The background features a stylized illustration of a ship's hull in shades of blue and grey, curving upwards from the bottom right. A large, bold, magenta arrow points upwards from the top right, symbolizing growth. The sky is light blue with white clouds and a white seagull in flight on the left.

World seaborne trade gathered momentum in 2017, with volumes expanding at 4 per cent, the fastest growth in five years. Supported by the world economic recovery and the improved global merchandise trade, world seaborne trade was estimated at 10.7 billion tons, with dry bulk commodities powering nearly half of the volume increase. Bearing in mind the low base effect, the recovery benefited all market segments; containerized trade and dry bulk commodities recorded the fastest expansion. Following the weak performances of the two previous years, containerized trade increased by 6.4 per cent in 2017. Meanwhile, dry bulk commodities trade increased by 4.0 per cent, up from 1.7 per cent in 2016. Crude oil shipments rose by 2.4 per cent, down from 4 per cent in 2016, while, together, refined petroleum products and gas increased by an estimated 3.9 per cent.

UNCTAD analysis is pointing to continued growth in world seaborne trade that hinges on the continued improvement of the global economy. In line with projected growth in world gross domestic product (GDP), UNCTAD expects global maritime trade to grow by another 4 per cent in 2018. Further, world seaborne trade is projected to expand at a compound annual growth rate of 3.8 per cent between 2018 and 2023. Volumes across all segments are set to grow, with containerized and dry bulk commodities trades recording the best performances. Tanker trade volumes are also projected to increase, although at a slightly slower pace than other market segments, a trend that is consistent with historical patterns.

Although prospects for seaborne trade are positive, caution would be advisable, given the uncertainty surrounding the sustainability of the recovery and related implications for shipping. Much of the uncertainty derives from the confluence of geopolitical, economic and trade policy risks and structural shifts such as the rebalancing of the Chinese economy, slower growth of global value chains and changes in the global energy mix. This is further amplified by the emergence of new trends, notably digitalization, which could alter the face of global shipping and redefine seaborne trade flows and patterns. How these factors will evolve and the extent to which they will support or derail the recovery in seaborne trade, remains unclear. What is clear is that they will require further monitoring and assessment.

DEVELOPMENTS IN INTERNATIONAL SEABORNE TRADE

WORLD SEABORNE TRADE IN 2017

Global volumes gathered momentum and reached
10.7 billion tons.

4% annual growth:
fastest growth in five years

Containerized trade accounted for
17.1%
of total seaborne trade
+6.4%.



Major dry bulk commodities accounted for
29.9%
of total seaborne trade
+5.1%.



Crude oil shipments rose by
2.4%
down from
4%
in 2016.



Combined volumes of refined petroleum products and gas went up by
3.9%.



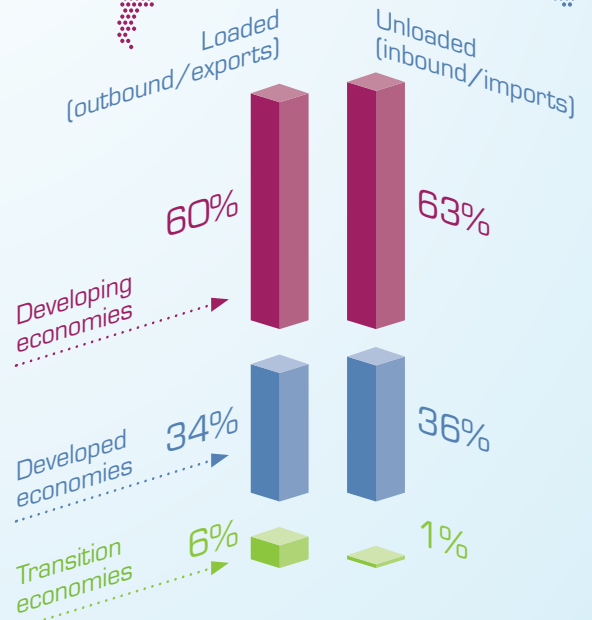
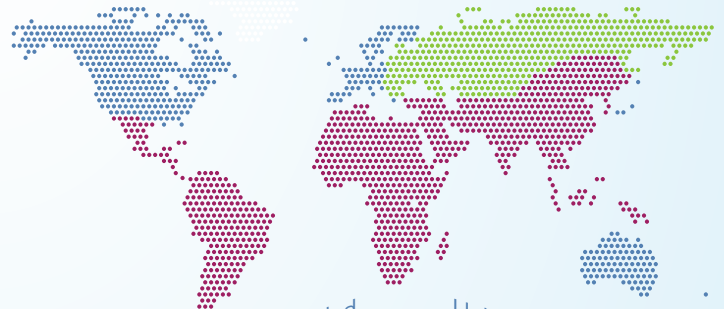
WORLD SEABORNE TRADE GROWTH FORECAST: 2018–2023

Volume projected to grow
+3.8%



Volumes across all segments set to grow:
containerized and **dry bulk** cargoes
projected to grow the **fastest**

Tanker volumes to grow at a slower pace



A. GENERAL TRENDS

Global economic expansion is the main driver of world shipping demand, and 2017 will be remembered as the year when the world economy and global shipping experienced a cyclical recovery from the historic lows of 2016, nearly a decade after the 2008–2009 global economic and financial crisis. Main economic and shipping indicators trended upward, reflecting growth in global investment, manufacturing activity and merchandise trade. At the same time, a range of upside and downside risks continued to unfold, bringing major implications for shipping and maritime trade.

1. Improved market fundamentals

Global industrial activity and manufacturing improved in 2017. In countries of the Organization for Economic Cooperation and Development, industrial production increased by 2.8 per cent, up from 0.2 per cent in 2016. Industrial activity in developing regions also picked up. In China, industrial production, at 6.5 per cent, was up, compared with 6 per cent in 2016. In Brazil, industrial production recovered and rose by 2.4 per cent, following the 6.4 per cent contraction recorded during the 2016 recession.

With GDP expanding by 3.1 per cent in 2017, up from 2.5 per cent in 2016, the global economy experienced a broad upswing, generating positive impacts on seaborne trade (table 1.1). Driven largely by stronger capital spending and global demand, GDP in developed countries increased by 2.3 per cent, up from 1.7 per cent in 2016. While growth accelerated in all major economies, strong growth in the European Union (2.4 per cent) was a welcome development. Growth in developing countries accelerated to 4.5 per cent, compared with 3.9 per cent in 2016, reflecting, among other factors, improved activity in commodity-exporting countries and a more favourable economic environment. This was illustrated by a return to positive growth in developing America, coinciding with the end of the recession in Brazil. A similar trend was observed in transition economies. These economies experienced positive growth in 2017, following the end of the recession in the Russian Federation. Aggregated GDP growth of 4.3 per cent in the least developed countries has improved, although it is still below the 7 per cent annual GDP growth target of the Sustainable Development Goals.

In addition to GDP, heightened global trade activity further supported maritime trade. In 2017, international merchandise trade volumes expanded by 4.7 per cent, up from 1.8 per cent in 2016 (table 1.2). Merchandise trade volumes increased in line with positive trends in the world economy, an upturn in investment and the rise in commodity prices. Higher commodity price levels translated into improved export earnings of commodity-exporting countries, which in turn, helped support their demand for imports. Rapid trade growth reflected to a large extent the trade correlation between investment

and capital spending on the one hand, and merchandise trade on the other. Generally, investment tends to be more import intensive compared with other components of aggregate demand. On average, the import content of investment is estimated at about 30 per cent globally, while for private consumption and government spending, import content hovers around 23 per cent and 15 per cent, respectively (International Monetary Fund, 2016). Accelerated investment growth has thus been particularly beneficial for shipping and maritime trade, in particular for dry bulk commodities and containerized trade.

Rapid trade growth increased trade-income elasticity. The ratio of trade growth to GDP growth increased from 0.7 in 2016 to 1.7 in 2017. Nevertheless, this ratio remains low compared with the elasticities observed in the 1990s and early 2000s. As stated in previous editions of the *Review of Maritime Transport*, structural factors weighing down on trade growth also seem to be at play, along with cyclical drivers (UNCTAD, 2016).

Certain regional variations between imports and exports, as well as between country groupings, shaped trade patterns in 2017. While export growth accelerated in both the developed and developing regions, trade volumes of developing countries firmed up. Their import demand increased by 7.2 per cent, up from 1.9 per cent in 2016. Their exports expanded at 5.7 per cent, higher than the 2.3 per cent recorded in 2016. Exports from developing Asia in particular strengthened during the year following a rebound in electrical and electronic products trade and the region's integration in global value chains.

Asia recorded the fastest growth in exports (6.7 per cent) and imports (9.6 per cent). Stronger domestic Asian demand supported by policy stimulus measures in countries such as China have sustained the region's demand for imports. Developments in China are of acute relevance to shipping, as the country remained at the centre of shipping activity in 2017 and accounted for nearly half of seaborne trade growth recorded during the year.

An important development in China, which had implications for shipping and maritime trade – in particular, dry bulk shipping – was the rapid expansion of the country's GDP (6.9 per cent), reflecting a short-term deviation from the gradual rebalancing of its economy towards services and domestic consumption. Another shift observed in 2017 was the growing focus on controlling air pollution in China and related implications for the energy mix, the quality of raw materials sourced and the domestic production versus import trade-offs. These trends favoured the sourcing of commodities of better quality or grades from external markets, which in turn, contributed to boosting import volumes in China.

Demand for imports improved markedly in developing America, following negative growth in 2016. Large economies such as Argentina and Brazil, which emerged from the recession in 2017, achieved positive results. In contrast, demand for imports in Africa,

Western Asia and transition economies remained under pressure (0.9 per cent growth in 2017), despite some improvement over 2016. Among other factors, this was a reflection of the continued weakness of commodity prices and exports, and the impact of the recession in the Russian Federation.

Demand for imports in the developed regions strengthened; volumes expanded by 3.1 per cent in 2017, compared with 2 per cent in 2016. Merchandise export volumes in these regions increased by 3.5 per cent, up from 1.1 per cent in 2016.

Region or country	2016	2017 ^a	2018 ^b
World	2.5	3.1	3.0
Developed countries	1.7	2.3	2.1
of which:			
United States	1.5	2.3	2.5
European Union (28)	2.0	2.6	2.0
Japan	1.0	1.7	0.9
Developing countries	3.9	4.5	4.6
of which:			
Africa	1.7	3.0	3.5
East Asia	5.9	6.2	6.0
of which:			
China	6.7	6.9	6.7
South Asia	8.4	5.8	6.1
of which:			
India	7.9	6.2	7.0
Western Asia	3.1	3.0	3.3
Latin American and the Caribbean	-1.1	1.1	1.8
of which:			
Brazil	-3.5	1.0	1.4
Countries with economies in transition	0.3	2.1	2.2
of which:			
Russian Federation	-0.2	1.5	1.7
Least developed countries	3.5	4.3	4.9

Source: UNCTAD secretariat calculations, based on United Nations, 2018 and UNCTAD, 2018a.

^a Partly estimated.

^b Forecast.

2. Growing world seaborne trade

International seaborne trade gathered momentum, with volumes expanding by 4 per cent. This was the fastest growth in five years. Reflecting the world economic recovery and improved global merchandise trade, UNCTAD estimates world seaborne trade volumes at 10.7 billion tons in 2017 (tables 1.3 and 1.4, figure 1.1). Dry bulk commodities have powered nearly half of the volume increase.

Major dry bulk commodities – coal, iron ore and grain – accounted for 42.3 per cent of total dry cargo shipments, which were estimated at 7.6 billion tons in 2017. Containerized trade and minor bulks represented 24.3 per cent and 25.4 per cent of the total, respectively. Remaining volumes were made of other dry cargo, including breakbulk shipments.

Tanker trade shipments accounted for less than one third of total seaborne trade volume, in line with the persistent shift in the structure of seaborne trade observed over the past four decades. The share of tanker trade dropped from around 55 per cent in 1970 to 29.4 per cent in 2017. Between 1980 and 2017, global tanker trade expanded at an annual average growth rate of 1.4 per cent, while major dry bulks rose by 4.6 per cent. The fastest growing segment was containerized trade, with volumes expanding over nearly four decades at an annual average growth rate of 8.1 per cent.

Developing countries continue to account for most global seaborne trade flows, both in terms of exports (goods loaded) and imports (goods unloaded). These countries shipped 60 per cent of world merchandise trade by sea in 2017 and unloaded 63 per cent of this total. By contrast, developed countries saw their share of both types of traffic decline over the years, representing about one third of world seaborne imports and exports (34 per cent of goods loaded and 36 per cent, unloaded). Transition economies continue to be heavily reliant on the export of bulky raw materials and commodities (6 per cent), while they hold a marginal share of global seaborne imports (1 per cent).

Exports			Countries or regions	Imports		
2015	2016	2017		2015	2016	2017
2.5	1.8	4.7	World ^a	2.5	1.8	4.7
2.3	1.1	3.5	Developed countries	4.3	2.0	3.1
2.4	2.3	5.7	Developing countries	0.6	1.9	7.2
0.8	0.6	4.2	North America	5.4	0.1	4.0
1.8	1.9	2.9	Latin America and the Caribbean	-6.4	-6.8	4.0
2.9	1.1	3.5	Europe	3.7	3.1	2.5
1.5	2.3	6.7	Asia	4.0	3.5	9.6
5.5	2.6	2.3	Africa, Western Asia and countries with economies in transition	-5.6	0.2	0.9

Source: UNCTAD secretariat, based on World Trade Organization, 2018, table 1.

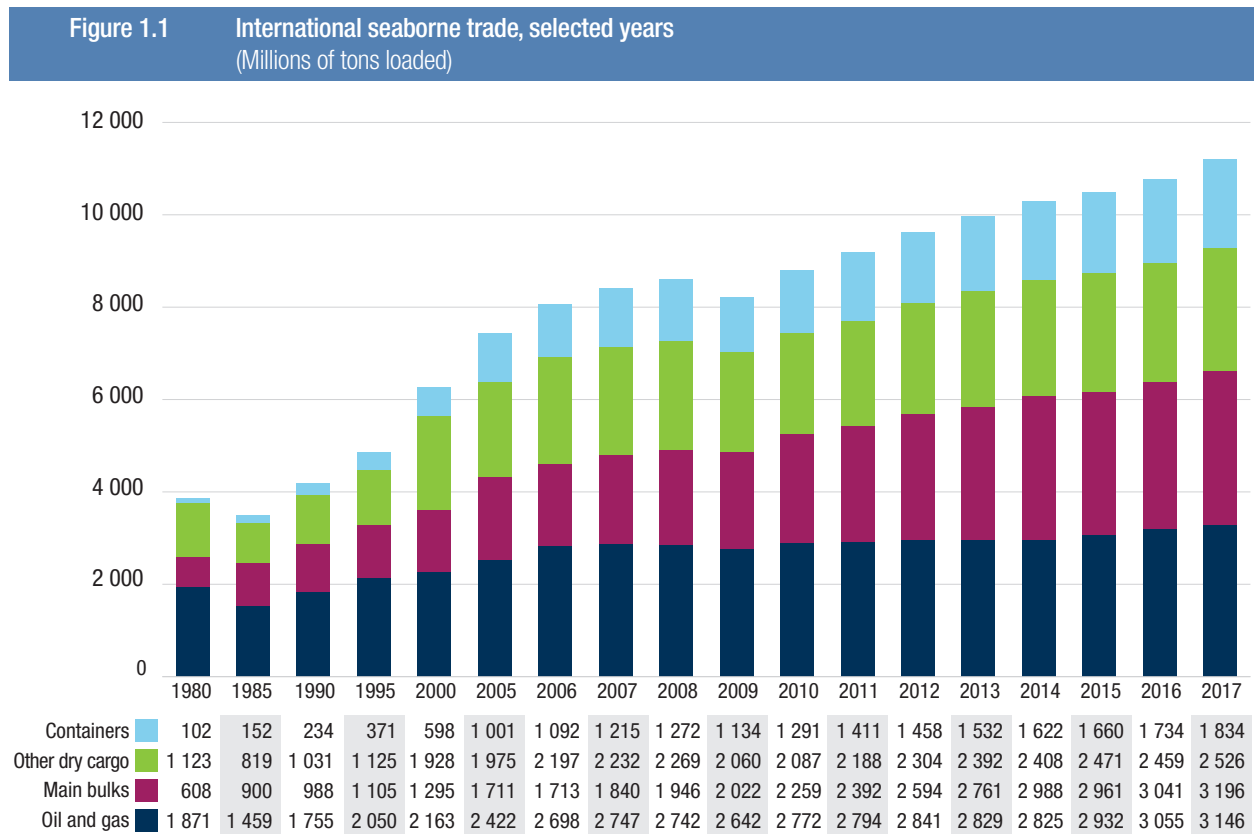
^a Average of exports and imports.

Year	Crude oil, petroleum products and gas	Main bulks ^a	Other dry cargo ^a	Total (all cargoes)
1970	1 440	448	717	2 605
1980	1 871	608	1 225	3 704
1990	1 755	988	1 265	4 008
2000	2 163	1 295	2 526	5 984
2005	2 422	1 711	2 976	7 109
2006	2 698	1 713	3 289	7 701
2007	2 747	1 840	3 447	8 034
2008	2 742	1 946	3 541	8 229
2009	2 642	2 022	3 194	7 858
2010	2 772	2 259	3 378	8 409
2011	2 794	2 392	3 599	8 785
2012	2 841	2 594	3 762	9 197
2013	2 829	2 761	3 924	9 514
2014	2 825	2 988	4 030	9 843
2015	2 932	2 961	4 131	10 024
2016	3 055	3 041	4 193	10 289
2017	3 146	3 196	4 360	10 702

Source: UNCTAD secretariat calculations, based on data supplied by reporting countries and as published on government and port industry websites, and by specialist sources.

Notes: Dry cargo data for 2006 onwards were revised and updated to reflect improved reporting, including more recent figures and a better breakdown by cargo type. Since 2006, the breakdown of dry cargo into main bulks and dry cargo other than main bulks is based on various issues of the *Shipping Review and Outlook*, produced by Clarksons Research. Total estimates of seaborne trade figures for 2017 are based on preliminary data or on the last year for which data were available.

^a Figures for main bulks include data on iron ore, grain, coal, bauxite/alumina and phosphate. Starting in 2006, they include data on iron ore, grain and coal only. Data relating to bauxite/alumina and phosphate are included under "other dry cargo".



Source: *Review of Maritime Transport*, various issues. For 2006–2017, the breakdown by cargo type is based on Clarksons Research, 2018a.

Notes: 1980–2005 figures for main bulks include iron ore, grain, coal, bauxite/alumina and phosphate. Starting in 2006, main bulks include iron ore, grain and coal only. Data relating to bauxite/alumina and phosphate are included under "other dry cargo".

Table 1.4 World seaborne trade, 2016–2017 (Type of cargo, country group and region)									
Country group	Year	Goods loaded				Goods unloaded			
		Total	Crude oil	Petroleum products and gas	Dry cargo	Total	Crude oil	Petroleum products and gas	Dry cargo
Millions of tons									
World	2016	10 288.6	1 831.4	1 223.7	7 233.5	10 279.9	1 990.0	1 235.7	7 054.1
	2017	10 702.1	1 874.9	1 271.2	7 555.9	10 666.0	2 035.0	1 281.5	7 349.4
Developed economies	2016	3 492.9	150.5	453.0	2 889.4	3 840.4	1 001.3	507.6	2 331.5
	2017	3 675.0	162.6	478.3	3 034.2	3 838.3	956.8	509.1	2 372.5
Transition economies	2016	637.3	176.3	40.2	420.7	59.6	0.3	4.0	55.3
	2017	664.5	190.7	48.3	425.6	65.9	0.8	3.4	61.7
Developing economies	2016	6 158.4	1 504.5	730.5	3 923.4	6 379.9	988.5	724.2	4 667.3
	2017	6 362.5	1 521.6	744.7	4 096.2	6 761.7	1 077.4	769.1	4 915.3
Africa	2016	692.7	271.3	58.8	362.6	492.9	38.7	80.8	373.4
	2017	726.2	288.0	60.0	378.2	499.8	33.9	90.5	375.4
America	2016	1 336.8	232.5	75.9	1 028.4	566.0	51.9	128.2	385.8
	2017	1 379.4	227.3	71.9	1 080.2	608.3	54.7	141.8	411.8
Asia	2016	4 121.2	999.1	594.9	2 527.2	5 307.6	897.0	510.9	3 899.7
	2017	4 248.8	1 004.6	611.8	2 632.4	5 640.1	988.0	532.5	4 119.6
Oceania	2016	7.7	1.7	0.9	5.2	13.5	0.8	4.2	8.4
	2017	8.0	1.7	0.9	5.4	13.5	0.8	4.2	8.4
Country group	Year	Goods loaded				Goods unloaded			
		Total	Crude oil	Petroleum products and gas	Dry cargo	Total	Crude oil	Petroleum products and gas	Dry cargo
Percentage share									
World	2016	100.0	17.8	11.9	70.3	100.0	19.4	12.0	68.6
	2017	100.0	17.5	11.9	70.6	100.0	19.1	12.0	68.9
Developed economies	2016	33.9	8.2	37.0	39.9	37.4	50.3	41.1	33.1
	2017	34.3	8.7	37.6	40.2	36.0	47.0	39.7	32.3
Transition economies	2016	6.2	9.6	3.3	5.8	0.6	0.0	0.3	0.8
	2017	6.2	10.2	3.8	5.6	0.6	0.0	0.3	0.8
Developing economies	2016	59.9	82.2	59.7	54.2	62.1	49.7	58.6	66.2
	2017	59.5	81.2	58.6	54.2	63.4	52.9	60.0	66.9
Africa	2016	6.7	14.8	4.8	5.0	4.8	1.9	6.5	5.3
	2017	6.8	15.4	4.7	5.0	4.7	1.7	7.1	5.1
America	2016	13.0	12.7	6.2	14.2	5.5	2.6	10.4	5.5
	2017	12.9	12.1	5.7	14.3	5.7	2.7	11.1	5.6
Asia	2016	40.1	54.6	48.6	34.9	51.6	45.1	41.3	55.3
	2017	39.7	53.6	48.1	34.8	52.9	48.5	41.6	56.1
Oceania	2016	0.1	0.1	0.1	0.1	0.1	0.0	0.3	0.1
	2017	0.1	0.1	0.1	0.1	0.1	0.0	0.3	0.1

Source: UNCTAD secretariat calculations, based on data supplied by reporting countries and as published on government and port industry websites, and by specialist sources.

Notes: Dry cargo data for 2006 onwards were revised and updated to reflect improved reporting, including more recent figures and a better breakdown by cargo type. Total estimates of seaborne trade figures for 2017 are based on preliminary data or on the last year for which data were available. For longer time series and data prior to 2016, see UNCTADstat data centre, available at <http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=32363>.

Historically, developing countries have been the main suppliers of high-volume, low-value raw materials; this has, however, changed over the years. As shown in figure 1.2, developing countries have emerged as prominent world exporters and importers. A milestone was reached in 2014 when developing countries' share of goods unloaded (imports), surpassed, for the first time, the group's share of goods loaded (exports). This shift underscores the strategic importance of developing countries as the main driver of global seaborne trade, as well as their growing participation in global value chains.

In 2004, UNCTAD noted that a new geography of trade was materializing and reshaping the global economic landscape. This new geography emphasized the growing role for the developing countries or the global South (Horner, 2016). The share of imports sourced from other developing countries increased from 37.5 per cent in 1995 to 57 per cent in 2016 (UNCTAD, 2018b).

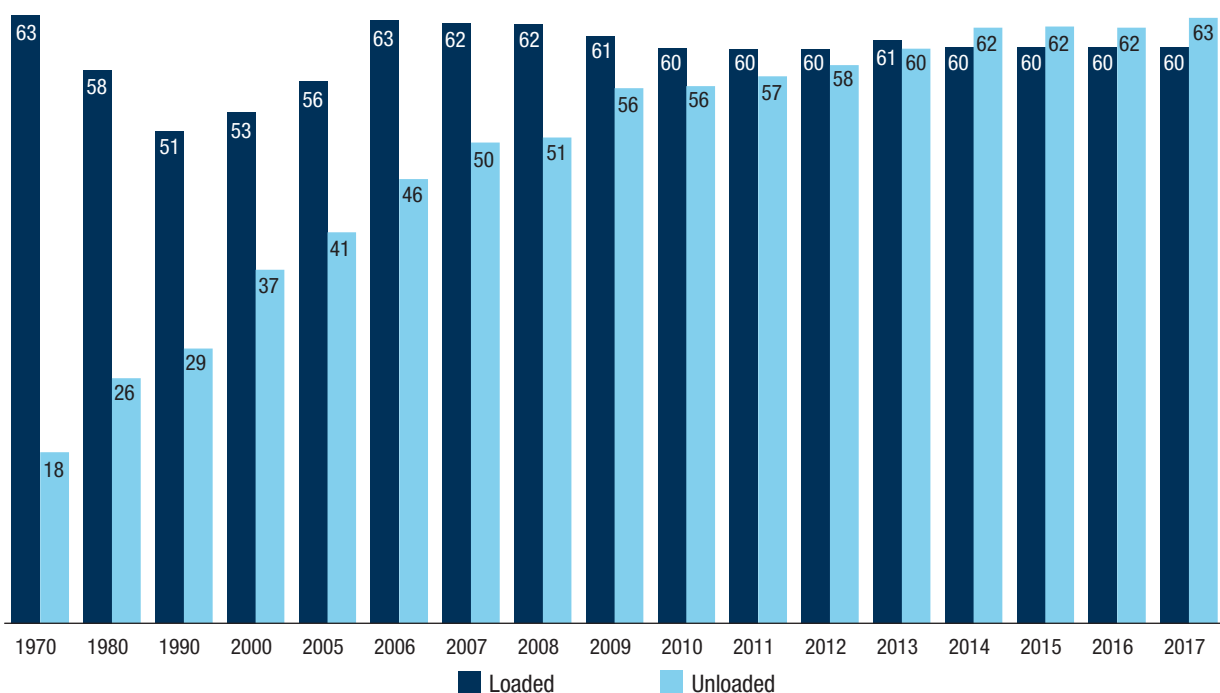
However, participation in global value chains does not tell the whole story, as participation in these processes is not truly global but rather regional and more specifically, East Asian. Far from being a homogenous group, developing countries are not all equal when it comes to regional integration and participation in global manufacturing.

While the participation of developing countries, notably those of East Asia, in global value chains may have

played a part in increasing their contribution to global goods unloaded, observed deceleration over recent years in vertical specialization suggests that factors other than participation in global value chains may also be driving growth in developing countries' seaborne imports. Overall decline in the vertical specialization process is evident when considering trade in intermediate goods. The share of intermediate imports of China as a proportion of its exports of manufacturing goods – a measure of the reliance of the manufacturing sector on imported inputs – has declined consistently over the last decade, from almost 60 per cent in 2002 to less than 40 per cent in 2014 (UNCTAD, 2016). The share of the value chain created by production abroad as a percentage of global exports is estimated to have gradually diminished since 2011, suggesting some deceleration in globalization (Berenberg and Hamburg Institute of International Economics, 2018). UNCTAD (2018c) finds that the rate of expansion of international production is slowing down, and international production and cross-border exchanges of factors of production are gradually shifting from tangible to intangible forms.

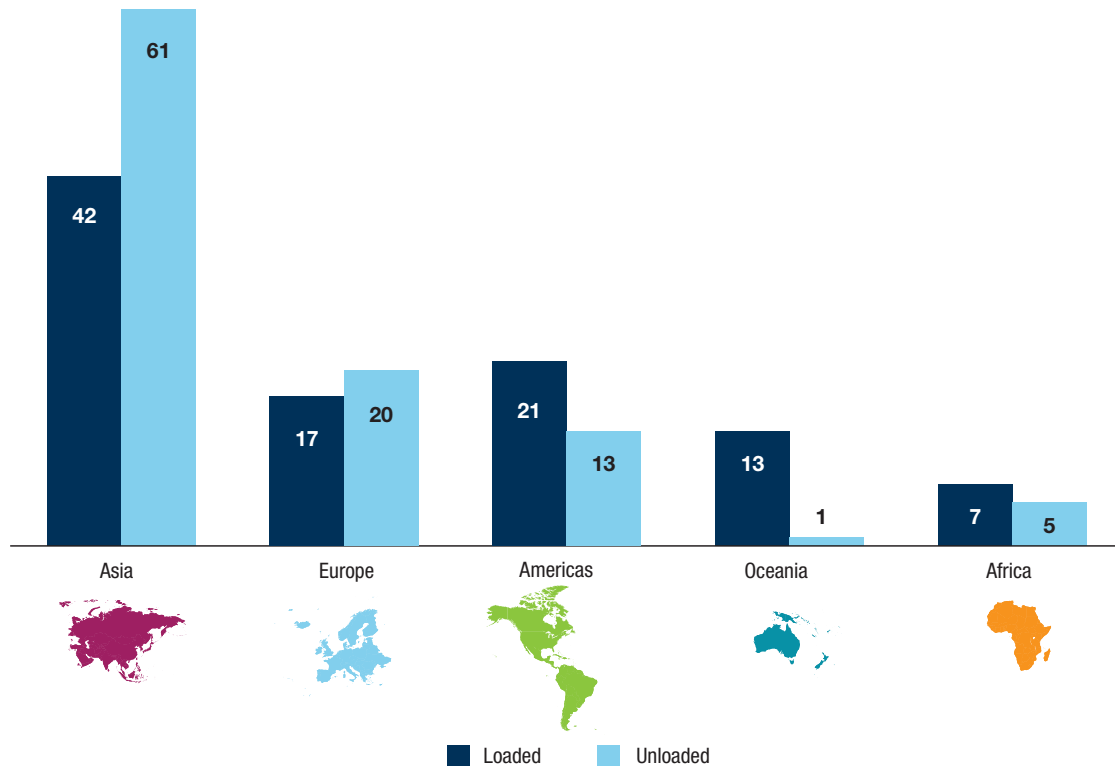
In this context, other potential factors that may be driving the continued structural shift in world seaborne trade include growth in South–South trade that is not necessarily generated by global value chains and manufacturing processes. Another potential driver is the growing consumption requirements of a fast-growing middle class in developing regions.

Figure 1.2 Participation of developing countries in seaborne trade, selected years
(Percentage share in world tonnage)



Source: UNCTAD secretariat calculations, based on the *Review of Maritime Transport*, various issues, and table 1.4 of this report.

Figure 1.3 World seaborne trade, by region, 2017
(Percentage share in world tonnage)



Source: UNCTAD secretariat calculations, based on data supplied by reporting countries and as published on government and port industry websites, and by specialist sources.

Note: Estimated figures are based on preliminary data or on the last year for which data were available.

Figure 1.3 highlights the leading influence of Asia, as 41 per cent of world maritime trade in 2017 originated in Asia and 61 per cent was destined to the region. Other regions, ranked in descending order, were Europe, the Americas, Oceania and Africa.

3. Factors contributing to more ton-miles in 2017

Seaborne trade measured in ton-miles to reflect distances travelled and the employment of ship capacity increased by 5 per cent in 2017, up from 3.41 per cent in 2016. Overall ton-miles generated by seaborne trade in 2017 amounted to an estimated 58,098 billion tons (figure 1.4). Much of the growth was driven by crude oil and coal shipments, which have greatly benefited the shipping industry, given the growth in volumes and distances. Crude oil trade contributed 17.5 per cent to ton-mile growth while major dry bulks contributed nearly one third. Together, minor bulks and other dry cargo accounted for 17.7 per cent of ton-mile growth, while containerized shipments contributed 17.4 per cent. The contributions of gas and petroleum products were much smaller.

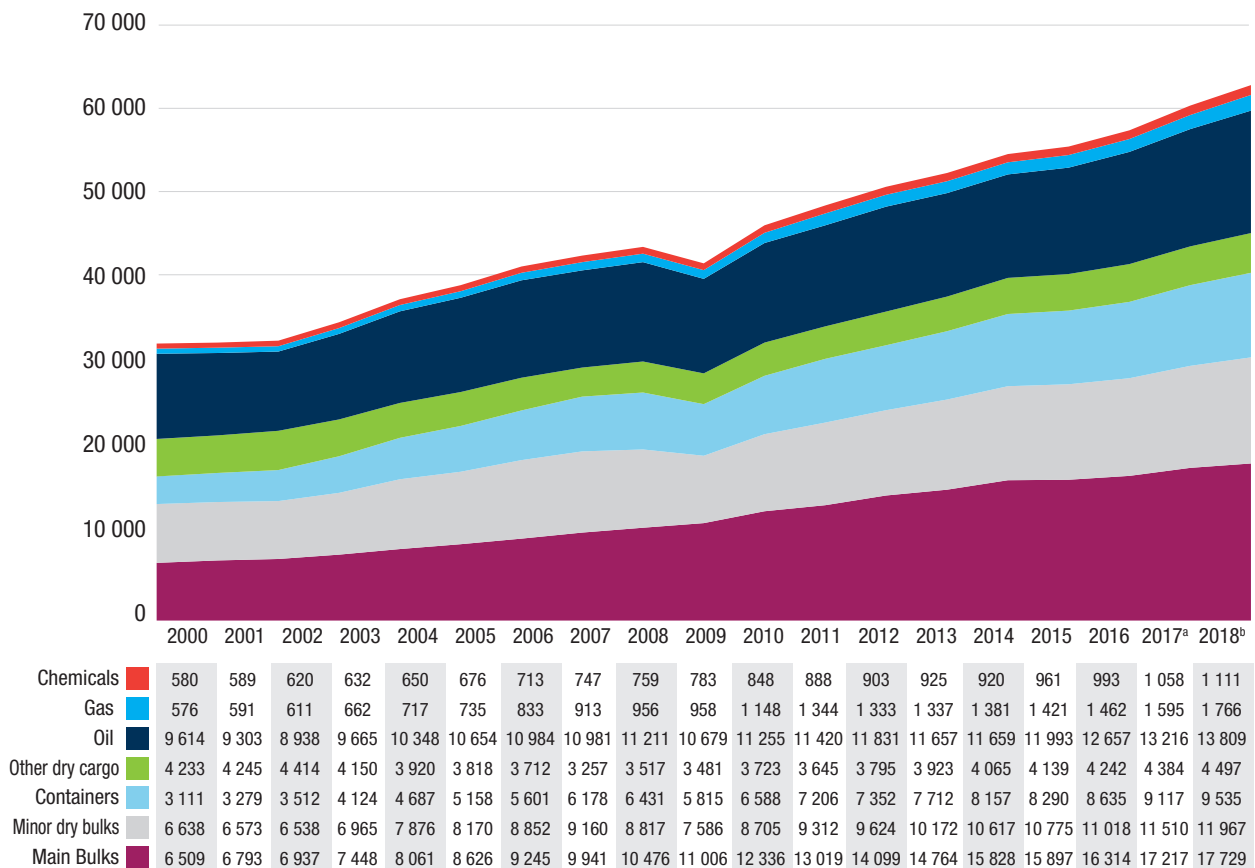
Tanker trade ton-miles, including crude oil and refined petroleum products, rose by 4.4 per cent, and major dry bulks and containerized trade ton-miles increased by

5.5 per cent and 5.6 per cent, respectively. Minor bulks ton-miles increased by 4.5 per cent, reflecting to some extent the positive contribution of the long-distance Guinea–China bauxite trade.

Growth in tanker ton-miles was supported by firm import demand in China, as well as its oil supply diversification strategy, which is aimed at reducing the country's reliance on Western Asian crude oil. As China has been sourcing more crude oil from the Atlantic basin (countries such as Angola, Brazil, Canada, Nigeria and the United States), the number of global crude oil ton-miles has been rising. Distances travelled by crude oil trade averaged 5,047.9 nautical miles in 2017, compared with 4,941.1 nautical miles in 2016.

Growth in oil product ton-miles increased at a slower pace compared with the previous year, owing to short average sailing distances. The lifting of the United States restrictions on crude oil exports in 2015, combined with increased demand from Asia and Europe have caused crude oil seaborne exports from the United States to surpass the country's seaborne exports of oil products in terms of billion ton-miles. In 2017, global liquefied natural gas ton-miles increased by 11.6 per cent. Growing exports of liquefied natural gas from the United States underpinned growth in the average haul of imports of this commodity to China.

Figure 1.4 World seaborne trade in cargo ton-miles, 2000–2018
(Billions of ton-miles)



Source: UNCTAD secretariat calculations, based on data from Clarksons Research, 2018a.

^a Estimated.

^b Forecast.

B. WORLD SEABORNE TRADE BY CARGO TYPE

The overall positive operating environment in 2017 has benefited global demand for shipping services. However, a closer look at seaborne trade by commodity type provides a clearer picture as to the extent of the recovery.

1. Tanker shipments

The year 2017 witnessed the geographical dispersion of oil trade, as oil trade patterns became less concentrated on usual suppliers from Western Asia and benefited from increased trade flows from the Atlantic basin to East Asia. These trends have supported and boosted long-haul tanker trade and tanker demand. Crude oil seaborne trade expanded at a slower pace – 2.4 per cent in 2017 – compared with stronger growth – 4 per cent – in 2016 (table 1.5).

UNCTAD estimates world crude oil trade in 2017 at 1.87 billion tons, supported by increasing exports from the United States, rising global refining activity – especially in Asia – declining oil inventories and steady

Table 1.5 Oil and gas trade 2016–2017
(Million tons and percentage annual change)

	2016	2017	Percentage change 2016–2017
Crude oil	1 831.4	1 874.9	2.4
Other tanker trade	1 223.7	1 271.2	3.9
<i>of which</i>			
Liquefied natural gas	268.1	293.8	9.6
Liquefied petroleum gas	87.5	89.3	2.0
Total tanker trade	3 055.1	3 146.1	3.0

Source: UNCTAD secretariat calculations, based on table 1.4 of this report.

Note: Liquefied natural gas and liquefied petroleum gas figures are derived from Clarksons Research, 2018b.

crude oil shipments from Western Asia. Crude oil trade benefited from the growing export volumes originating in the Atlantic basin and destined to Asia, most notably China, where rising demand from independent refiners and growing state refinery capacity boosted demand growth. An overview of global players in the oil and gas sector is presented in table 1.6.

In view of the two-digit growth rate recorded in 2016 and 9.1 per cent growth experienced in 2017, China is clearly emerging as a leading importer of crude oil. Its main crude oil suppliers were Angola, the Islamic Republic of Iran, Iraq, Oman, the Russian Federation, Saudi Arabia and the Bolivarian Republic of Venezuela.

Exports from member countries of the Organization of the Petroleum Exporting Countries, especially from Western Asia, were hampered by the production cuts agreed in November 2016 and the decline in shipments from the Bolivarian Republic of Venezuela. These trends were, however, offset by growing shipments from the United States, reflecting the rapid growth in its shale oil output, as well as a recovery in exports from Libya and Nigeria.

Together, refined petroleum products and gas volumes increased by 3.9 per cent in 2017; growth in petroleum products was supported by rising demand in developing America and growing intra-Asian trade. However, elevated global inventory and stocks undermined arbitrage opportunities for some products and hindered growth during the year. At the same time, drawdowns

on inventories weighed on the import demand in some regions, including Europe (Clarksons Research, 2018a).

On the supply side, higher levels of refinery throughput lifted export volumes from Europe and Asia, including Western Asia and China. The United States contributed to export growth, and shipments of oil products expanded by 9.5 per cent (Clarksons Research, 2018b). United States exports to developing America partly benefited from the continued decline in refinery activity in Brazil, Mexico and the Bolivarian Republic of Venezuela.

Growing domestic refinery capacity has increasingly positioned China as a significant exporter of oil products, with its export volumes more than doubling between 2013 and 2016 (Clarksons Research, 2018c). Although less impressive than the 2016 surge of more than 50 per cent, exports from China increased by 6.3 per cent in 2017, driven by the ongoing oversupply of oil products in that country. The deceleration observed in 2017 partly reflects its growing domestic consumption requirements.

2. Factors supporting trade in gas and refined petroleum products

Shipments of liquefied natural gas totalled 293.8 million tons in 2017, following a 9.6 per cent increase over the previous year (table 1.5) (Clarksons Research, 2018b). Increased demand, the highest in six years, originated mostly in Asia, where energy policy shifts are under way. Imports of the commodity to China increased by 47.3 per cent in 2017, owing to weather conditions and stronger demand. The country's demand for liquefied natural gas was partly supported by the growing importance of the environmental agenda. Further, the continued expansion of liquefied natural gas regasification capacity in China highlights the potential for further expansion in imports of the commodity.

Key exporters included Qatar, which remained the largest supplier of liquefied natural gas. Other exporters were Australia, the Russian Federation and the United States. Much of the growth was underpinned by increased exports from Australia to Asia, although long-haul trade from the United States to Asia was on the rise. Increased production from liquefied natural gas projects commissioned in 2016 and the start of operations at liquefaction facilities in Australia, the Russian Federation and the United States, boosted export volumes of the commodity. During the year, the world's first floating liquefied natural gas facility started operations in Malaysia (Barry Rogliano Salles, 2018), and one project received approval in Mozambique, a major development, given the rise of the country as a producer of liquefied natural gas.

Shipments of liquefied petroleum gas expanded at a slower pace (2.0 per cent) in 2017, down from 11.2 per cent in 2016 (Clarksons Research, 2018b). The main factors restricting growth included a decline in Western

Table 1.6 Major producers and consumers of oil and natural gas, 2017
(World market share, in percentage)

World oil production		World oil consumption	
Western Asia	34	Asia and the Pacific	35
North America	19	North America	23
Transition economies	15	Europe	15
Developing America	10	Western Asia	10
Africa	9	Developing America	9
Asia and the Pacific	9	Transition economies	4
Europe	4	Africa	4
Oil refinery capacities		Oil refinery throughput	
Asia and the Pacific	34	Asia and the Pacific	35
North America	21	North America	22
Europe	15	Europe	16
Western Asia	10	Western Asia	10
Transition economies	9	Transition economies	8
Developing America	8	Developing America	6
Africa	3	Africa	3
World natural gas production		World natural gas consumption	
North America	25	North America	23
Transition economies	22	Asia and the Pacific	21
Western Asia	18	Transition economies	16
Asia and the Pacific	17	Western Asia	15
Europe	7	Europe	14
Developing America	6	Developing America	7
Africa	5	Africa	4

Source: UNCTAD secretariat calculations, based on data from British Petroleum, 2018.

Notes: Oil includes crude oil, shale oil, oil sands and natural gas liquids. The term excludes liquid fuels from other sources such as biomass and coal derivatives.

Asian exports, which was offset somewhat by growing exports from the United States. Demand for imports in China was key, with import volumes expanding by 14.7 per cent. This pace is, however, less than half of that in 2016 (34.4 per cent), reflecting the end of the recent wave of propane dehydrogenation plant expansions (Danish Ship Finance, 2017). Imports of liquefied petroleum gas to India increased in 2017, supported by a subsidy programme of the Government promoting households' switch to cleaner fuels. In contrast, imports of the commodity to Europe declined, owing in part to competition from ethane. With regard to chemicals, volumes also increased following the growing demand for imports in Asia, a rebound in palm oil trade after El Niño in 2016 and growth in United States exports.

3. Dry-cargo trades: The mainstay of seaborne trade in 2017

Dry bulk shipments: Major and minor dry bulks

Following a limited expansion in 2015–2016, global dry bulk trade¹ grew by about 4 per cent in 2017, bringing total volumes to 5.1 billion tons (table 1.7). A sharp increase in iron ore imports to China, a rebound in global coal trade and improved growth in minor bulk trades supported the expansion. Overall, strong import demand in China remained the main factor behind growth in global dry bulk trade. An overview of global players in the dry bulk commodities trade sector is presented in table 1.8.

Iron ore

Iron ore imports to China increased by 5 per cent in 2017, bringing total volumes to nearly 1.1 billion tons. With a market share of more than 70 per cent, China remains the main source of global iron ore demand. A rise in

steel production and the closure of more than 100 million tons per annum of outdated steelmaking capacity in 2016–2017 boosted the country's demand for imports. Further, the increased use of higher grade imported iron ore displaced domestic supplies. The leading iron ore exporters were Australia, Brazil and South Africa; Australia and Brazil supplied over 85 per cent of the demand for imports in China. Nevertheless, Australia is by far the largest exporter, supplying nearly two thirds of iron ore requirements in China. The country imports 21 per cent of its iron ore requirements from Brazil, which benefits the dry bulk shipping industry through long distances. South Africa generates 4 per cent of all iron ore imports to China. Other suppliers, such as India, the Islamic Republic of Iran and Sierra Leone, have also increased their exports to China.

Coal

Global coal trade resumed growth in 2017, increasing by 5.8 per cent following a limited expansion in 2016 and a significant decline in 2015. Higher import demand in China, the Republic of Korea and a number of South-East Asian countries supported the volume increase. Coal imports to China continued to provide strong support for dry bulk shipping demand. China, India, Japan, Malaysia, and the Republic of Korea are major importers of coal, while Australia and Indonesia are major exporters of the commodity. Growing coal exports from the United States to China are benefiting dry bulk shipping. One factor is the uncertainty over the Indian coal trade. On the one hand, India plans to increase domestic production, which may alter the balance between locally sourced and imported coal. On the other hand, growing demand from the steel sector in India may boost seaborne imports of coking coal (Barry Rogliano Salles, 2018).

Grain

Global grain trade, including wheat, coarse grains and soybeans, reached 515.1 million tons in 2017, a 7.1 per cent increase over 2016. Exports are dominated by a few countries, notably the United States; importers tend to be regionally diverse.

As in other dry bulk trades, Asia was a driving force of growth, albeit not the only one. In 2017, grain trade was underpinned by a 14.7 per cent increase in soybean imports to China and growing exports from Brazil and the United States. China dominates the soybean trade and accounted for nearly two thirds of the global soybean import demand in 2017. Outside Asia and the European Union, some lesser consuming regions, such as Africa and Western Asia, also contributed to such growth.

Tariffs by the United States on certain goods imported from China, including steel and aluminium, and retaliation by China, may lead to restricting soybean import from the United States. China is the world's largest consumer and importer of uncrushed soybeans. However, it may decide to replace imports from the United States

Table 1.7 Dry bulk trade 2016–2017 (Million tons and percentage annual change)			
	2016	2017	Percentage change 2016–2017
<i>Main bulks</i>	3 040.9	3 196.3	5.1
<i>of which:</i>			
Iron ore	1 418.1	1 472.7	3.9
Coal	1 141.9	1 208.5	5.8
Grain	480.9	515.1	7.1
<i>Minor bulks</i>	1 874.6	1 916.5	2.2
<i>of which:</i>			
Steel products	406.0	390.0	-3.9
Forest products	354.6	363.6	2.5
Total dry bulks	4 915.5	5 112.8	4.0

Source: UNCTAD secretariat calculations, based on Clarksons Research, 2018a.

and source its soybean requirements from alternative suppliers such as Brazil. While trade restrictions generally portend ominous consequences for shipping, a shift in suppliers and routes in this context may have an unintended positive effect on ton-miles generated.

Minor bulks

Growing manufacturing activity and construction demand supported a 2.2 per cent increase in minor bulks commodity trade. Rising demand for commodities such as bauxite, scrap and nickel ore pushed volumes to 1.9 billion tons. However, the large drop (less 30.8 per cent) in exports of steel products from China due to reforms in the country's steel sector undermined the expansion to some extent. Bauxite shipments expanded by 19.5 per cent, accounting for 13 per cent of minor dry bulks commodities trade

in 2017. The continued rise in Chinese aluminium production and the availability of bauxite ore, following years of export disruptions, led to an expansion in bauxite trade. While China dominates the import side with a market share of more than two thirds, key players on the supply side are more varied and include Australia, Brazil, Guinea and India. Nickel ore trade rose by 7.6 per cent, highlighted in particular by increased growth in nickel ore shipments from Indonesia, following its decision to relax its export ban on unprocessed ores.

Other dry cargo: Containerized trade

Following the difficult years of 2015 and 2016 when containerized trade grew modestly at 1.1 per cent and 3.1 per cent, respectively, container market conditions improved in 2017, and strong growth in volumes was recorded across all routes. World containerized trade volumes expanded by a strong 6.4 per cent in 2017, the fastest rate since 2011. Global volumes reached 148 million TEUs (figure 1.5), supported by various positive trends.

The modest global recovery was central to the rise in containerized volumes. In addition, factors such as a recession in Brazil and the Russian Federation, increased consumption requirements in the United States, improved commodity prices, strong import demand from China and the rapid growth of intra-Asian trade reflecting the effect of regional integration and participation in global value chains, contributed to the recovery.

Trade growth strengthened on the major East–West trade lanes, namely Asia–Europe, the Trans-Pacific and transatlantic routes (table 1.9 and figure 1.6). Volumes on the Trans-Pacific route (eastbound and westbound) increased by 4.7 per cent, while volumes on the East Asia–North America route (eastbound and westbound) increased by 7.1 per cent. Overall, the Trans-Pacific trade lane remained the busiest, with total volumes reaching 27.6 million TEUs, followed by 24.8 million TEUs on the Asia–Europe route and 8.1 million TEUs on the transatlantic route.

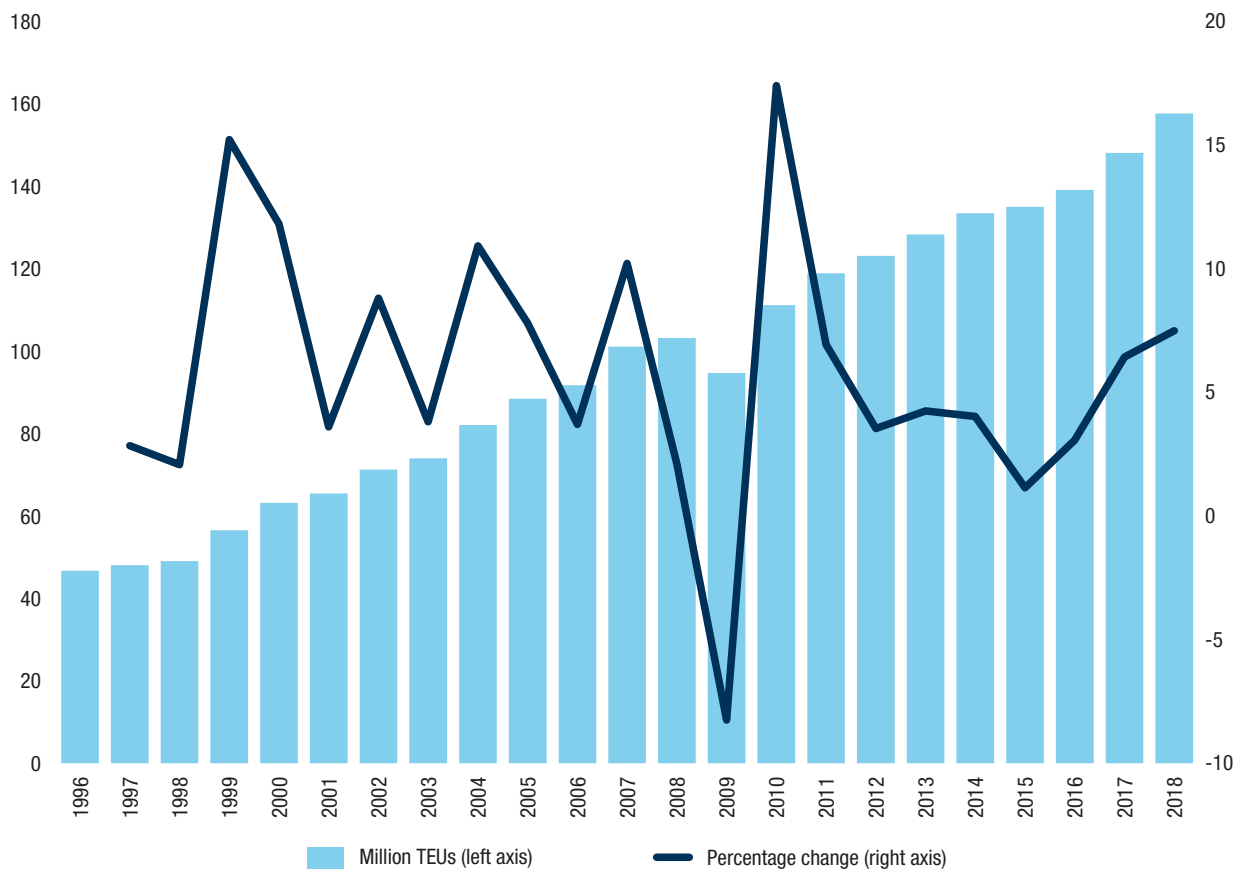
Growth accelerated across non-mainlane routes (table 1.10). Robust growth (6.5 per cent) on the North–South trade route reflected improvements in the commodity price environment and the higher import demand of oil- and commodity-exporting countries. Supported by positive economic trends in China, economic growth in emerging Asian economies, as well as regional integration and global value chains, volumes on the intra-Asian routes picked up, expanding by 6.7 per cent. Containerized trade on the non-mainlane East–West routes grew by an estimated 4.0 per cent, with varied performances across individual routes; key factors were faster growth on routes within and outside the Indian subcontinent and slower growth on routes within and outside Western Asia.

Table 1.8 Major dry bulks and steel: Producers, users, exporters and importers, 2017
(World market shares, in percentage)

Steel producers		Steel users	
China	49	China	46
Japan	6	United States	6
India	6	India	5
United States	5	Japan	4
Russian Federation	4	Republic of Korea	4
Republic of Korea	4	Germany	3
Germany	3	Russian Federation	3
Turkey	2	Turkey	2
Brazil	2	Mexico	2
Other	19	Other	25
Iron ore exporters		Iron ore importers	
Australia	56	China	72
Brazil	26	Japan	9
South Africa	4	Europe	8
Canada	3	Republic of Korea	5
India	2	Other	6
Other	9		
Coal exporters		Coal importers	
Indonesia	32	China	18
Australia	30	India	17
Colombia	7	Japan	15
United States	7	European Union	13
South Africa	7	Republic of Korea	12
Canada	2	Taiwan Province of China	6
Other	15	Malaysia	3
		Other	16
Grain exporters		Grain importers	
United States	25	East and South Asia	34
Russian Federation	23	Africa	21
Ukraine	15	Developing America	20
Argentina	11	Western Asia	16
European Union	9	Europe	7
Australia	8	Transition economies	2
Canada	7		
Other	2		

Source: UNCTAD secretariat calculations, based on data from Clarksons Research, 2018d and World Steel Association, 2018a, 2018b.

Figure 1.5 Global containerized trade, 1996–2018
(Million 20-foot equivalent units and percentage annual change)



Source: UNCTAD secretariat calculations, based on data from MDS Transmodal, 2018.

Note: Data for 2018 are projected figures.

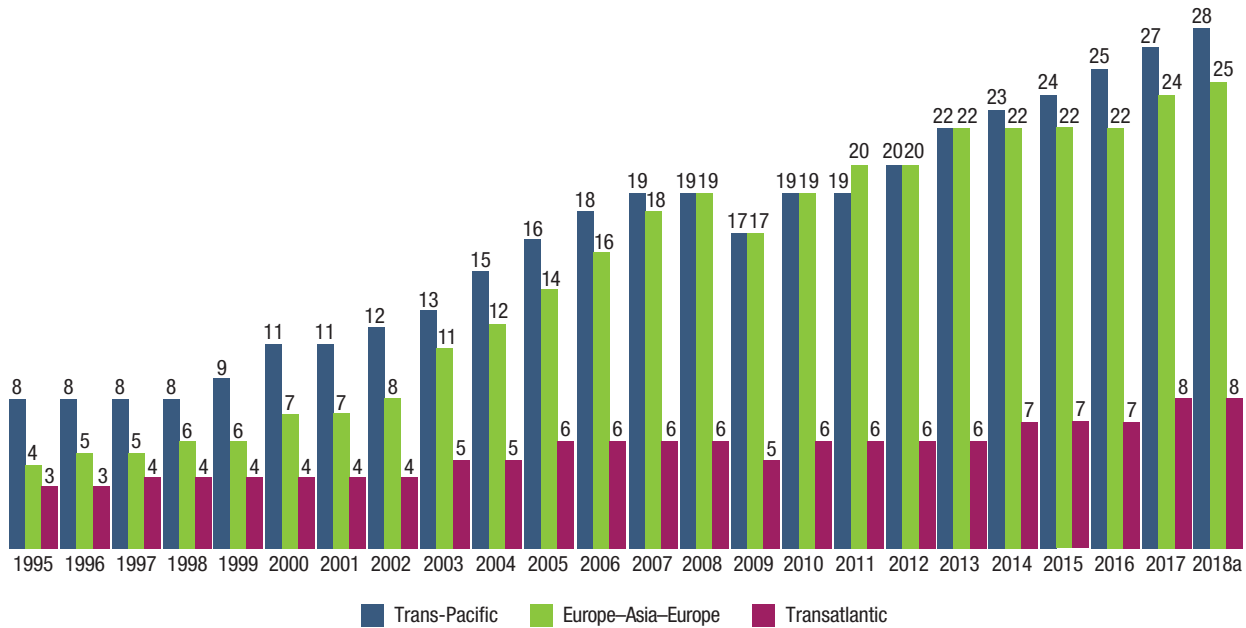
Table 1.9 Containerized trade on major East–West trade routes, 2014–2018
(Million 20-foot equivalents and percentage annual change)

	Trans-Pacific		Asia–Europe		Transatlantic	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
	East Asia–North America	North America–East Asia	Northern Europe and Mediterranean to East Asia	East Asia to Northern Europe and Mediterranean	North America to Northern Europe and Mediterranean	Northern Europe and Mediterranean to North America
2014	15.8	7.4	6.8	15.2	2.8	3.9
2015	16.8	7.2	6.8	14.9	2.7	4.1
2016	17.7	7.7	7.1	15.3	2.7	4.2
2017	18.7	7.9	7.6	16.4	3.0	4.6
2018 ^a	19.5	8.1	7.8	16.9	3.2	4.9
Percentage annual change						
2014–2015	6.6	-2.9	0.2	-2.3	-2.4	5.6
2015–2016	5.4	7.3	3.8	2.7	0.5	2.8
2016–2017	5.6	2.1	6.9	7.1	8.0	8.3
2017–2018 ^a	4.1	3.0	3.2	3.3	7.3	7.1

Source: UNCTAD secretariat calculations, based on MDS Transmodal, 2018.

^a Forecast.

Figure 1.6 Estimated containerized cargo flows on major East–West container trade routes, 1995–2018
(Million 20-foot equivalent units)



Source: UNCTAD secretariat calculations, based on Economic Commission for Latin America and the Caribbean, 2010. Figures from 2009 onward are derived from data provided by MDS Transmodal and Clarksons Research.

^a Forecast.

Table 1.10 Containerized trade on non-mainline routes, 2016–2018 (Million 20-foot equivalents and annual percentage change)				
	Intraregional	Intra-Asian	Non-mainline East–West	North–South
Percentage annual change				
2016	5.0	5.6	4.9	1.9
2017	6.3	6.7	4.0	6.5
2018 ^a	6.1	6.8	5.2	6.4

Source: UNCTAD secretariat calculations, based on data from Clarksons Research, 2018e.

^a Forecast.

Positive trends in the containerized trade market unfolded against the backdrop of continued market consolidation; alliance reshuffling; ordering of larger ships, with capacities likely to stabilize at close to 20,000–22,000 TEUs; as well as a growing momentum surrounding e-commerce and digitalization. Together these factors are reshaping the containerized trade and liner shipping landscape and raising new challenges and opportunities for the sector.

The rise of mega alliances is likely to reinforce the commoditization of container transportation services, as they tend to limit liner shipping service or product differentiation (McKinsey and Company, 2017a). This means that lines would be unable to differentiate themselves and to compete based on service. As a member of an alliance, a shipping line may not be able to offer faster and more reliable services than its alliance partners. For shippers, the commoditization of services

would also be an unfavourable development, as it limits their ability to obtain greater transparency and reliability, as well as the right services. This is because shippers do not know which ship or operator is handling their cargo in an alliance arrangement. Overall, it seems that alliances help to expand the service range available but tend to heighten operational complexities and detract from transparency along the logistics chain (see chapters 2 and 3).

Electronic commerce

The rapid expansion of e-commerce is of direct relevance to the container shipping market, given the related implications for consumption patterns, retail models, distribution networks, and transport and logistics. UNCTAD estimates global e-commerce at almost \$26 trillion in 2016 (UNCTAD, 2018d). Cross-border e-commerce is particularly relevant to shipping and accounts for a relatively smaller share of total e-commerce in general and business-to-consumer sales, in particular. According to UNCTAD, such cross-border transactions were worth about \$189 billion in 2015. Dwarfed by the size of domestic business-to-consumer e-commerce, cross-border sales in that year accounted for 6.5 per cent of total business-to-consumer e-commerce (UNCTAD, 2017a). Nevertheless, business-to-consumer e-commerce, including cross-border transactions, is growing rapidly, and Asia is becoming a major growth area. While data on e-commerce trends in developing countries are difficult to obtain, cross-border e-commerce in China was said to account for up to 20 per cent of total import and

export trading volumes (JOC.com, 2017). Elsewhere in the region, the size of e-commerce-related business is much smaller, but is characterized by rapid growth. In India, e-commerce sales were estimated at around \$40 billion in 2016, up from \$4 billion in 2009, while in Indonesia, the market was worth about \$6 billion in 2016. By 2020, 45 per cent of online shoppers are expected to buy goods from other countries. This would represent a fourfold increase in the value of cross-border sales since 2014 (Colliers International, 2017).

Shipping, like other modes of transport, is also part of the e-commerce supply chain. However, the extent to which container shipping is able to benefit from e-commerce trade flows and capture some of the associated gains remains unclear in view of the relatively small share of cross-border business-to-consumer e-commerce flows and the participation of alternative modes of transport. The speed of air transport favourably positions aviation as a better fit for e-commerce trade, notably for high-value and time-sensitive cargo. Rail transport could also gain market share as illustrated by developments in the China–Europe rail connections and the example offered by the China–Germany service advertised on the Alibaba portal (Colliers International, 2017). Nevertheless, ocean shipping is expected to contribute to e-commerce trade and benefit from the transport of other goods and products that rests on the building of inventories near consumption markets.

For shipping to tap the trade potential arising from e-commerce, operators need to adapt, leverage technology for greater efficiencies and design integrated supply chain solutions that are e-commerce-friendly. Adaptation and planning for change is critical for shipping to remain a relevant market player. In this respect, concerns have recently been raised over the potential for e-retailers to displace traditional players such as liner shipping operators. While these concerns have generally been downplayed, shipping lines recognize the potential risks and seem to be adapting their business models to account for these emerging trends, including by leveraging technology and digitalization to ensure efficiency gains and capture market share. An example is the new global integrator strategy pursued by Maersk to drive down costs, improve reliability, enhance responsiveness and forge a better link with customers (Maersk, 2018).

Digitalization

Today, the shipping industry is cautiously embracing relevant technologies arising from digitalization. More and more, carriers and freight forwarders alike are taking measures to digitalize internal processes, develop integrated information technology infrastructures and offer real-time transparency on shipments. Digital start-ups such as Xeneta, Flexport and Kontainers are being launched (McKinsey and Company, 2017b). These solutions aim to provide user-friendly online interfaces for shippers, while facilitating processes and

enhancing transparency. Recent developments relating to blockchain technology aimed at facilitating seaborne trade are also important (see chapter 5). Some argue that the technology could save \$300 in customs clearance costs for each consignment and that it could potentially generate \$5.4 million in savings on each shipment associated with a ship that has a capacity of 18,000 TEUs (Marine and Offshore Technology, 2017).

Other technologies of relevance to seaborne trade include robotics, artificial intelligence and additive manufacturing or three-dimensional printing. Robotics have some implications for production localization by enabling zero-labour factories (Danish Ship Finance, 2017). According to UNCTAD research however, robot use in low-wage labour-intensive manufacturing has remained low (UNCTAD, 2017b).

Three-dimensional printing and robotics may facilitate regionalized manufacturing and lead to some reshoring by displacing low-cost labour. While three-dimensional printing, in particular, is not expected to cause a massive relocation pattern, it may have an incremental impact and affect specific niche markets. In time, this technology may lead to less raw materials being used in manufacturing. Until it becomes widespread and cost-effective, for now the impact of three-dimensional printing is expected to be marginal – existing estimates suggest that TEU volumes will drop by less than 1 per cent by 2035 (JOC.com, 2017).

C. OUTLOOK AND POLICY CONSIDERATIONS

1. World seaborne trade projections: 2018–2023

Global seaborne trade is doing well, helped by the upswing in the world economy. Prospects for the short and medium term are positive overall – global GDP is expected to grow by more than 3.0 per cent over the 2018–2023 period (International Monetary Fund, 2018), and merchandise trade volumes are set to rise by 4.4 per cent in 2018 and 4 per cent in 2019 (World Trade Organization, 2018). In line with projected economic growth and based on the income elasticity of seaborne trade estimated for the 2000–2017 period, UNCTAD expects world seaborne trade volumes to expand by 4.0 per cent in 2018. According to UNCTAD projections, world seaborne trade will expand at a compound annual growth of 3.8 per cent during that period, based on calculated elasticities and the latest figures of GDP growth forecast by the International Monetary Fund for 2018–2023. Overall, these projections are comparable with existing ones, such as those by Clarksons Research and Lloyd's List Intelligence (table 1.11). Further, they are consistent with past trends indicating that seaborne trade increased at an annual average growth rate of 3.5 per cent between 2005 and 2017 and that dry bulk commodities and containerized trades have been driving much of the growth.

Contingent on continued economic conditions in the global economy, volumes across all segments are set to expand; it is expected that containerized and dry bulk commodities trades will record the fastest growth. Tanker trade volumes should increase, although at a slightly slower pace than other cargo types. Dry bulk commodities are projected to experience a compound annual growth rate of 4.9 per cent between 2018 and 2023, while containerized shipments are expected to rise by 6 per cent, supported by positive economic trends, imports of metal ores to China and steady growth on the non-mainlane trade routes. Further, crude oil trade is forecast to grow by 1.7 per cent between 2018 and 2023, and combined petroleum products and gas volumes, by 2.6 per cent.

The positive outlook for seaborne trade could be sustained by the trade liberalization gains that may be generated by various trade policy instruments, providing they are successfully concluded and implemented. These include the Comprehensive and Progressive Agreement for Trans-Pacific Partnership, the Agreement between the European Union and Japan for an Economic Partnership, the trade and investment agreements between the European Union and Singapore,² the Regional Comprehensive Economic Partnership and the Agreement Establishing the African Continental Free Trade Area. The latter agreement, according to

UNCTAD, could increase the value of intra-African trade by 33 per cent (UNCTAD, 2018e).

While the advantages and implications of the implementation of the Agreement Establishing the African Continental Free Trade Area with regard to seaborne trade are yet to be fully assessed, additional trade flows can be expected to benefit shipping and support seaborne trade volumes (Brookings Institution, 2018). In this respect, one liner shipping operator reported that intra-Africa trade had picked up following the implementation of trade facilitation measures, in particular the one-stop border post concept (Southern Africa Shipping News, 2017). This points to the significant potential in Africa that could be unlocked for shipping and seaborne trade if relevant support measures and enabling conditions were to be provided.

Growing intra-Asian trade arising from a shift of low-cost manufacturing activities from China to other neighbouring East and South Asian countries could generate some additional seaborne trade flows. As China moves up the global value chain, new trading opportunities are opening up for other countries. The value of outward-oriented greenfield foreign direct investment in manufacturing in developing Asia has nearly doubled, from \$26.6 billion in 2005–2010 to \$50.2 billion in 2011–2016 (Asian Development

Table 1.11 Seaborne trade development forecasts, 2017–2026
(Percentage change)

	Annual growth rate	Years	Seaborne trade flows	Source
Lloyd's List Intelligence	3.1	2017–2026	Seaborne trade	<i>Lloyd's List Intelligence research, 2017</i>
	4.6	2017–2026	Containerized trade	
	3.6	2017–2026	Dry bulk	
	2.5	2017–2026	Liquid bulk	
Clarksons Research Services	3.4	2018	Seaborne trade	<i>Seaborne Trade Monitor, May 2018</i>
	5.2	2018	Containerized trade	
	2.6	2018	Dry bulk	
	2.4	2018	Liquid bulk	
Drewry Maritime Research	4.9	2019	Containerized trade	<i>Container Intelligence Monthly, April 2018</i>
	4.5	2018	Containerized trade	
	4.2	2019	Containerized trade	
	4.2	2019	Containerized trade	
UNCTAD	4.0	2018	Seaborne trade volume	<i>Review of Maritime Transport 2018</i>
	5.2	2018	Dry bulk	
	6.4	2018	Containerized trade	
	1.8	2018	Crude oil	
	2.8	2018	Refined petroleum products and gas	
	3.8	2018–2023	Seaborne trade	
4.9	2018–2023	Dry bulk	<i>Review of Maritime Transport 2018</i>	
6.0	2018–2023	Containerized trade		
1.7	2018–2023	Crude oil		
2.6	2018–2023	Refined petroleum products and gas		

Source: UNCTAD secretariat calculations, based on own calculations and forecasts published by the indicated institutions and data providers.

Bank, 2017). Major recipients included Cambodia, India, Indonesia, Malaysia and Thailand. Unlike China, where the growing share of domestic content used in manufacturing limits growth in intermediate goods, these countries are likely to source much of the goods from external suppliers and thus generate additional trade activity.

In addition, various projects under the Belt and Road Initiative of China have the potential to generate growth and boost seaborne trade volumes through increased demand for raw materials and semi-finished and finished products. Infrastructure developments of the size of the Initiative require large amounts of construction materials in the form of dry bulk commodities, steel products, cement, heavy machinery and equipment. Improvements in connectivity through enhanced transport infrastructure, linking manufacturing industry or agriculture to global markets, could strengthen many countries' economic growth and boost trade. These developments have favourable implications for container shipping and bulk commodities trade.

However, an expanding overland route between China and Europe that has already attracted movements of high-value, time-sensitive goods – which previously would have been transported by sea – could shift some seaborne cargo from ship to rail. The pipelines built under the framework of the Belt and Road Initiative could also restrict seaborne trade growth in related trades (Hellenic Shipping News, 2017). All in all, however, the net effect of the initiative could support shipping demand, as rail transport services and pipelines are not expected to significantly displace the role of shipping in the region and along the Asia–Europe trade lane.

As noted previously, the prospects for seaborne trade are positive and may be sustained by the various upside factors. Yet caution is required, given the uncertainty arising from the confluence of geopolitical, economic and trade policy risks, and structural shifts, such as the rebalancing of the Chinese economy, slower growth of global value chains and a change in the global energy mix. How these factors will evolve and the extent to which they will support or derail the recovery in seaborne trade remains unclear. A major trade policy risk relates to the inward-looking policies and the rise of protectionism, which may reverse the trade liberalization of today. Examples include the decision of the United States to withdraw from the Trans-Pacific Partnership Agreement, to renegotiate the North American Free Trade Agreement and to re-evaluate other existing trade agreements. Such policies can produce significant setbacks for global economic and trade recovery and undermine the growth prospects of seaborne trade.

Another risk of this nature is associated with the growing trade tensions between the United States and some of its trading partners. Following the announcement by the United States in March 2018 to apply tariffs to steel and aluminium imports, the United States, within the framework of the North American Free Trade Agreement, in May proceeded to apply such tariffs to imports from

the European Union. Such developments could be detrimental for global trade, depending on how major trading partners respond to the new trade restrictions.

A closer look at the specific trades and commodities that may be affected by the United States tariffs on steel and aluminium, as well as the proposed tariffs on a list of other products imported from China, indicates that importers and exporters will be facing uncertainty and disruptions relating to dry bulk shipping (for example, steel, aluminium and soybeans), as well as some proportion of the containerized trade between China and the United States. According to one observer, tariffs currently in force in those countries affect an estimated 24 million tons of seaborne trade, equivalent to some 0.2 per cent of global seaborne trade (Clarksons Research, 2018f). If proposed tariffs were to be accounted for, the impact would increase to 0.7 per cent of world seaborne trade volume. However, this could produce an unintended positive effect – an increase in soybeans ton-miles to China – if Argentinian and Brazilian soybeans were to displace soybeans from the United States.

The list of containerized goods from China that could be affected by the proposed tariffs include furniture, electrical machinery, rubber manufactures, clothing and accessories, and metal manufactures. These goods are shipped in containers from Eastern Asia to the West Coast of the United States on the Trans-Pacific route. As the China–United States trade on this route accounts for about 3 per cent of total global containerized trade, the overall impact is not likely to be disruptive. Overall, the impact may initially be limited, depending on the duration of the tariffs and the extent of the retaliatory measures by trading partners.

Other factors and potential risks for the sustained recovery of seaborne trade and its outlook include the following:

- Trade policy risks linked to the decision by the United Kingdom of Great Britain and Northern Ireland to leave the European Union and the related implications for business confidence and investment activity in Europe. Other concerns relate to the increasing number of trade disputes that have been raised at the World Trade Organization, regarding for example, Australia, Canada, China, India, Pakistan, the Republic of Korea, the Russian Federation, Ukraine, the United Arab Emirates, the United States and Viet Nam.
- Withdrawal of the United States from the Joint Comprehensive Plan of Action and the re-imposing of international sanctions on the Islamic Republic of Iran.
- Deterioration of the economic crisis in the Bolivarian Republic of Venezuela and related implications for tanker trade and other sectors.
- The gradual transition of China towards a more diversified economy and its efforts to reduce industrial overcapacity and improve air quality. Developments in that country are important for

seaborne trade prospects, given its strategic importance for shipping demand, especially dry bulk commodities trade. In view of the significant market shares of China in trade in various dry bulks commodities – for example, iron ore, bauxite, coal and nickel ore – the slightest negative shift in its import requirements can be potentially detrimental to shipping demand.

- Structural forces, including the slower pace of trade liberalization, as well as global value chain integration. As stated in the 2017 and 2016 editions of the *Review of Maritime Transport*, cyclical factors alone do not explain the decline in the ratio of trade growth to GDP growth.
- Although beneficial for sustainability objectives, the transition of the global economy towards a less fossil fuel-intensive growth model entails some uncertainty for oil, gas and coal trades. A similar concern arises in connection with trends in the circular economy. Applying circular economy principles may hold back demand for raw materials, although it would be a boon for the sustainability agenda.
- Potentially unintended negative impacts of emerging technologies such as three-dimensional printing and robotics may cancel out the positive gains for maritime trade.

2. Policy considerations

UNCTAD projections are pointing to continued growth in world seaborne trade, which hinges on continued growth in GDP. At the same time, upside and downside risks to the outlook are manifold and include rising trade tensions on the downside and digitalization on the upside. Further, new factors such as digitalization, e-commerce and the Belt and Road Initiative are increasingly unfolding. Depending on their extent and the pace at which they evolve, they may alter the face of global shipping and redefine seaborne trade flows and patterns.

In this context, it is increasingly acknowledged that the value of shipping can no longer be determined by scale alone. The ability of the sector to leverage relevant technological advances to improve processes and operations, cut costs and generate value for the industry and customers, as well as the broader economy and society, is becoming increasingly important.

While the next chapters will address in more detail some of the implications of selected technologies, including for the world fleet, markets, ports and the regulatory framework, on the demand side and in connection with seaborne trade, the impact of digitalization can be significant, depending on the pace at which these technologies are implemented in shipping, the level of exposure of each market segment and the ability to strike a balance between the pros (for example, greater efficiency) and cons (for example, cybersecurity risks) associated with the various technologies. The challenge

is to embrace the change while minimizing disruptions and supporting a sustainable recovery in shipping and global seaborne trade.

Based on these considerations, the following recommendations are suggested with a view to ensuring a more sustainable economic recovery in trade and shipping:

- Governments have a role to play by supporting the current positive economic trends and promoting a self-sustaining global economic recovery. This may entail, among other measures, actively promoting economic diversification in commodity-dependent countries. More importantly, at a time of growing concerns over the rise of protectionist sentiment, barriers to trade and trade disputes that may result in far-reaching detrimental impacts for the global economy and trade should be avoided to the extent possible.
- Relevant regulatory authorities, maritime transport analysts, as well as development entities such as UNCTAD need to regularly monitor market concentration trends in liner shipping and assess potential implications in terms of market power, freight rates, surcharges and other costs to shippers and trade.
- Governments, in collaboration with the shipping industry, the private sector, and the trade and business community need to build digital preparedness and promote greater uptake of relevant technologies. This will require, among others, providing an enabling legal and regulatory framework and supporting training and initiatives to build knowledge and upgrade skills.
- All stakeholders, including Governments, need to work together and support the development of transportation and supply chain infrastructure and services tailored for e-commerce. This may require an assessment of how the maritime transport sector could improve and tailor its service offerings to remain relevant and capture the potential gains deriving from e-commerce flows. A first step in this respect, is to enhance understanding of the cross-border e-commerce market and its potential. The establishment of a working group on measuring e-commerce and the digital economy, as proposed at the second session of the Intergovernmental Group of Experts on E-commerce and the Digital Economy, held in Geneva, Switzerland, in April 2018, could help promote a data-driven e-commerce analysis.
- While bearing in mind the need to prevent the heightened commoditization of services and ensure the ability to compete on service offerings to better respond to customer needs, collaboration between shipping lines, alliances, port terminals, shippers and other supply chain partners to improve communications, enhance transparency, increase efficiency, reduce operational complexity and allow better service offerings should be encouraged.

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ENDNOTES

1. Detailed figures on dry bulk commodities are derived from Clarksons Research, 2018d.
2. Free Trade Agreement between the European Union and Singapore; Investment Protection Agreement between the European Union and its Member States, of the One Part, and Singapore, of the Other Part.