Canada and the United States accounted for 48.2 per cent of world grain exports, not including soybeans. Argentina's share amounted to 9.4 per cent, while Australia and the EU supplied, respectively, 9.5 per cent and 8.8 per cent of global exports. The balance of grain shipments was supplied by China (3.3 per cent share) and other minor exporters. Except for Australia and Argentina, all remaining exporters recorded increases during 2006.

In 2006, Asia remained the main unloading area for grain (excluding soybean) with 71.2 million tons, followed by Africa and Latin America with 46.5 million tons each, Western Asia (31 million tons), Europe including the EU (11 million tons) and the economies in transition of the CIS (6.2 million tons). Although major importers such as Japan and the Republic of Korea recorded increases in imports, the fall in China's (a 62.9 per cent drop) imports contributed to a decline of 2.6 per cent in Asia's grain imports. Despite the 6.2 per cent decrease in Egypt's imports, total 2006 imports into Africa expanded by 4.3 per cent mainly as a result of growth in the volumes of lesser importers such as Algeria (1.4 per cent increase), the Libyan Arab Jamahiriya (4.3 per cent increase), Morocco (7.3 per cent increase), Sudan (11.8 per cent increase), South Africa (23.5 per cent increase) and Tunisia (4.5 per cent increase).

Imports into Latin America in 2006 increased by 4.3 per cent. Import growth was stimulated by an increased demand from South America (15.7 per cent) especially from Peru (22.2 per cent), Colombia (16.2 per cent) and Brazil (9.7 per cent). During the same year, grain imports into Western Asia increased at a faster pace (6.7 per cent), driven mainly by strong import demand from Iraq (61.3 per cent increase), Saudi Arabia (19.2 per

cent increase) and Yemen (23.8 per cent). In 2006, grain imports into Europe fell by 16.7 per cent owing to weaker import demand in EU and non-EU countries, which dropped by 15.1 per cent and 23.1 per cent, respectively. Economies in transition recorded a 6.7 per cent import growth driven by countries other than the Russian Federation, which maintained its 2005 level of imports.

Forecasts for 2007 indicate that global grain shipments will remain steady, with a weaker import trend in Western Asia and Africa being offset by firm growth in all other regions especially, the EU and Latin America.

Other bulk shipments

World trade of bauxite and alumina is estimated to have reached 72 million tons in 2006, almost equally split between the two minerals. Guinea and Australia contain about half of the world's reserves of bauxite, while Guyana, Jamaica, Brazil and Suriname together account for 25 per cent. New reserves have been found in Viet Nam. Major loading areas of bauxite included Africa with a share estimated to be over 40 per cent, followed by the Americas (34.8 per cent) with Jamaica alone accounting for 13.2 per cent of the world total. Other exporting regions included Australia and Asia with shares of 12.4 per cent and 11.1 per cent respectively. Main importing areas were Europe and North America with world shares of 47.5 per cent and 41.7 per cent respectively. During the same year, main exporters of alumina were Australia with a share of 43.8 per cent, followed by the Americas (25.7 per cent). Jamaica alone accounted for 13.9 per cent of world alumina shipments and was mainly supplying demand in North America and Europe.

In 2006, production of world consolidated primary aluminium increased by 6.2 per cent to reach 33.2 million tons. Production in China continued its impressive expansion and increased by 19.8 per cent to reach 9.3 million tons. Production in other Asian countries also expanded, reaching 3.5 million tons, an increase of 11.3 per cent over 2005. Other regions have shown mixed results, with Africa, Latin America and Oceania increasing production by 6.3 per cent, 4.3 per cent and 1 per cent, respectively. In contrast to the previous year, production declined in both North America and Western Europe at a rate of 0.9 per cent for the former and 1.6 per cent for the latter.

In 2006, world trade of rock phosphate totalled 31 million tons. Morocco remains the major exporter, accounting

for almost half of the world shipments, which are estimated to be over 13 million tons. A large share of Morocco's shipments serves to meet the demand for rock phosphate in Europe and the Americas. Shipments by lesser exporters, such as countries in Africa and Western Asia, and the economies in transition, are estimated at about 4.0, 7.1 and 3.1 million tons respectively. Other minor exporters made up the balance. Major unloading areas included Asia, at about 13 million tons, Europe (9.5 million tons), the Americas (5.2 million tons) and Australia (0.8 million tons). To increase capacity, the Moroccan Government encourages private investment through joint ventures with European and Asian companies. It has been reported that in order to finance more developments, a 10-year credit agreement worth \$20 million was signed with Proparco. Elsewhere, the potential offered by the Red Sea area as a major rock phosphate and fertilizer exporting area resulted in a spillover effect which benefits various businesses.

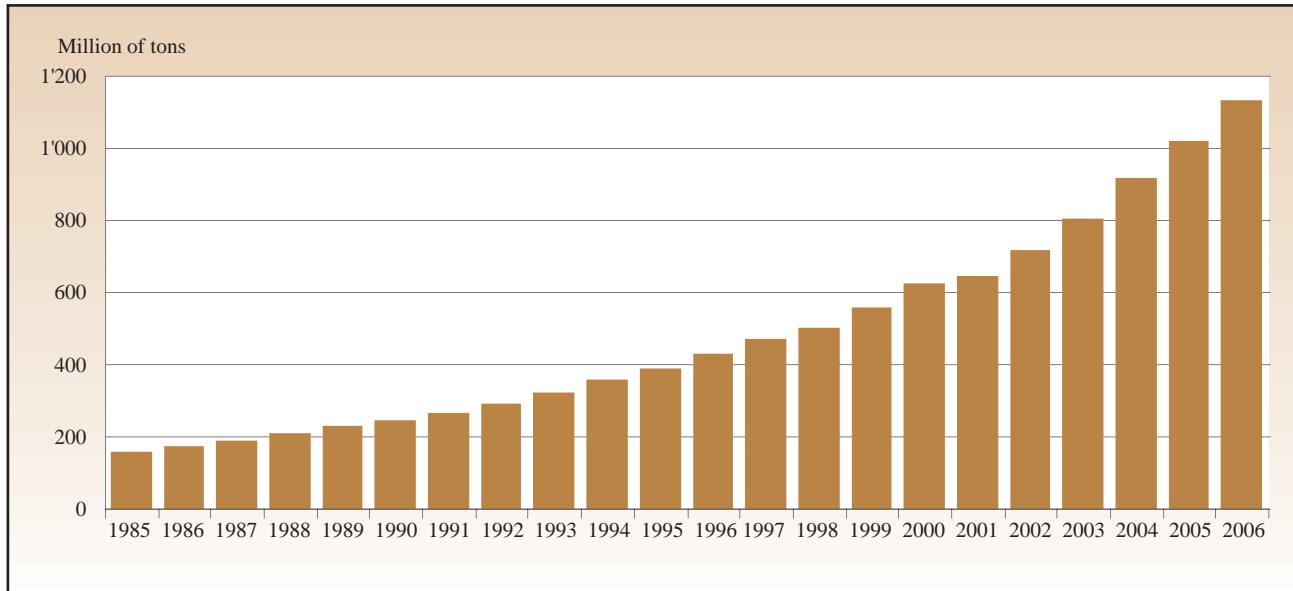
The minor dry bulks are estimated to have reached 949 million tons in 2006. The big increase came from steel products and cement exports from China. Shipments of steel and forest products are estimated to have increased by 8.3 per cent, reaching 429 million tons. Trade in steel products accounted for 59.4 per cent of this total and grew at a faster rate (12.8 per cent) than trade in forest products, which increased by 2.3 per cent in 2006. Other minor dry bulk trades involved agricultural products such as sugar, rice, tapioca and meals (oilseeds, soy and oil-cakes), as well as fertilizers (phosphates, potash, sulphur and urea). Volumes traded in 2006 are estimated to be slightly over 257 million tons, an increase of 2.8 per cent compared with the previous year. Shipments of various other minerals and bulky products (e.g. cokes, non-ferrous ores, metals, salt and cement) have also grown and were estimated to have totalled 263 million tons. Forecasts for 2007 indicate an overall steady growth, with shipments of manufactures, especially steel products, growing at a higher rate than the other specified minor bulk trades.

4. Liner shipments of containerized cargoes¹⁰

The balance of 1.96 billion tons of dry cargoes is increasingly being carried in containers along the liner trade routes. Clarkson Research Services estimated container trade, measured in cargo tons, to have grown in 2006 by 11.2 per cent, reaching 1.13 billion tons (see figure 4). Over the last two decades, global container trade (in tons) is estimated to have increased at an average annual rate of 9.8 per cent, while the share of

Figure 4

International containerized trade growth, 1985–2006
(Million tons)



Source: Clarkson Research Services, Shipping Review Database, Spring 2007, p. 101.

containerized cargo in the world's total dry cargo is estimated to have increased from 7.4 per cent in 1985 to 24 per cent in 2006. In this context, it is important to note that trade in manufactured goods, which in terms of value accounted for 72 per cent of the 2005 world merchandise trade, is growing continuously.¹¹ According to Drewry Shipping Consultants, over 70 per cent of the value of world international seaborne trade is being moved in containers.

Against this background, containerised trade is set to expand and is likely to account for an increasingly larger share of world dry cargo. Drewry Shipping Consultants estimated global container trade in 2006 at about 129 million TEUs. A forecast ending in 2020 indicated that container trade is expected to reach 157 million TEUs in 2008, 219 million TEUs in 2012 and 287 million TEUs in 2016, and to exceed 371 million TEUs in 2020.

Developments along the major container trade routes illustrate this trend in 2006. The Pacific trade is estimated to have reached 18.5 million TEUs, an increase of

10.1 per cent over the previous year. The dominant leg, Asia–United States trade, was estimated at 13.9 million TEUs, up 12.1 per cent over the previous year. Trade in the opposite direction, United States–Asia, grew by 4.5 per cent and is estimated to have reached 4.6 million TEUs. The imbalance between the eastward and westward traffics seems to have deepened in 2006, with the Asia–United States cargo flows exceeding those in the reverse direction by 9.3 million TEUs as against 8 million TEUs in 2005. The next major trade route, the Asia–Europe, had trade estimated to have reached 18.3 million TEUs. Cargo flows on the dominant leg from Asia to Europe are estimated at 12.5 million TEUs in 2006, against 10.8 million TEUs in 2005. Traffic moving in the opposite direction grew by 5.4 per cent to an estimated total of 5.8 million TEUs.

The Transatlantic route linking Europe with North America is estimated to have reached 6.2 million TEUs in 2006. Trade on the dominant leg, with cargo moving westward from Europe to North America, increased by 2.6 per cent over the previous year, taking the total to 3.9 million TEUs. Flows in the opposite direction,

Europe–North America, expanded at a slightly slower pace and reached 2.3 million TEUs. The rapid growth of trade routes linking Asia and particularly China to North America and Europe highlights the continued role of dynamic Asian emerging economies as an engine of global trade, as well as the impact of new production processes and delocalization from conventional production centres in the West to Asian developing countries. The emergence of Viet Nam as an important contributor to this growth is worth noting, especially in the light of its recent accession to the WTO.

In addition to East–West trade routes, North–South trades and South–South trades are growing, a fact that reflects in the latter case the new geography of trade and the role of emerging developing economies as industrial centres. Total North–South trade in 2006 is estimated at 19.6 million TEUs. Cargo flows from Europe to West Africa were estimated at 0.6 million TEUs, while trade in the opposite direction amounted to 0.3 million TEUs. The former expanded at a faster rate than the latter, the estimated growth rates being 10 and 2 per cent respectively. Container trade

between Europe and Oceania is estimated to have increased by 6.3 per cent and reached 0.5 million TEUs in 2006. No major imbalances are observed in these trades. The larger trade routes linking North America and Europe to developing America are estimated at 5.2 million TEUs and 3.3 million TEUs respectively. Imbalances affecting these cargo flows are more pronounced, with trade originating in developing America amounting to double the trade departing from Europe and North America.

Container flows between and within developing regions are expanding at a faster rate. For example, intra-Asia trade is estimated to have grown in 2006 by 8.8 per cent, reaching 8.1 million TEUs. The volumes are expected to grow even faster with delocalization of production from China to less expensive Asian countries such as Viet Nam and India. In November 2006, 48 African countries signed trade agreements with China. This indicates the potential for growth that lies ahead for South–South containerized trade, with China importing raw materials and Africa importing consumer goods from China.

Endnotes

- ¹ For a more comprehensive overview of world economic development, see UNCTAD's *Trade and Development Report*, 2007, www.unctad.org.
- ² Based on information published by the WTO in the *World Trade 2006, Prospects 2007*, Press Release, April 2007; WTO Statistics Database, *International Trade Statistics, 2006*; and *World Trade Report, 2006* (www.wto.org).
- ³ UNCTAD secretariat, based on various specialized sources, including BP *Statistical Review of World Energy*, 2005, 2006 and 2007 (www.bp.com).
- ⁴ Algeria, Indonesia, Islamic Republic of Iran, Iraq, Kuwait, Libyan Arab Jamahiriya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates and Venezuela. Angola joined OPEC on 1 January 2007.
- ⁵ The OPEC Reference Basket (ORB) was implemented in June 2005 and is made up of the following: Saharan Blend (Algeria), Minas (Indonesia), Iran Heavy (Islamic Republic of Iran), Basra Light (Iraq), Kuwait Export (Kuwait), Es Sider (Libyan Arab Jamahiriya), Bonny Light (Nigeria), Qatar Marine (Qatar), Arab Light (Saudi Arabia), Murban (United Arab Emirates) and BCF 17 (Venezuela).
- ⁶ These include ExxonMobil, Chevron, ConomoPhilips, Occidental Petroleum, Shell and BP.
- ⁷ A copy of the report can be downloaded from the website of the National Petroleum Council at <http://www.npc.org>.
- ⁸ UNCTAD secretariat, based on various specialized sources, including the International Iron and Steel Institute (www.worldsteel.org), Clarkson Research Services, *Dry Bulk Trade Outlook*, April 2007, *Clarkson Shipping Review & Outlook*, Spring 2007, Fearnleys, *Review 2006*, International Aluminium Institute, *Historical Statistics*, 2006, and International Grains Council (IGC) (www.igc.org.uk).
- ⁹ MEPS International, Ltd is an independent international steel industry analyst providing steel market information (www.meps.co.uk).
- ¹⁰ Based on information published in *Shipping Review & Outlook*, Clarkson Research Services, Fall 2006 and Spring 2007; *Container Intelligence Monthly*, various issues, *Containerisation International Magazine*, various issues; and *Containerisation International Online* (www.ci-online.co.uk). Data supplied by Drewry Consultants Ltd.
- ¹¹ UNCTAD, *Handbook of Statistics 2006/2007* (www.unctad.org) and WTO trade statistics data (www.wto.org).