Abstract of International Shipping Market Analysis Report

Review of 2017 and Prospect of 2018

Shanghai International Shipping Institute

International Shipping Market Analysis Report

(Review of 2017 and Prospect of 2018)

International Container Liner Shipping Market

International Dry Bulk Shipping Market

Shanghai International Shipping Institute

January 2018

Preface

Shanghai International Shipping Institute is a research and advisory body monitoring the development of international shipping industry. It offers decision-making consulting, information release and talent services. The institute, relying on the establishment of Shanghai International Shipping Center, works closely with international shipping organizations, enterprises and colleges to pool top-notch experts from home and abroad, establish an international shipping research platform to follow up on new concepts, new technologies, new trends and new systems on global shipping development, grasp the pulse of international shipping market changes, provide decision-making consulting and information services for domestic and foreign enterprises and shipping organizations, and assist the development of China's shipping industry and the establishment of Shanghai International Shipping Center.

Shanghai International Shipping Institute has been compiling the *International Shipping Market Analysis Report* for 11 consecutive years. The analysis reports are contributions made by the institute to the development of world shipping industry and the establishment of Shanghai International Shipping Center, and serve as an asset to the shipping sector from the institute. This annual report is primarily composed of the *Review of 2017 and Prospect of 2018 of the International Container Liner Shipping Market* and the *Review of 2017 and Prospect of 2018 of the International Dry Bulk Shipping Market*.

The Report covers the international container and Dry Bulk Shipping markets. Based on the current market developments, the Report analyzes the principal features of the market and provides a prospect of the shipping market in the upcoming year. The Report contains a large number of graphs and figures to highlight the main viewpoints of the article by summarizing past and future trends in order to provide valuable insights and important references to readers.

The Report also draws references from numerous materials and documents and cites the ideas of others while expressing the principal standpoints of Shanghai

International Shipping Institute on market research. Although we have tried to make the Report as accurate and reliable as possible through many consultations with experts, we would like to stress that the Report may serve best as a reference for analysis and assessment because of the unpredictable and ever-changing nature of the shipping industry.

We gladly welcome any advice and corrective feedback from shipping insiders and hope the Report can be helpful for analyzing the shipping market.

Secretary General of Shanghai International Shipping Institute

Shanghai International Shipping Institute

January 2018

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Review of 2017 and Prospect of 2018

I. Review of the International Container Liner Shipping Market in 2017

1.1 Major Container Liners and Their Business Performance

1.1.1 Change of Rankings of the Top 20 Liners in Shipping Capacity

The shipping capacity data for December 2017 released by Alphaliner showed that among the Top 20 global liners, three companies, namely APM-Maersk, Mediterranean Shipping Company and CMA-CGM, seized as much as 45.5% of shipping capacity market share in the world. Some small and medium-sized companies such as An Tong Holdings Limited, SITC International Holdings and ZhongGu Logistics Corporation ascended to the Top 20 global liners for the first time.

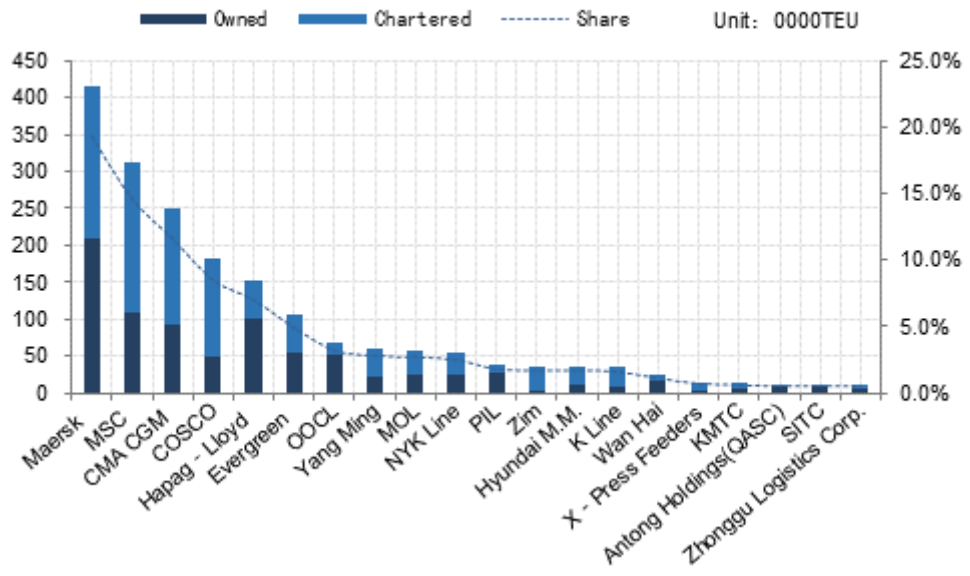


Figure 1-1 Rankings of Top 20 Global Liners in Terms of Shipping Capacity in 2017
Data source: Alphaliner (data as of December 2017), prepared by Shanghai International Shipping Institute.

1.1.2 Overall Business Performance of the Liner Industry

The overall profitability of the liner industry improved substantially in 2017 year-on-year. Among the Top 20 liners in the world, all liners, except Yang Ming Marine Transport Corporation which suffered loss in the first two quarters, started to see profits to various extents from Q2. Among them, CMA-CGM registered the best performance with a total profit of 628 million US dollars in the first three quarters.

Table 1-1 Operation Profits of Major Liners in 2010-2017 (million US dollars)

Shipping Company	2010 years	2011 years	2012 years	2013 years	2014 years	2015 years	2016 years	2010-2016 total	Q1-Q3 2017
APM-Maersk	2820	-482	525	1571	2504	1431	-376	7993	493
CMA-CGM	----	----	----	708	956	894	-452	2106	629
Orient Overseas (International) Limited	923	-118	229	57	230	276	-274	1323	----
Wan Hai Lines	343	-12	98	75	171	122	38	835	66
Hapag-Lloyd	779	131	34	92	-509	407	-115	819	6
Evergreen Marine	436	-169	-37	-25	120	-117	-221	-13	229
KLINE	350	-465	64	-1	160	-15	----	93	----
NYK Lines	402	-519	-24	-7	39	37	----	-72	----
Yang Ming Marine Transport Corporation	528	-363	-65	-293	88	-197	-499	-801	-3
Hyundai Merchant Marine	580	-323	-226	-161	-215	-216	----	-561	----
COSCO Container Lines Co Ltd	1211	-1433	-343	-562	152	-221	-1506	-2702	415
ZIM	115	-259	-206	-161	-12	118	-168	-573	28
APL	492	-424	-250	-234	-139	-98	-1196	-1849	----
Mitsui O.S.K. Lines	471	-361	-109	-1410	-204	-180	----	-1793	----
Total	9450	-4797	-310	-351	3341	2241	-4769	4805	1863

Data sources: *2015 Performance and Seven-year Performance of Major Liners* by Xu Jianhua, and Alphaliner, prepared by Shanghai International Shipping Institute.

1.2 Review of Global Container Liner Shipping Volume in 2017

Global seaborne container shipping volume saw rapid growth. The global economy witnessed a modest recovery in 2017 and developed economies also enjoyed improving economic situations. As a result, the prosperity index of Europe was on a constant rise, and the global trade also sped up the growth. The global container shipping volume totaled 191 million TEUs in 2017, growing rapidly by 5.12% year on year (the figure was only 3.77% in 2016).

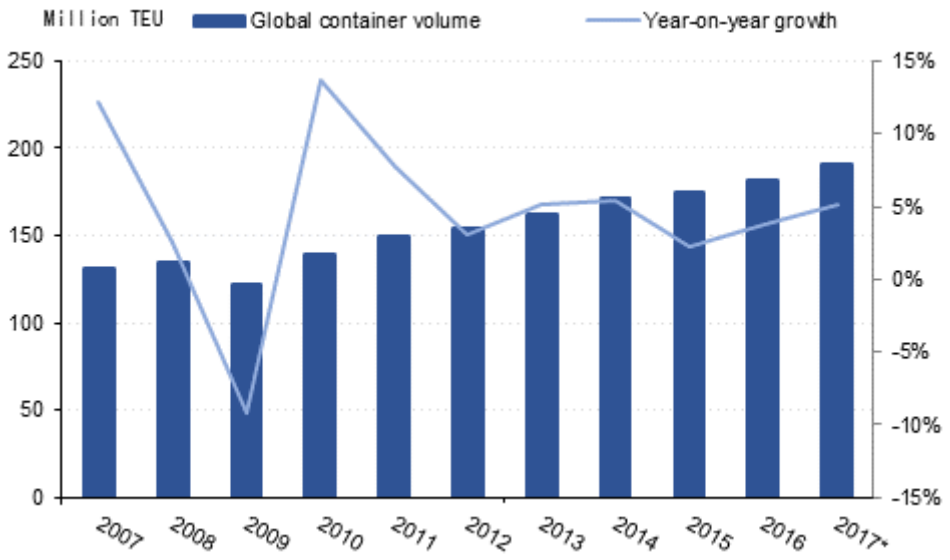


Figure 1-2 Global Container Shipping Volumes in 2007-2017

Data source: Clarksons Research, prepared by Shanghai International Shipping Institute

All shipping routes welcomed rapid growth in shipping volume, with north-south routes enjoying growth speedup. Various major shipping routes all maintained rapid growth in shipping volume in 2017. Asia-Europe routes resumed positive growth in 2016 after the negative growth in 2015, and the growth in 2017 was quite impressive, namely 4.50%. The Transpacific shipping routes continued the high shipping volume growth of 5.49%, running flat with that in the same period of 2016. The shipping demand on north-south routes picked up substantially compared with that in 2016, and the shipping volume grew by 3.91% year on year, the growth rate being 3.25 percentage points higher than that in 2016. The shipping volume on shipping routes in the Intra-Regional shipping routes increased by as high as 6.23%, making Intra-Regional shipping routes the fastest growing area in terms of shipping

volume.

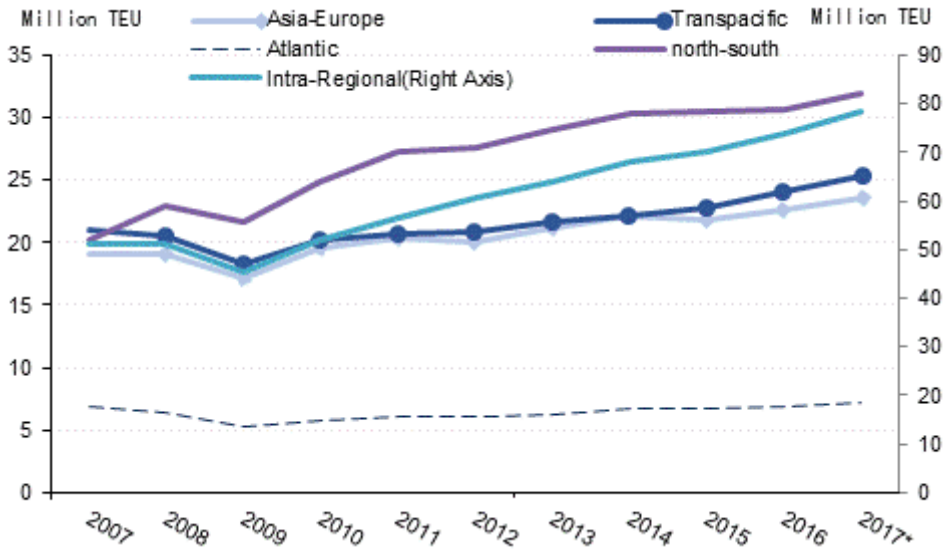


Figure 1-3 Container Shipping Volumes of Secondary Routes in 2007-2017

Data source: Clarksons Research, prepared by Shanghai International Shipping Institute

1.3 Review of Global Container Liner Shipping Capacity in 2017

◆**Shipping capacity growth rate remained low, and average size of individual ships kept rising.** The global container shipping capacity growth in 2017 remained low and the supply-demand balance situation was improved to some extent compared with that in 2016. In 2017, the global container shipping capacity broke the 20 million TEUs mark and totaled 20.591 million TEUs, increasing by 3.01%, which was a slight rise compared with the 1.25% growth rate in 2016. The market performance in 2017 was favorable overall, and the supply-demand balance was improved compared with that in 2016. The supply-demand balance index in 2017 stood at 84.5, rising slightly by 2.55%. In 2017, the total number of container ships went down from the 5,193 ships in 2016 to 5,156 ships, yet the average size of individual ships in container fleets increased slightly by 100 TEUs to reach 3,942 TEUs, which was 2.47% higher than that in 2016.

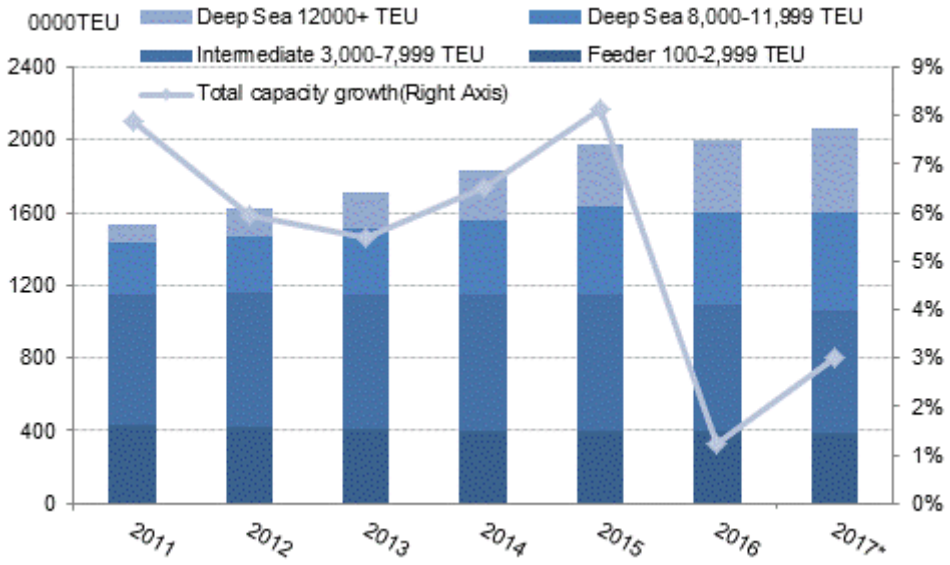


Figure 1-4 Total Shipping Capacity of Global Container Market in 2010-2017 (by ship type)

Data source: Clarksons Research, prepared by Shanghai International Shipping Institute

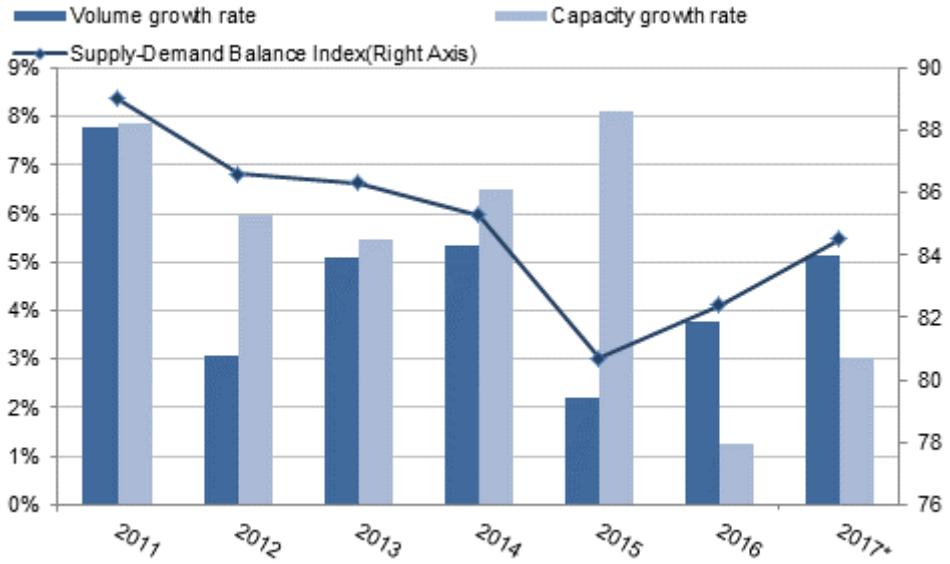


Figure 1-5 Supply-demand Balance Index of Global Container Market in 2011-2017 (1996=100)

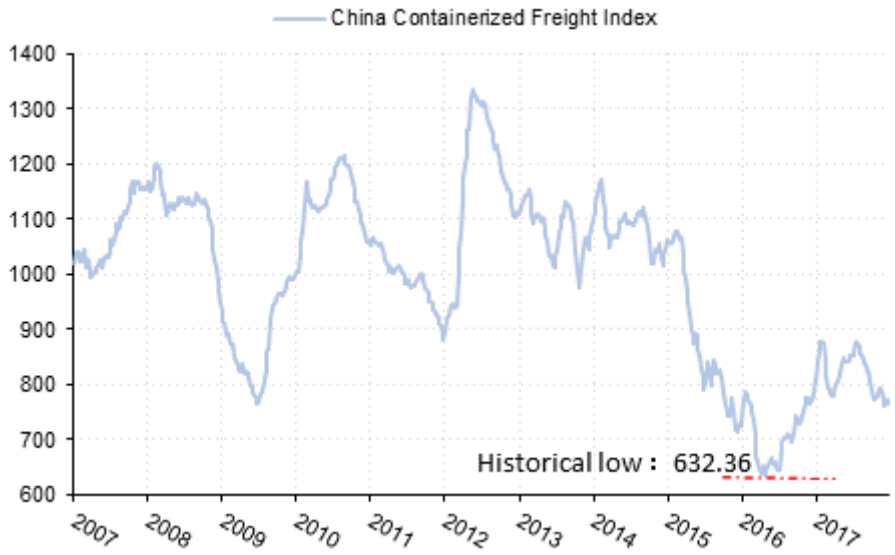
Data source: Clarksons Research, prepared by Shanghai International Shipping Institute

1.4 Review of Global Container Liner Shipping Price in 2017

◆Long-term-wise, international container shipping freight bottomed out

The international container shipping freight tumbled to a historical low in 2016. Thanks to the global economic recovery and stabilization and the international trade warm-up, the container shipping market demand enjoyed steady growth. In addition, new shipping capacity input slowed down, easing the supply-demand conflict in the

market. In 2017, the international container shipping freight bottomed out and maintained higher than the average freight level in 2016. By the end of 2017, China Containerized Freight Composite Index was averaged at 820.08 points, an increase of 15.3% year on year.



中国出口集装箱运价综合指数：China Containerized Freight Composite Index
历史最低点：Historical low

Figure 1-6 Trend of Containerized Market Freight (CCFI) in 2006-2017

Data source: Shanghai Shipping Exchange, prepared by Shanghai International Shipping Institute

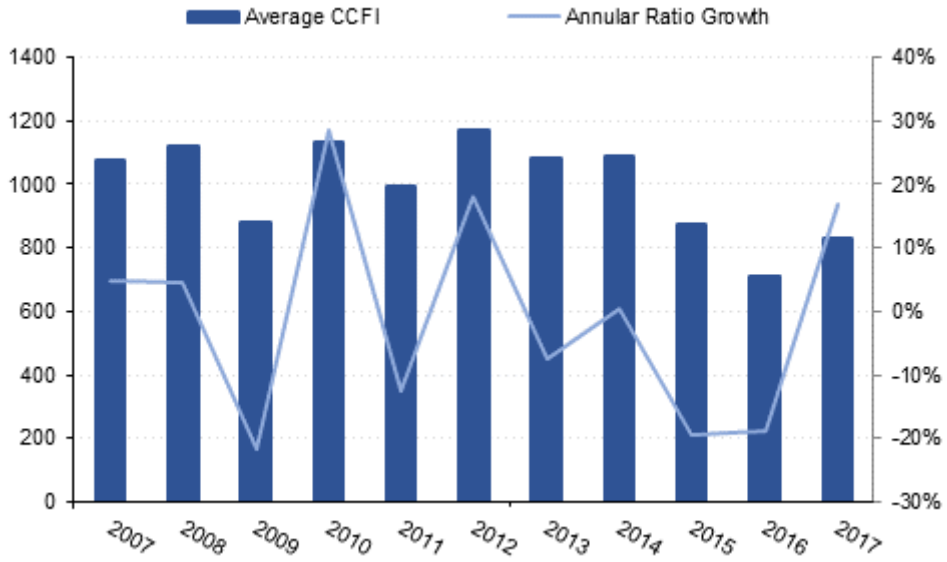


Figure 1-7 Trend of Annual Average Containerized Market Freight (CCFI) in 2007-2017

Data source: Shanghai Shipping Exchange, prepared by Shanghai International Shipping Institute

◆Short-term-wise, the containerized freight in 2017 presented an "M" curve

CCFI underwent two rises and two falls in 2017, presenting an M-shaped trend overall. Freights soared in January because of the freight rise plan. After the peak, the price dived due to the sluggish cargo volume increase. Freights plummeted all the way from February, and hit a low of 778.15 points at the end of March. After that, the space utilization in the market picked up quickly, and many shipping routes rode on an upward wave. Q3 was a traditional boom season for shipping. The market cargo supply looked good, and freights continued the rise. However, liners improved their expectation in the market, leading to accelerated shipping capacity rise, and intensified competition on major shipping routes. As a result, the freights in the market slid and the freight index hit a yearly low of 763.14 points at the end of 2017. As of December 29, 2017, China Containerized Freight Composite Index stood at 770.64 points, and Shanghai Containerized Freight Composite Index stood at 824.18 points.

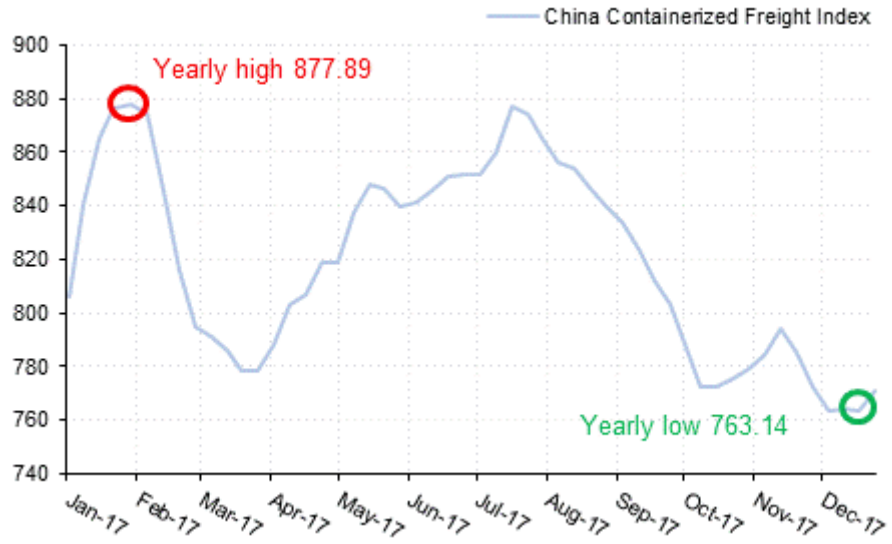


Figure 1-8 Trend of China Containerized Freight Index in 2017

Data source: Shanghai Shipping Exchange, prepared by Shanghai International Shipping Institute

II. Analysis of Market Developments and Trends

2.1 Secondary Routes See Surging Freights, with Freights on South American Routes Topping the World

Freights on secondary routes enjoyed an all-round surge in 2017 thanks to the favorable market performance. Specifically, South American routes continued the sound momentum in supply and demand from the end of the previous year driven by the economic pickup in its major destination - Brazil, and stood high in freights. Its average SCFI hit 26.5613 million US dollars/TEU. China's "Belt and Road" initiative benefited various industrial chains in Asia, driving up enterprise investments to and resident incomes in countries and regions along the route. The consumption demand was on a constant rise, fueling the rapid growth of shipping demands on Asian routes. The freights on near-sea shipping routes of Taiwan (Kaohsiung), Southeast Asia, Hong Kong and other places all reversed the declining trend and began to pick up, with the Southeastern Asian routes enjoying as high as 111.64% of freight increase. The improving economic situations in various economies in Africa boosted the recovery of market demand in the continent. Besides, the shipping capacity cut on African routes, especially South African and West African routes, which originally seized a large shipping capacity share, took the lead in terms of freight growth and their freights in various periods of 2017 all outperformed those in the same periods of last year.

Table 2-1 Freights (SCFI) on Secondary Routes

Date	China-Europe (Base Port) ($/TEU)		China- Mediterranean (Base Port) ($/TEU)		China-West US (Base Port) ($/FEU)		China-East US (Base Port) ($/FEU)		Taiwan (Kaohsiung) ($/FEU)	
	Freight	YOY Increase	Freight	YOY Increase	Freight	YOY Increase	Freight	YOY Increase	Freight	YOY Increase
2016	705.33	13.34%	698.84	-3.87%	1274.39	-15.22%	2096.24	-34.08%	153.41	-21.03%
2017	879.50	24.69%	828.13	18.50%	1497.27	17.49%	2478.35	18.23%	155.68	1.48%
Date	China-Southeast Asia		Kansai, Japan (Base		Kanto, Japan (Base		Hong Kong (Hong		South Korea (Busan)	

e	(Singapore) ($/TEU)		Port) ($/TEU)		Port) ($/TEU)		Kong) ($/TEU)		($/TEU)	
	Freight	YOY Increase	Freight	YOY Increase	Freight	YOY Increase	Freight	YOY Increase	Freight	YOY Increase
2016	69.98	-63.28%	186.65	57.43%	185.27	29.38%	57.00	-1.96%	103.35	-35.46%
2017	148.10	111.64%	214.67	15.01%	215.02	16.06%	61.27	7.49%	139.71	35.18%
Date	South America (Santos) ($/TEU)		Australia and Singapore (Melbourne) ($/TEU)		South Africa (Durban) ($/TEU)		West Africa (Lagos) ($/TEU)		The Persian Gulf (Dubai) ($/TEU)	
	Freight	YOY Increase	Freight	YOY Increase	Freight	YOY Increase	Freight	YOY Increase	Freight	YOY Increase
2016	1651.90	265.32%	528.43	7.79%	580.39	-17.77%	1190.63	-18.46%	405.33	-22.35%
2017	2675	60.79%	646.92	22.42%	1153.85	98.81%	1802.54	51.39%	634.77	56.60%

Data source: Shanghai Shipping Exchange, prepared by Shanghai International Shipping Institute

2.2 Three Major Container Shipping Alliances Enter Formal Operation, Aggravating Ship Upsizing on Trunk Routes

The three major shipping alliances composed of major international liner giants entered formal operation on April 1, 2017. More ultra-large container ships were put into trunk routes, aggravating the ship upsizing trend on trunk shipping routes. Container ship upsizing was prominent on Asia-Europe route. The share of 10,000 - 13,300 TEU container ships on the routes declined from the 25.62% in 2016 to 15.78% in 2017. The share of 13,300+ TEU container ships kept growing to as high as 71.63%. Specifically, there were 63 18,000+ TEU container ships, with their shipping capacity totaling 1.217 million TEUs, accounting for 27.41%. The ship sizes on Transpacific route grew by a smaller margin, but the ship upsizing trend was still visible. In 2017, four 13,300+ TEU container ships appeared for the first time on Transpacific route, with the shipping capacity totaling 55,474 TEUs, accounting for 1.62%. The share of 10,000 - 13,300 TEU container ships also rose from the 19.01% in 2016 to 24.53% in 2017. The shipping capacity unleashed by the three major

shipping alliances to their trunk routes may further increase the effective shipping capacity in Asia, Europe and pan-transpacific areas. Specifically, the effective shipping capacity on Asia-Europe route increased by 2.96% year on year, while that on pan-transpacific route increased by 5.85% year on year.

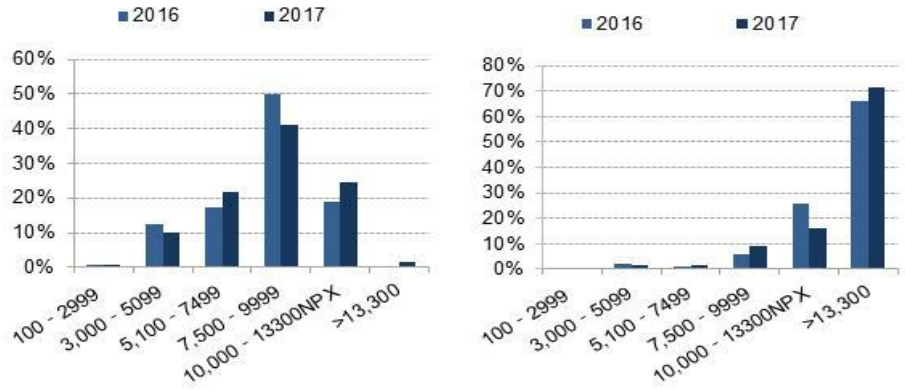


Figure 2-1 Ship Types on Pacific Routes (left)/Asia-Europe Routes (right) in 2016 and 2017 (by shipping capacity)

Data source: Alphaliner, prepared by Shanghai International Shipping Institute.

2.3 World Trade Landscape Subject to Profound Shift, with Plenty of Uncertainty Expected

The global industrial landscape is expected to face complicated shifts due to a diversity of factors including the changed relative cost structures in developed and emerging economies, rapid development of intelligent manufacturing technologies and the trends toward personalized and diversified market demands. The trade investment facilitation by industry shift is hard to recover to the full extent within a short period of time. Without a substantial rally in economic growth rate, international trade investment may find it hard to sustain the rapid development momentum.

Some countries began to resort to surveillance on after-border measures in other countries and re-formulation of economic and trade rules in favor of their own interests, apart from continuing the traditional protection measures such as the "national priority" policy, raising trade barriers and abusing international laws. For example, the United States exited the TPP, re-initiated the NAFTA negotiations with

Canada and Mexico, and amended the trade agreement with South Korea. All these moves have brought new uncertainty to the global trade environment. On the other hand, China continued to push forward its The Belt and Road Initiative further promoting trade exchanges and the formation of RCEP (Regional Comprehensive Economic Partnership) in addition to signing a lot of trade agreements with ASEAN countries. Japan also led the cooperation under the TTP framework and the rest 11 TTP signatories announced the CPTPP framework. Under the new trade agreement, service trade, finance, investment openness will all enjoy improvement, which will further boost trade exchanges between the 11 countries.

2.4 2018 Sees Concentrated Deliveries of 10,000TEU-container Ships, Driving Shipping Capacity Structures on Routes into Profound Adjustment

A total of 89 large ships of 10,000 TEUs and above will be delivered in 2018, including 33 ships of 18,000 TEUs or above. Their shipping capacities total 680,000 TEUs, rising by around 66.3% year on year. Delivery of large ships faces increased pressure. All the ships of 18,000 TEUs or above will be put onto Asia-Europe route. Asia-Europe route tend to develop towards high oligopoly, while the Far East-North America route may grow towards low oligopoly, which may boost major trunk routes to first complete market clearing. The concentrated deliveries of 10,000-TEU ships will trigger a new round of cascade replacement of ships, leading to another adjustment in shipping capacity structures on shipping routes , may aggravating the competition in the region or among south-north routes.

2.5 Port and Shipping Sectors Enhance Association to Jointly Weather Industry Troughs

The shipping market enters a new round of adjustment and development against the backdrop of sluggish global economic recovery and low-speed growth. Shipping

enterprises' investment in terminal operation follows a vertical and integrated pattern along the industrial chain, invested terminal assets can bring closer the partnerships with ports, which is conducive to improving the entire logistics industrial chain and curbing risks from periodical fluctuations. Take China COSCO for example. Relying on its own shipping business, the group makes vigorous effort to improve its global terminal network taking advantage of the favorable opportunities, and on the other hand, it also seeks equity participation in Shanghai International Port Group to leverage the bond of capital and form a safer, more convenient and more efficient logistics channel through resource and experience sharing, so as to adapt to the general container ship upsizing and liner unification trends. The shipping network adjustment and market trading procedures in the future still harbor many uncertainties, and the frequent fluctuations in the cargo source market also add to risks of terminal investment. As a result, enhancing cooperation with ports by equity participation in professional terminal operators may become a new trend. Liners can not only ensure priority for operation of their own ships at a lower price, but also share the dividend of port enterprises to improve their own business performance.

Table 2-2 List of Terminal Operators with Shipping Enterprise Investment

Shipping Enterprise	Capacity/ 0,000 TEUs	Market Share/%	Terminal Operator	Equity Throughput/ million TEUs	Market Share/%
2M	703.0	32.7		57.0	8.3
Maersk	354.7	16.5	APM Terminals	35.9	5.2
MSC	313.1	14.6	Terminal Investment Limited (TIL)	18.4	2.7
Hyundai Merchant Marine	35.2	1.6	Hyundai Merchant Marine*	2.7	0.4
OCEAN Alliance	606.3	28.2		46.5	6.8
China COSCO Shipping Corporation Limited	181.8	8.5	COSCO Shipping Ports Limited	29.4	4.3
Evergreen Marine	107.0	5.0	Evergreen Marine	7.5	1.1
CMA-CGM	250.3	11.6	APL	3.7	0.5
			CMA CGM	2.6	0.4
Orient Overseas (International) Limited (OOCL)	67.2	3.1	Orient Overseas (International) Limited (OOCL)	3.3	0.5
THE Alliance	202.9	9.5		10.0	1.3

NYK Lines	53.8	2.5	NYK Lines	3.0	0.4
Yang Ming Marine Transport Corporation	58.0	2.7	Yang Ming Marine Transport Corporation	2.4	0.3
Mitsui O.S.K. Lines (MOL)	56.9	2.7	Mitsui O.S.K. Lines (MOL)	2.4	0.3
KLINE	34.2	1.6	KLINE	2.2	0.3
Hanjin Shipping	—	—	Hanjin Shipping	6.3	0.9
Total	1512.2	70.4	Total	119.8	17.3

Data source: Alphaliner, company annual reports, prepared by Shanghai International Shipping Institute (Note: Equity throughput is based on data for 2015.)

2.6 Industrial Innovation Enhanced and Digital Technology Application Wins Increasing Interest

Liners quietly unveiled reform to cope with the continuous sluggish shipping market. They began to cooperate with e-commerce companies to offer online booking of cargo spaces, and the trend is constantly ramping up. On the one hand, Alibaba worked with multiple shipping companies to provide container shipping services for Alibaba to various regions in the globe. On the other hand, Maersk launched its online platform in China to enable online requests for quotes, shipping schedule inquiries, loading and shipping operations, and document handling among other features. Maersk aims to provide better digital solutions for its clients through this pilot program and solve the industry-wide pain point of short-notice cancellation of space orders. Meanwhile, Maersk, ONE, Pacific International Lines (PIL), Hyundai Merchant Marine and other liners started to try the block chain technology in shipping, in a hope to innovate their business models and ultimately streamline procedures and save costs.

III. Prospect of International Container Shipping Market in 2018

3.1 Prospect of Shipping Volume of International Container Shipping Market

In 2018, the continued global economic recovery remains an important condition backing trade recovery. However, the high base number of global trade growth in 2017 has posed pressure on the growth rate in 2018. Major developed economies' tightening of their monetary policies, the rise of protectionism and geopolitical risks will also affect trade growth. WTO estimated that the global cargo trade volume in 2018 may rise by 3.2%, slightly lower than that in 2017.

In 2018, the growth rate of seaborne volumes on trunk routes may slow down, but the growth of seaborne volumes on routes in Asia and south-north route is expected to further increase. Clarksons forecast that the global container shipping volume growth in 2018 may hit 5.3% with the total volume registering 201 million TEUs.

Table 3-1 Forecast on Seaborne Container Volume Growth on Major Routes

Date	Pan-Pacific Routes		Asian and European Routes		Transatlantic Routes		Regional Routes		South-north Routes	
	Seaborne Volume (million TEUs)	Increase (%)	Seaborne Volume (million TEUs)	Increase (%)	Seaborne Volume (million TEUs)	Increase (%)	Seaborne Volume (million TEUs)	Increase (%)	Seaborne Volume (million TEUs)	Increase (%)
2017	25.4	5.3	23.7	4.9	7.3	5.7	78.2	6.1	32.1	4.4
2018*	26.5	4.3	24.6	3.7	7.6	4.1	83.1	6.3	33.6	4.7

Data source: Clarksons

3.2 Prospect of Shipping Capacity of International Container Shipping Market

As of November 2017, global container ship orders totaled 342 ships with 2.776 million TEUs, accounting for around 13.5% of the current fleet capacity. The percentage was about 3.1 percentage points lower year on year. In terms of delivery schedule, planned deliveries in 2018 total around 1.705 million TEUs in shipping capacity. Specifically, large ships of 18,000 TEUs or above contribute around 680,000 TEUs, rising by around 66.3% year on year. Delivery of large ships faces increased pressure. If the aforementioned orders are fulfilled on schedule, the carrier capacity in 2018 may reach 22.385 million TEUs, rising by 8.3% year on year, without demotion of ship and delivery delays into account. In recent years, ship owners and ship operators have been constantly enhancing their demotion of old ships. As a result, the quantity of existing old ships has been on a sharp decline. It is expected that the demotion of ship effort in 2018 may be reined in than that in 2017. In addition, ship delivery delays may ease in 2018 in view of the severe overstocking of new ships in recent years from delayed deliveries. In general, the total container fleet capacity in 2018 is forecast at 22.26 million TEUs, an increase of 5.4%.

Table 3-2 Forecast of Global Container Shipping Capacity

Year	Shipping capacity (10,000 TEUs)	YOY Increase (%)
2014	1826.3	6.5
2015	1974.4	8.1
2016	1998.5	1.3
2017	2068.0	3.4
2018 (excluding dismantled ships and delayed deliveries)	2238.5	8.3
2018 (including dismantled ships and delayed deliveries)	2226.0	5.4

Data source: Clarksons Research, prepared by Shanghai International Shipping Institute

3.3 Prospect of Freights of International Container Shipping Market

As of December 2017, China Containerized Freight Composite Index was

averaged at 820.08 points. It is expected that the international container liner shipping market will continue the recovery and adjustment in 2018, with the freights running flat with the average level in 2017 or a little higher. The yearly average CCFI may undulate between 800 to 900 points.

In terms of the fleet capacity supply, the oversupply of container shipping capacity in the market in 2017 may be exacerbated, and the shipping capacity of delayed deliveries may be unleashed in 2018 intensively. The scale of idle capacity may return to a high level. In 2018, a total of 89 ships of 10,000 TEUs or above are scheduled to be delivered, including 33 ships of 18,000 TEUs or above. The shipping capacity will be put onto Asia-Europe route, which may urge Asia-Europe route to first complete market clearing. The concentrated deliveries of 10,000-TEU ships will trigger a new round of cascade replacement of ships, leading to another adjustment in fleet capacity structures on shipping routes ,may aggravating the competition in the region or among south-north routes.

In terms of the shipping capacity demand, the global economic growth in 2018 is expected to speed up. Driven by the accelerated economic and trade growth, global container shipping demand will enjoy a faster increase. The tax reform act of the United States was passed, which may boost economic recovery in the country, further giving rise to import demands in the US and shipping volume on American routes. China's " the Belt and Road" Initiative has enjoyed constant promotion, and the integration process in the Asia region is gaining speed. They jointly contribute to the fast growth momentum of shipping demands on Asian routes. Meanwhile, the gradual upswing of market demand and prices of international staple commodities, and the concerted economic pickup in major resource exporters such as Brazil, Africa, and Australia have fueled the gradual increase of local consumption demand, leading to a stable increase of seaborne shipping volume on south-north routes.

From the market competition landscape, we can expect that the container shipping industry may enter an oligopoly market structure after the completion of existing mergers and acquisitions (COSCO Shipping Holdings Co Ltd merges Orient

Overseas (International) Limited and ONE establishment in Japan) in 2018. With the delivery of 10,000-container large ships, Asia-Europe route will evolve towards high oligopoly, while the Far East-North America route will go for low oligopoly, continuing the industrial structure optimization. The bankruptcy of Hanjin Shipping sounded an alarm for the whole industry. Liners may abandon the competition means of "freight fight" but turn to enhancing shipping capacity collaboration, ship sharing and shipping route node building as well as information technology application to cut down route operation costs.

Annual Report on International Dry Bulk Shipping Market

Review of 2017 and Prospect of 2018

I. Review and Prospect of World Economic and Trade Development

1.1 Review of World Economic and Trade Development in 2017

- **Global economic recovery gains speed in 2017 and trade volumes of commodities look to strong rebound**

The world economy has entered a relatively strong recovery track since 2017. The enhanced periodical stimulus and endogenous growth drivers, the improved financial environments, and recovering market demand all propped the faster economic growth in major economies. The International Monetary Fund (IMF) estimated that the global economy may grow by 3.6% in 2017, rising by 0.4 percentage points from that in 2016.

Table 1-1 GDP Growth Rates in Major Economies/Countries in the World (Unit: %)

Economy/Country	2015	2016	2017(P)
World Economy	3.2	3.2	3.6
Developed Countries	2.1	1.7	2.2
Emerging Markets and Developing Countries	4.0	4.3	4.6
United States	2.6	1.5	2.2
Euro Zone	2.0	1.8	2.1
Japan	1.1	1.0	1.5
China	6.9	6.7	6.8

Data source: IMF (Oct 2017), prepared by Shanghai International Shipping Institute

Thanks to the robust economic growth of major global traders especially China, the global trade volume of commodities around the world in the first half of 2017

increased by 4.2% year on year. Region-specific, Asia demonstrated the most outstanding trade growth. Its imports and exports increased by 8.9% and 7.3% year on year, respectively. The fast growth can be ascribed to Asia's improved and stabilizing financial environment which has boosted the confidence of enterprises and consumers. North America ranked second in terms of trade growth rate, with its imports and exports increasing by 3.9% and 4.9% year on year, respectively, in the first half of the year. According to WTO forecast, the global commodity trade volume in 2017 would grow by 3.6%, a wide increase of 2.3 percentage points over that in 2016 and hitting a six-year high.

Table 1-2 World Commodity Trade Volume Growth in 2013-2017 (Unit: %)

	2013	2014	2015	2016	2017(P)	YoY
World Commodity Trade Volume	2.4	2.7	2.6	1.3	3.6	**↑2.3**
Exports						
Developed Economies	1.7	2.4	2.7	1.4	3.0	**↑1.6**
Developing Economies	4.0	3.0	1.9	1.3	4.7	**↑3.4**
Imports						
Developed Economies	0.0	3.6	4.7	2.0	3.0	**↑1.0**
Developing Economies	4.7	1.7	0.5	0.2	5.1	**↑4.9**

Data source: WTO (Sept 2017), prepared by Shanghai International Shipping Institute.

- **The US sees robust economic recovery and China's economy continues the stable pickup**

In 2017, the IMF forecast the US GDP growth at 2.2%, presenting a robust economic recovery momentum. Its PMI of the year remained above fifty points, indicating a continued improvement in the manufacturing industry overall. The coal output in the United States in 2017 surged thanks to the favorable national coal policies. Boosted by the high demand from Asian markets, the seaborne exports of steam coal in the United States skyrocketed by 80%.

According to IMF forecast, China's GDP in 2017 may increase by 6.8% year on year, manifesting the stable improvement in China's national economy. In terms of imports and exports, against the backdrop of continuous economic improvement and enhanced industrial investment as well as supply-side reform and de-capacity

measures, industrial enterprises above a designated scale welcomed increased profits. The imports and exports indicators of major dry bulk were on a constant rise. The removal of the 140 million tons of substandard steel capacity not only essentially cut the domestic steel supply, but also led to the oversupply of domestic scrap steel which therefore largely turned to exports. In addition, with the implementation of various anti-dumping measures on steel in 2017, steel exports declined substantially. After the temporary storage policies of corn were canceled, corn imports also reduced, while exports soared.

Table 1-3 Imports and Exports Dynamics of Major Dry Bulk in China in 2017

Imports and Exports	Product Name	Total (Jan to Nov)		YoY Increase/Decrease (%)	
		Quantity (10,000 t)	Amount (1,000 US dollars)	Quantity	Amount
Imports	Iron ores and concentrates	99,073	70,691,633	↑6	↑36.4
	Coal and lignite coal	24,817	20,574,163	↑8.5	↑72.2
	Aluminium ores and concentrates	6159	3,109,950	↑30	↑33.6
	Corn	237	500,884	↓21.6	↓16.5
	Wheat	422	1,020,739	↑32.4	↑33.2
	Paddy and rice	360	1,640,639	↑15.3	↑16.3
	Soybean	8,599	35,650,474	↑14.8	↑18.6
Exports	Rolled steel	6,983	49,647,128	↓30.7	↓0.5
	Paddy and rice	112.7673	544,948	↑152	↑57.6
	Corn	7.99	19,975	↑2788.8	↑863.9
	Sorghum	3.38	15,317	↑42.7	↑40.7
	Steel scrap	203.54	230,449	↑206480.3	↑76102.8

Data source: General Administration of Customs of China and Mysteel Data, prepared by Shanghai International Shipping Institute

- **Brazil's economy tends to stabilize and ASEAN-5 demonstrate remarkable economic performance**

In 2017, Brazil's GDP growth was projected at 0.7%, showcasing stabilizing economic growth following two years of recession. The upturn of prices of oil, iron

ore and other major bulk secured positive growth of Brazil's GDP in the first three quarters of 2017. In 2017, the IMF forecast the ASEAN-5 GDP growth at 5.2%, presenting a prospering economic recovery in the five countries. Member state specific, the economic growth in Indonesia was 5.2%, that in Malaysia was 5.4%, that in the Philippines was 6.6%, that in Thailand was 3.7% and that in Vietnam was 6.3%. The Philippines led the economic growth among the ASEAN-5. Its infrastructure construction spendings, FDI (foreign direct investment), consumer expenditure, remittances of overseas workers and business process outsourcing are the primary driving force for growth.

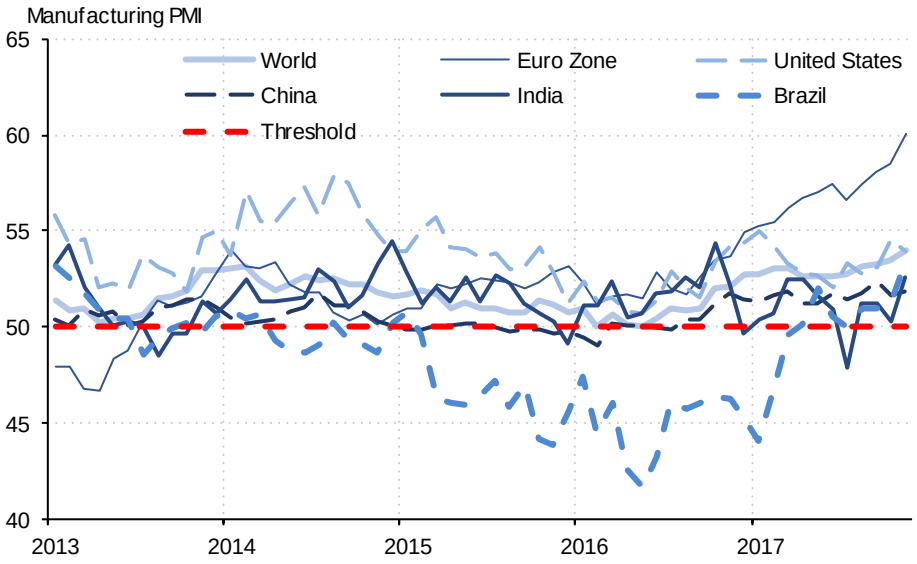


Figure 1-1 Manufacturing PMI of Major Economies

Data source: Mysteel Data, prepared by Shanghai International Shipping Institute

1.2 Prospect for World Economic and Trade Development in 2018

Looking to 2018, the economic environment in the world is expected to continue the improvement. Major economies may welcome accelerated economic growth, international trade may resume the growing momentum and the financial market will foster confidence. The IMF forecast that the world economy may grow by 3.7% in 2018, an increase of 0.1 percentage points over that in 2017, indicating the improving world economy. Global economy may still face a downside risk in the medium term, including accelerated implementation of tightened monetary policies in advanced

economies such as the United States and the Euro zone, continued financial market turmoil risks in front of emerging economies, drastic easing of financial regulation and the rise of protectionist policies. The WTO predicted that the global merchandise trade volume will increase by 3.2% in 2018 in a range of 1.4% to 4.4%, which is lower than that in 2017 and the IMF's forecast world economic growth for the same period.

II. Output and Prices of Major Dry Bulk in 2017

2.1 Iron Ore Output and Prices

1) Global iron ore output increases, with variety structural contradictions highlighted

Global iron ore output by mines in 2017 increased by about 98 million t. In the year, mines in China showed improved enthusiasm for resumption of production. According to a survey by the ASKCI Consulting, the output of crude iron ores from January to November in 2017 stood at 1.16 billion t, an increase of 6.5% year on year. The accumulated output of crude iron ores in the whole year is expected to reach 1.26 billion t. Iron ore output in India soared after the mining ban was lifted. In 2017, Indian ore giant Vedanta's iron ore output is forecast at 10.9 million t, which figure was only 5.2 million t in 2016.

Table 2-1 Output by Country (million t)

Country	2016	2017E	Increase/Decrease
Australia	856.1	881.8	25.7
Brazil	404.1	426	21.9
China	245	265	20
India	38.6	50.5	11.9
Russia	84.1	84.3	0.2
Canada	83.9	95.8	11.9
Peru	10.5	11.2	0.7
South Africa	60.9	64.6	3.7
Sweden	26.9	26.7	-0.2
Sierra Leone	5.8	8.9	3.1
Ukraine	40.8	39.5	-1.3
Chile	16.8	15.9	-0.9

Mauritania	11.3	12.2	0.9
Others	83.2	83.6	0.4
Total	1968	2066	98

Data source: Mysteel.com, prepared by Shanghai International Shipping Institute

2) Port inventory fluctuates high, with price gap between high- and inferior-quality ores widened

China kept setting new records in iron ore imports in 2017 due to the increased supply and improved stockpiling enthusiasm of traders. The inventory of imported iron ores at 41 ports totaled 143 million t by the end of 2017, from the 114 million t at the beginning of the year, and the share of ores for trade rose to 37.68%.

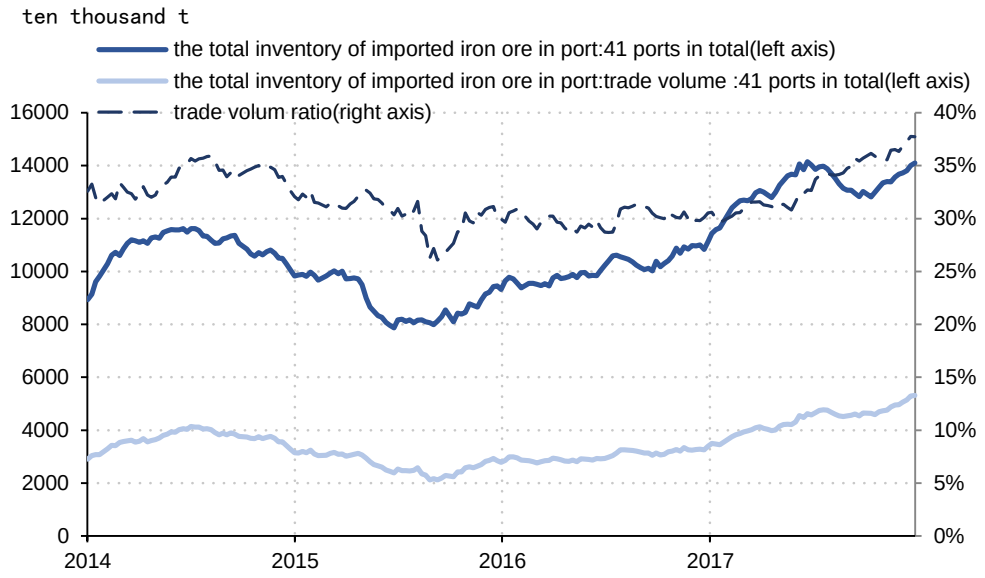


Figure 2-1 Stock of Imported Iron Ores at Ports in China

Data source: Mysteel Data, prepared by Shanghai International Shipping Institute

2.2 Coal Output and Prices

- **Global coal supply expected to recover, yet coal prices continue to run high**

Coal production capacity in major coal producers in the world is gradually shrinking and the output has been on an accelerated decline since 2014. Global coal output in 2017 was expected to recover after three years of decline in a row. In 2017, China over-fulfilled its annual goal of cutting 150 million tons of coal capacity, with a total of more than 400 million tons of coal capacity reduced over a period of two

years. After the 7.9% of coal output decrease in 2016, China's industrial raw coal output by mines above a designated scale restored growth. From January to November 2017, the output of raw coal hit 3.14 billion tons, an increase of 3.7% year on year. According to the US Energy Information Administration, the US coal output from January to October was 659 million short tons, up by 10.4% year on year. In 2017, the annualized coal output in the US is estimated to reach 784.9 million short tons, up by 7.8% year on year. Global coal output was expected to rebound slightly in 2017.

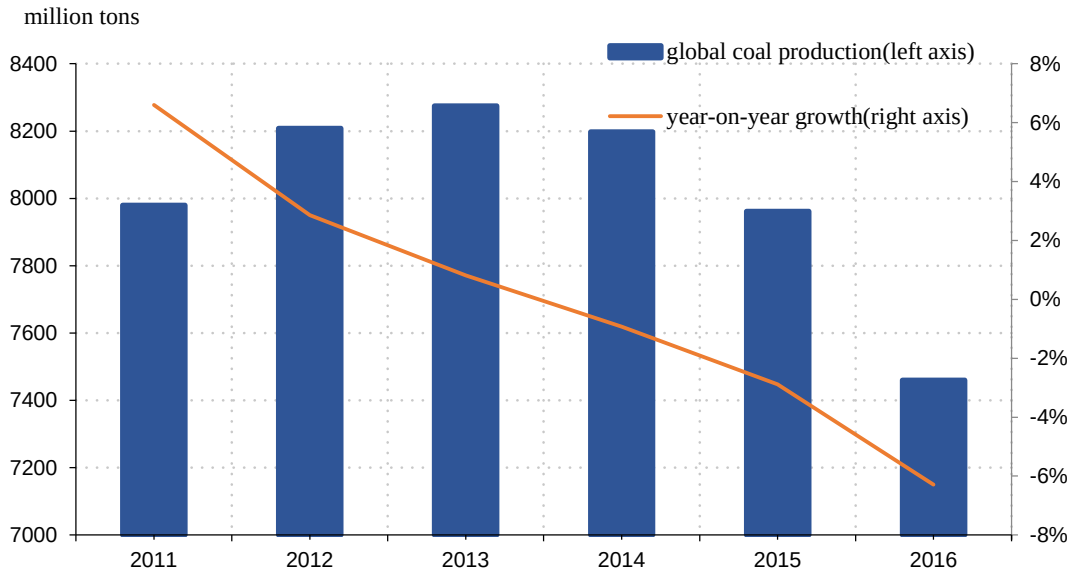


Figure 2-2 Global Coal Output in 2011-2016

Data source: Mysteel Data, prepared by Shanghai International Shipping Institute

The economy in India, the United States and Russia picked up, driving global coal demand to bottom out and sustain an upward trend. Since 2017, China’s demand for steam coal has been on a rise. The rate of operation in secondary industries stayed high, boosting the strong demand for electricity. The coking coal demand continued to grow. From the coking coal stock alone, we can see a strong will in steel and coking enterprises for stock replenishment following the gross margin growth. In Q3, a traditional peak season for operation and stockpiling to welcome the upcoming production restriction in winters, coking coal demand continued to boom and its prices were also rising.

2.3 Grain Output and Prices

- **Output of major grain products in the world increases and soybean price runs low**

The Food and Agriculture Organization of the United Nations (FAO) forecast the global grain output for 2017/18 at 2.627 billion t, up by 16.8 million t (0.6%) from the previous year. The growing trend in global soybean yield was clear. As of November, the total soybean output in Brazil recorded 1.17 billion t, increasing by 5.9% year on year; the supply of soybean in Argentina was 620 million t, running flat with that in 2016; China's total soybean output was 150 million t, a sharp increase of 13.6% year on year. In terms of corn, corn outputs in China and the United States rose. Main reasons for the year-on-year decline in global wheat output in 2017/18 were the wheat output cut in the United States and the expected wheat output slump in Australia.

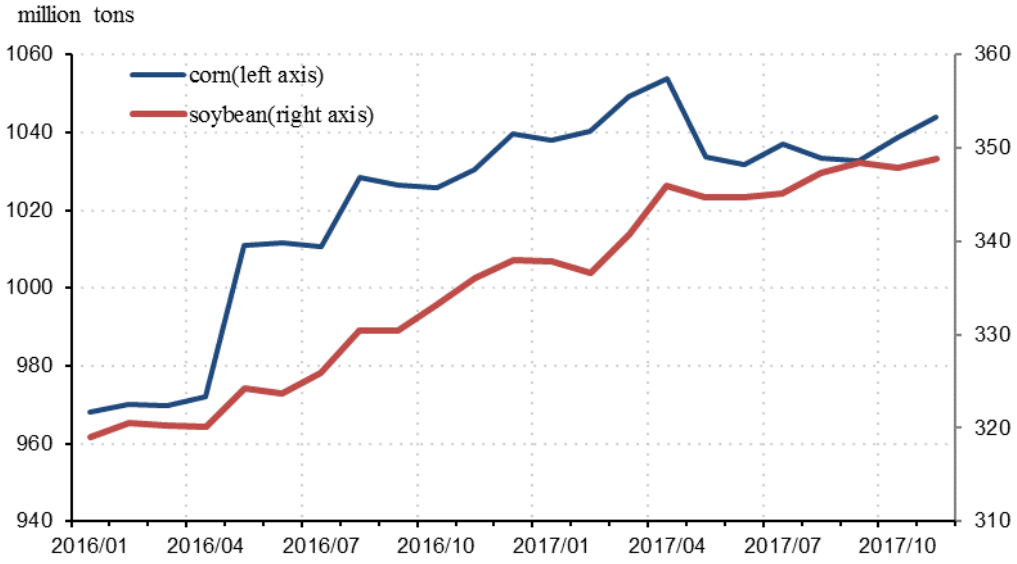


Figure 2-3 Global Corn and Soybean Outputs in 2016-2017

Data source: The U.S. Department of Agriculture, prepared by Shanghai International Shipping Institute

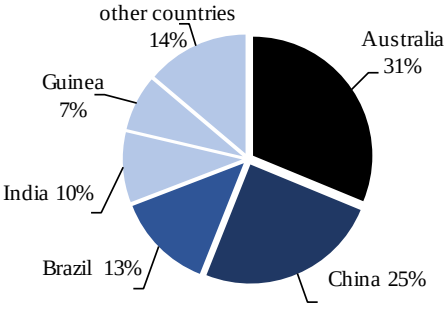
International wheat prices in 2016 were at a 10-year low. The sharp acreage contraction of wheat in 2017 resulted in a surge in international wheat price in 2017/2018. The soybean stock at the end of 2016 reached a new high of 13.06 million t, increasing the market stress. Conditions for a surging price of imported soybean in

2017 were not available and imported soybean price may continue to undulate at low levels.

2.4 Output and Prices of Major Minor Bulks

- **Guinea bauxite output skyrockets, driving bauxite prices up from the low**

Global bauxite is primarily distributed in Africa, Oceania and South America, among which Guinea, Australia and Brazil together account for nearly 60% of the global reserves. Global bauxite output in 2017 was expected to surpass 300 million t boosted by multiple favorable drivers including the successive launch of mine projects in Guinea and Indonesia's recovery of bauxite exports to China. The bauxite output in Guinea was estimated at 31 million t, a substantial increase of 57.36% year on year. The bauxite output in Australia in the first half of 2017 was 42 million t, a slight increase of 3.41% year on year. In the recent two years, China's "Belt and Road" initiative brought benefits to African countries and has fueled the prosperity of the mining industry in Guinea. Guinea enjoyed a surging share in China's imports. From January to October 2017, China imported a total of 55.73 million t of bauxite, among which 21.8 million t was from Guinea, accounting for 39.1% of the total, making Guinea the biggest bauxite source for China.



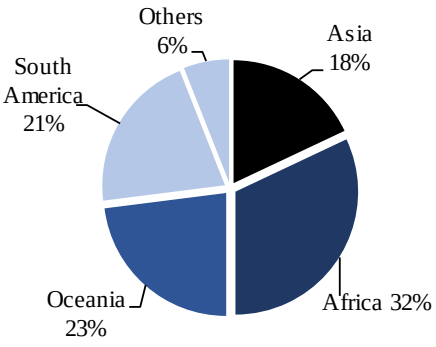


Figure 2-4 Distribution of Intercontinental Bauxite Reserves in the World

Figure 2-5 Shares of Major Bauxite Producers in 2016

Data source: USGS and China Customs, prepared by Shanghai International Shipping Institute

Since the historic slump in imported bauxite market in 2015, bauxite has been

mired at lows bottoming and consolidating. However, the price of imported bauxite gradually bottomed out in 2017. On the one hand, it was because of the robust pickup of downstream demand for aluminium oxide, primary aluminium, etc., and on the other hand, the upstream supply tended to be tightened up. China's macro-control policies such as supply-side capacity cut and the production restriction in heating seasons in particular caused a number of domestic mines to shut down, which was in favor of bauxite price pickup.

III. Developments of International Dry Bulk Shipping Market in 2017

3.1 International Dry Bulk Shipping Volume

The global economic recovery led to the accelerating growth of seaborne trade volume. In 2017, the global dry bulk shipping volume was approximately 5.109 billion t, an increase of 4.20% year on year. Specifically, iron ore accounted for 29.16%, coal accounted for 23.45%, grain accounted for 10.08%, and minor bulks accounted for 37.31%.

The global seaborne iron ore trade volume was estimated at 1.49 billion t in 2017, an increase of 5.08% year on year. The rate of increase tended to stabilize. In terms of coal, China’s coal output went down affected by China's supply-side structural reform. As a result, China’s imported coal demand increased. The seaborne shipping volumes of imported coking coal and steam coal increased by 18% and 8%, respectively. ASEAN countries and some Asian countries showed strong demand for coal, but some countries such as India increased domestic production and reduced coal imports, slowing down the growth of seaborne coal shipping volume on the whole. In terms of grain, major grain exporters saw surging grain output, and consumption demands in the Middle East and some Asian countries were also strong. As a result, the growth rate of global grain shipment rose remarkably.

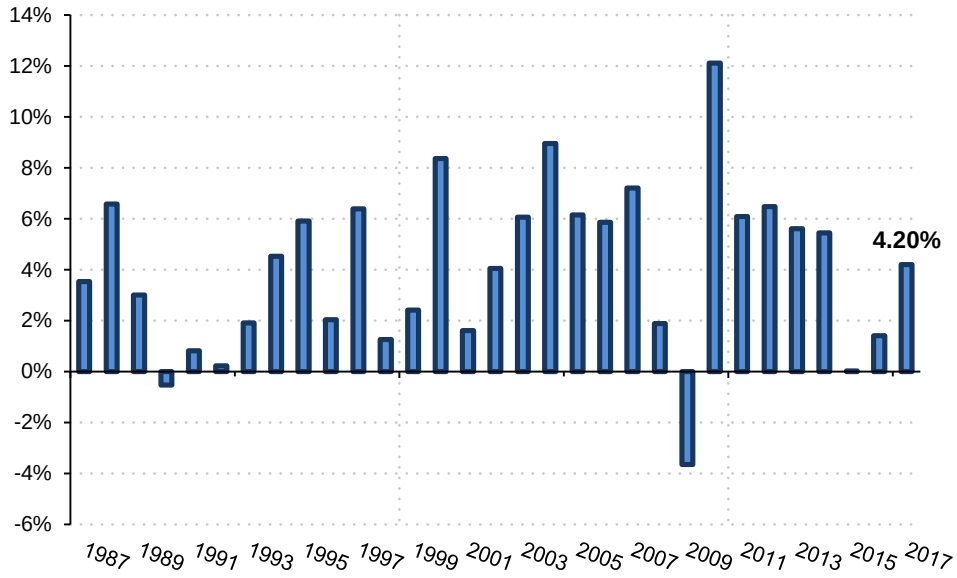


Figure 3-1 Growth Rate of International Demand for Dry Bulk Shipping in 1986-2017

Data source: Clarksons, prepared by Shanghai International Shipping Institute

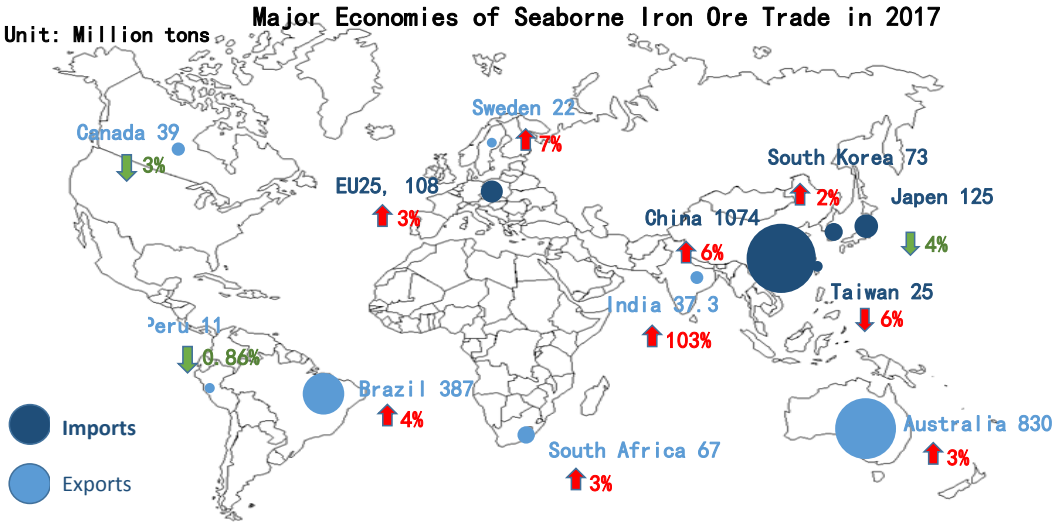


Figure 3-2 Seaborne Trade Volumes of Global Major Seaborne Iron Ore Trading Economies in 2017 (Estimates)

Data source: Clarksons, prepared by Shanghai International Shipping Institute

The global seaborne shipping volume of minor bulk cargoes in 2017 was estimated at 1.906 billion t, an increase of 2.25% year on year. Cargo category specific, the global bauxite seaborne shipping volume was estimated at 98 million t, up by 20.99% year on year. The global nickel ore seaborne shipping volume was estimated at 43 million t, up by 4.88% year on year. Country specific, the Indonesian government resumed exports of nickel ore and bauxite in January, so the shipping

volume of exported ores increased dramatically. As of November 3, it had exported 2.27 million t of nickel ore and 640,000 t of bauxite ore. China and Morocco, as major countries with rising phosphate output, saw a constant rise in phosphate supply.

3.2 Review of International Dry Bulk Shipping Capacity

Ship demolition and delivery both eased slightly in 2017. As of the end of 2017, global dry bulk shipping fleets totaled 11,113 vessels and 817 million DWT, with a 2.94% increase in capacity and a sustained slowdown in total capacity growth. Shipping capacity growth of Handymax ships fluctuated at a high level, and that of Capesize and Panamax ships began to pick up.

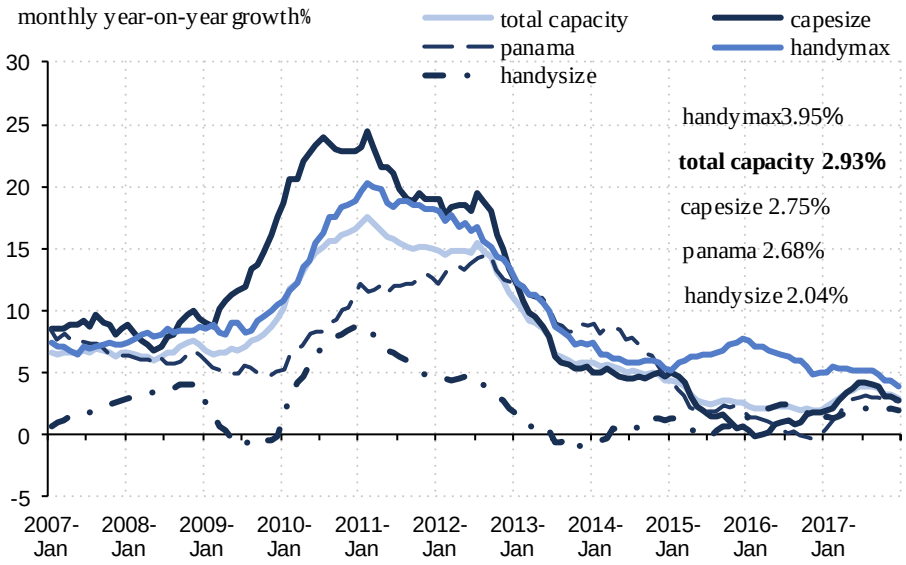


Figure 3-3 Growth Rates of Global Dry Bulk Shipping Fleet Capacity in 2007-2017

Data source: Clarksons, prepared by Shanghai International Shipping Institute

- **Bulkcarrier Contracting orders rise sharply, but newbuilding price lingers low**

In 2017, newbuilding orders totaled 286 and 32.67 million DWT. The DWT of orders skyrocketed by 133.94% year on year. Prices of newbuilding orders remained low and volatile due to shipowners' caution in shipbuilding.

- **Sales volume surges and secondhand prices rising steadly**

The market restored confidence gradually in 2017. Transactions of second-hand vessels increased to 672 ships, or 47.57 million DWT which increased by 5.64% year

on year. The transaction price soared by 29.47%.

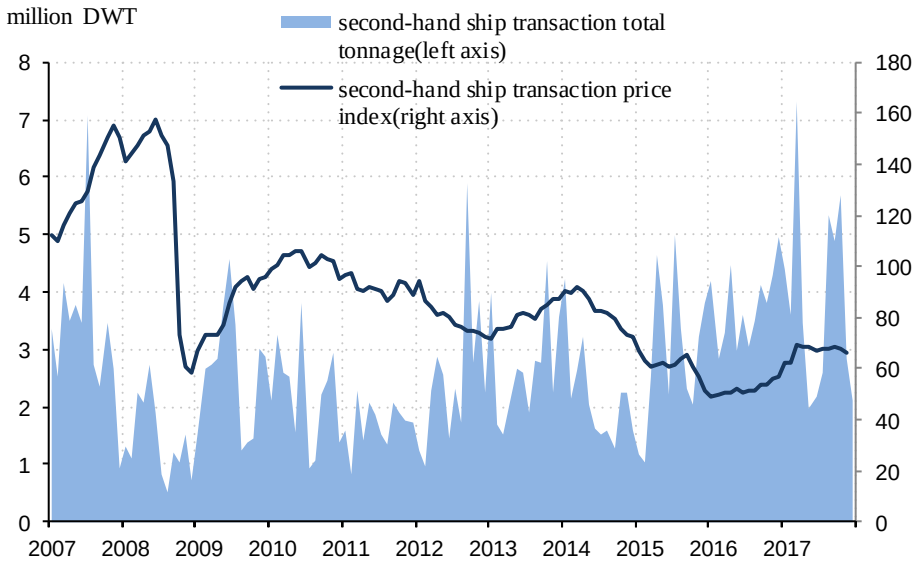


Figure 3-4 Trading Volume and Price of Second-hand Ships in 2007-2017

Data source: Clarksons, prepared by Shanghai International Shipping Institute

- **Dimolitions drops substantially and price falls slightly**

Against a large-scale dimolitons in 2016, the dimolitions in 2017 plummeted by 47.3% to 215 ships and the total DWT decreased by 50.33% to 14.53 million DWT. The average monthly price of dismantling increased by 46.7% year on year.

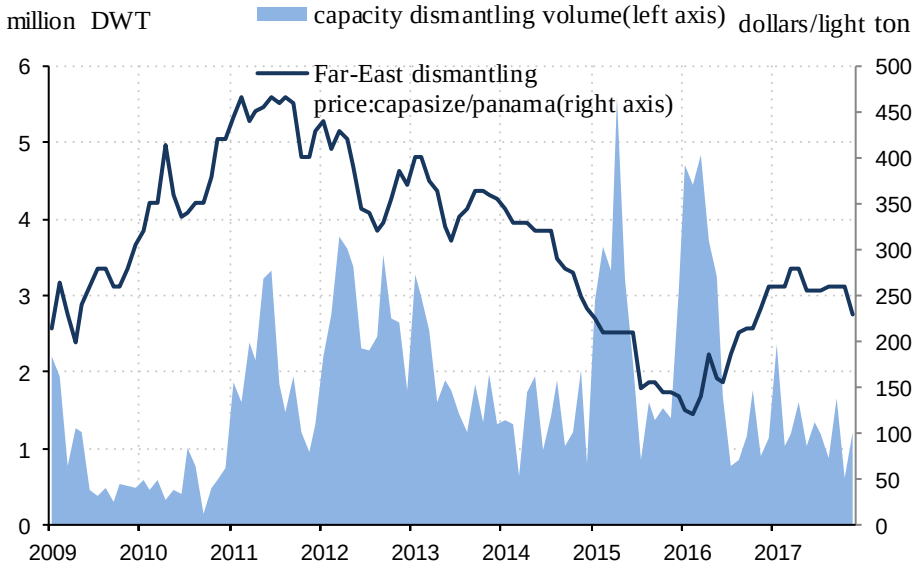


Figure 3-5 Dimolitions and Dismantling Price in 2009-2017

Data source: Clarksons, prepared by Shanghai International Shipping Institute

3.3 Review of International Dry Bulk Shipping Freights

- **In the long term, the market remains in modulating recovery with**

stronger rebound expected

In 2017, the annual average BDI stood at 1,145 points, surging by 70% over the average for 2016. In the long run, the average BDI had returned to the medium level, and the supply-demand growth difference re-entered the prosperous interval. Market freights entered a modulating recovery track.

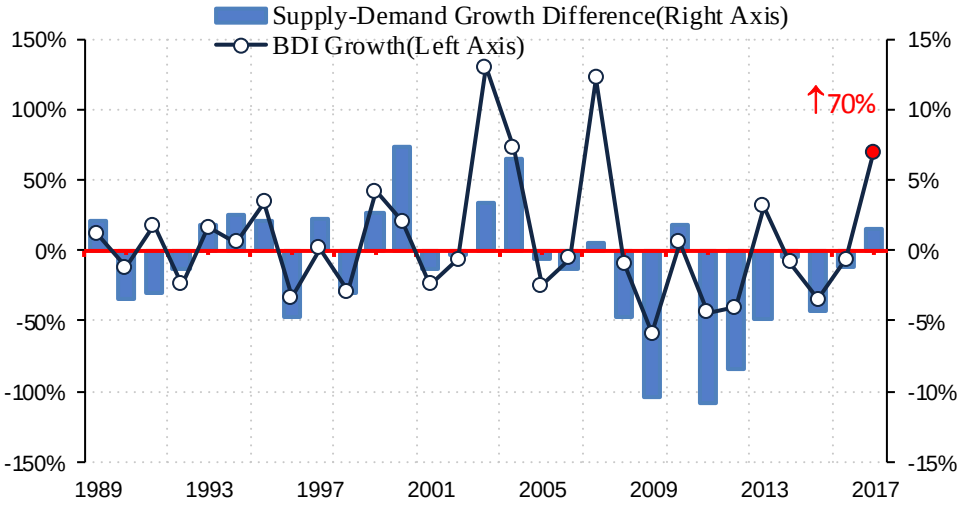


Figure 3-6 BDI Growth and Supply-Demand Growth Difference Fluctuations in 1989-2017

Data source: Clarksons, prepared by Shanghai International Shipping Institute

Note: Supply-demand growth difference = seaborne dry bulk trade volume growth - bulkcarrier capacity growth.

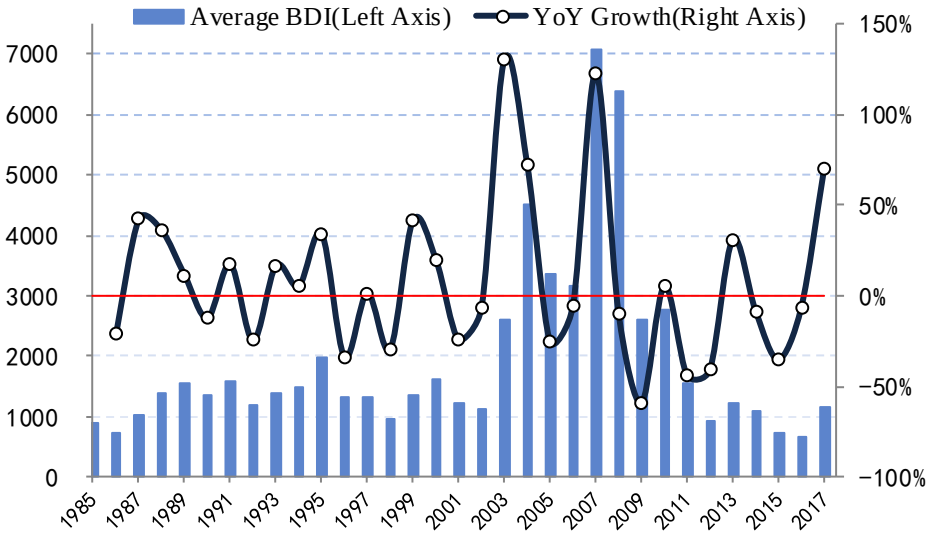


Figure 3- 7Average BDI in 1985-2017

Data source: Baltic Exchange, prepared by Shanghai International Shipping Institute

Note: Data before 1999 is based on BFI.

3.4 Leading Dry Bulk Shipping Enterprises and Their Competitive Strategies

In 2017, the world's Top 20 Dry Bulk Shipping enterprises seized an enormous share of global shipping capacity, with the Top 10 taking 11% of the shipping capacity, a slight rise of 1% from that in 2016. After the merger and reorganization in 2016, China COSCO Shipping Group augmented its capacity to make to the top of the list. Fredriksen Group rose quickly on the list because of its active ordering of new vessels and acquisition of second-hand vessels.

Table 3-1 Rankings of Top 20 Global Dry Bulk Shipping Enterprises in 2017

Ranking	Enterprise Name	Economies or Region	Fleet	
			Number of Vessels	Million DWT
1	COSCO Shipping Bulk Co. Ltd	China	289	28.34
2	NYK Lines	Japan	183	17.1
3	KLINE	Japan	117	13.77
4	Fredriksen Group	Norway	111	12.53
5	Pacific Basin Shipping Ltd	Hong Kong	107	4.23
6	Mitsui O.S.K. Lines	Japan	105	11.83
7	Wisdom Marine Group	Taiwan of China	99	5.13
8	China Merchants Group	China	91	9.38
9	Oldendorff Carriers	Germany	87	8.37
10	Nissen Kaiun K.K.	Japan	85	8.42
Global Share by Top 1-10			11%	15%
11	Imabari Shipbuilding Co., Ltd	Japan	85	8.37
12	Mitsubishi Corporation	Japan	85	6.9
13	Navios Group	Greece	76	8.11
14	Star Bulk Carriers	Greece	71	7.48
15	Pan Ocean Shipping	South Korea	64	8.97
16	Doun Kisen	Japan	60	5.05
17	Genco Shpg & Trading	United States	60	4.69
18	Mitsui&Co	Japan	57	4.54
19	Angelicoussis Group	Greece	52	9.17
20	Diana Shipping	United States	50	5.84
Global Share by Top 11-20			6%	8%

Data source: Clarksons, prepared by Shanghai International Shipping Institute

- **Peer cooperation enhanced to mitigate operational risks**

The joint operation pool began to mushroom in the Dry Bulk Shipping market to effectively prevent market risks, enhance overall fleet management, capitalize on the scale effect of fleets and fortify market influence. Handysize and Panamax vessels are highly volatile and competitive, so Dry Bulk Shipping enterprises began to explore alliances between the same types of vessels on the basis of a comprehensive pool of joint operation. On March 29, 2017, Shanghai Changhang Shipping Co Ltd, JiarongShipping Co Ltd and Maple Leaf Shipping Co Ltd signed the agreement on the establishment of China Handysize Bulk Carrier Owners' Association (CHBA), which currently has a total of 30 vessels with each individual vessel of 24,000-39,000 DWT and all vessels totaling 1 million DWT. In addition, Shanghai Changhang Shipping also signed a quartet with Shandong Shipping (Hong Kong) Holdings Co Ltd, Singapore Xincheng Shipping and Singapore Hengyue to set up the "Alliance of Excellence" (operating Panamax bulk carriers). With its operating platform based in Singapore, the "Alliance of Excellence" will fully rely on Singapore's superior geographical location and international operation networks for shipping to maximize fleet benefits.

- **Industrial chain integration enhanced to uplift COA proportion**

Following the shaped monopoly of oligarchies composed of underlying shippers, big ship owners and major steel mills, large-scale shipbuilding markets saw highlighted concentration and exclusivity. The sustention of long-term COAs became a crucial guaranteed source for Capesize fleets. In addition to its long-term shipping contracts with shipping companies after the resale of the VLOCs (Very Large Ore Carrier), the world's large miner Vale also signed a 25-year Contract of Affreightment with Japan's shipowner NS United (NSU) for the shipment of Brazil’s iron ores. The contract will be completed by NSU’s new 400,000-DWT environment-friendly ore carriers with an expected total shipment of 40 million t of iron ores. On December 8, 2017, Mitsui O.S.K. Lines (MOL) also said it signed a five-year contract with Guinea-based Alufer Mining to transport Africa-exported bauxite with Capesize carriers. NYK Lines is also committed to maintaining long-term affreightment

contracts in order to secure a stable operating income.

IV. Consumption of Major International Dry Bulk Markets in 2017

4.1 Iron Ore Consumption

- **Global steel demand shows sound recovery. China's infrastructure investment growth slows down without compromising strong demand for steel products**

According to the World Steel Statistics 2017 released by the World Steel Association, the apparent global consumption of finished steel products registered 1.515 billion t in 2016, reversing the negative year-on-year growth by a grow rate of 1%. China, the United States, India, Japan and South Korea are large steel consumers in the world. Steel consumption in the five countries in the year accounted for 64.38% of the global total. Steel markets in developed and developing economies outperformed expectations thanks to the continued enhancement in cyclical pickup in 2017. According to the World Steel Association, the global demand for steel may reach 1.6221 billion t in 2017. Demand for steel excluding China may increase by 2.6% to 856.4 million t.

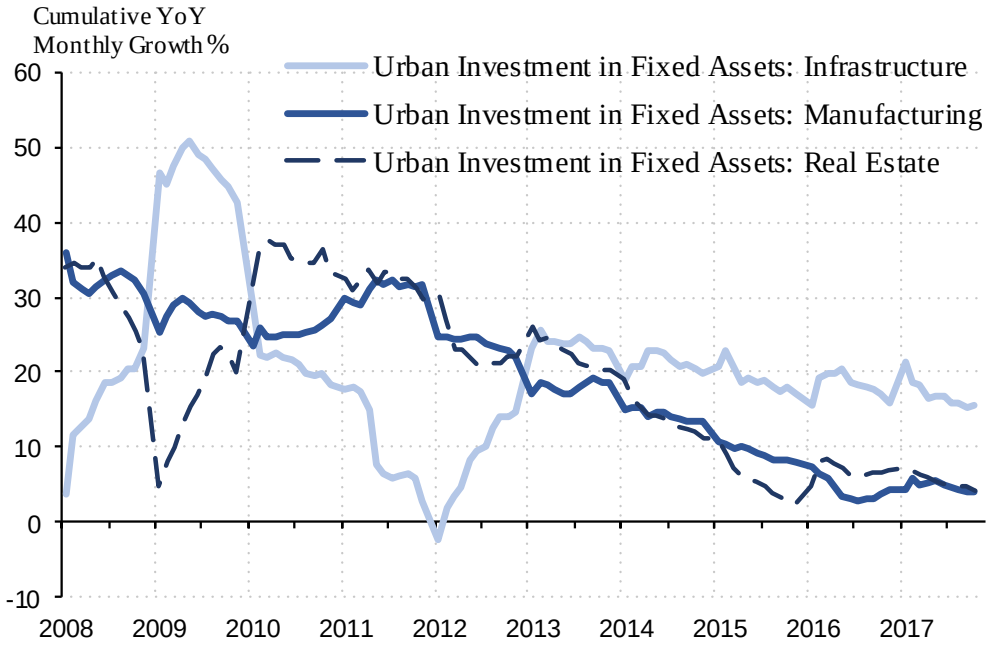


Figure 4-1 Cumulative Year-on-Year Monthly Growth Rate of China's Fixed-asset Investment in 2005-2017

Data source: Mysteel Data, prepared by Shanghai International Shipping Institute

Table 4-1 Apparent Consumption Structures of China's Crude Steel in 2010-2017 (Unit: million t)

Industry	2010	2011	2012	2013	2014	2015	2016	2017
Building	336	369	395	423	435	410	412	413
Machinery	106	115	118	123	127	125	122	124
Auto	42	43	46	50	54	56	61.2	64
Shipbuilding	23	23	20	17	17	16	15.1	15.2
Household appliances and hardware	9	11	12	12	12	13	13.1	13.4
Pipeline	7	8	9	10	10	11	11.4	12
Container	6	7	8	10	10	10	8.5	8.8
Industry aggregate	529	576	608	645	665	641	643.3	650.4
Proportions of major industries	86.43%	86.24%	88.42%	84.23%	89.82%	91.53%	90.68%	89.71%
Apparent consumption of crude steel	612.06	667.93	687.61	765.75	740.38	700.35	709.4	725

Data source: Mysteel Data, prepared by Shanghai International Shipping Institute

4.2 Coal Consumption

- **The global coal consumption continues to decline, and growth rate of China's coal consumption turns positive from negative**

2017 marks the first year of the *Paris Agreement*'s entry into force under the

framework of which all countries in the world strive to join hands to promote low-carbon transition and cope with climate changes. Coal consumption dropped sharply from the peak in 2014. According to the IEA *Coal Information Statistics 2017*, global coal consumption in 2016 stood at 105.7 million tonnes of coal equivalent, down by 1.9% year on year. Specifically, the coal consumption in OECD member states plunged by 5.3%. Due to the substitution of shale oil and tight oil on coal, as well as domestic environmental restrictions, coal consumption in the United States plummeted by 7.8% to 494 million tonnes of coal equivalent, hitting a 33-year low. As a result, India replaced the US as the second largest coal consumer in the world. The coal consumption in Britain fell by 52.5%, slipping to a level equivalent to that at the beginning of the industrial revolution, and its power sector welcomed the first "Coal-free Day" in April 2017.

Driven by the steady growth of the macro economy, the industrial production recovery and the increased thermal power generation in 2017, energy consumption in China presented a pickup. From January to October, the national coal consumption totaled around 3.26 billion tons, an increase of 3.7% year on year. Coal growth reversed the negative trend. Specifically, steam coal consumption registered 2.581 billion tons, an increase of 1.7% year on year. Coking coal consumption hit 433 million tons, down by 2.26% year on year. In 2017, the favorable climatic factors steadily pushed up the demand for electricity. The daily coal consumption in the six major power plants kept hitting record highs, stimulating the willingness for replenishment, and the steam coal market just went “wild”. Coking coal consumption demand lost the momentum under the influences of the de-capacity campaigns at steel plants, and intensified air pollution control and prevention in Beijing-Tianjin-Hebei and “2+26” surrounding areas.

4.3 Grain Consumption

- **Corn demand shows steady improvement, with soybean consumption continuing the rise from high levels**

Corn demand rose under the dual drivers of population and economic recovery, as well as the stimulus of deep processing demand and the fuel ethanol-favoring policy. In 2017/2018, global corn consumption totaled 1.069 billion t, an increase of 1.5% year on year. China registered the largest corn consumption rise in 2017/18 with 4.08%, and its total consumption was 221 million t. Specifically, fodder corn consumption increased steadily by 138 million t and corn industrial consumption was estimated to reach 63 million t. The rigid growth in global demand for protein and robust demand for soybeans and manufactured products pulled up the global consumption of soybeans in 2017/18 to 352 million t, an increase of 14 million t over the previous year. The global consumption ratio of in-stock soybeans in 2017/18 dived to 9.82%. China is the world's largest consumer of soybeans. In 2017, its soybean consumption rose to 112 million t thanks to the improvement in soybean crush profits and plant operating rate. In terms of soybean meals, 2017 is the last year of China’s closing or relocating livestock farms and aquaculture farms in banned areas (except Beijing, Tianjin, Hebei, Yangtze River Delta and Pearl River Delta). As a result, the quantity of live hogs lingered at a low level and pig feed demand was weak, which jointly slowed down the growth of soybean meal consumption.

4.4 Consumption of Major Minor Bulks

- **China's aluminium profile consumption booms, and steel scrap consumption soars**

Riding on the energy saving and environmental protection wave, aluminium has been widely used in buildings, electric vehicle manufacturing, electronics and mechanical equipment by virtue of its light weight, low price and recyclability, and the market demand continues to grow. According to the International Aluminium Institute (IAI), global aluminium consumption (excluding recycled aluminium) in 2017 may reach 61.92 million t, an increase of 4.89% year on year, indicating the steady consumption growth. As the largest aluminium producer and consumer in the world, China accounted for nearly 50% of the global total in both dimensions, and its

aluminium profit totaled more than 50 billion yuan. In 2017, aluminium consumption was estimated at 34.7 million t, an increase of 6.77% year on year. According to the 13th Five-Year Plan for the nonferrous metal industry, the total consumption of aluminium in China is projected to reach 43 million t by 2020, and the CAGR (Compound Annual Growth Rate) during 2016-2020 will reach 7.24%. China's aluminium consumption growth was expected to maintain the sound uptrend and its consumption structure was transforming toward the high-end aluminium.

2017 marks an important turning point for the scrap steel industry. With the advance of China’s supply-side reform and de-capacity effort, especially the reduction of 140 million t of substandard steel capacity, China’s scrap steel industry witnessed tremendous changes. The total consumption and comprehensive unit consumption of scrap steel both climbed. From January to October 2017, the total consumption of scrap steel in China's steel mills totaled 114.5 million t, an increase of 42.21 million t or 58.4% year on year. This is the first time for China’s steel industry to break through 100 million t of scrap steel consumption for steelmaking after its crude steel output first hit 100 million t in 1996, 21 years ago. It is estimated that by the end of 2017, the total consumption of scrap steel for steelmaking may reach around 140 million t, marking the advert of large-scale scrap steel utilization in China's steel industry.

V. Prospect of International Dry Bulk Shipping Market in 2018

- **International seaborne dry bulk trade faces restructuring and may slightly drop in 2018**

It is estimated that the seaborne trade volume of international dry bulk cargoes will slightly change in 2018. Despite the recovery speedup of emerging markets and the infrastructure boom in ASEAN countries, the small base number, coupled with the slowdown of fixed-asset investment growth in China and the slow destocking process of iron ore at ports, may contribute to a slower growth rate in iron ore imports than 2017. However, the infrastructure construction will still secure medium-speed growth. The seaborne shipping volume of coal is expected to slow down boosted by the

strengthening global environmental protection and energy restructuring. China's steel exports may continue the negative growth clouded by anti-dumping measures. Shanghai International Shipping Institute looked to a 2.7% growth rate or higher in global seaborne shipping volume in 2018.

- **Deliveries dive in 2018, with the capacity growth plunging to 2%**

In 2018, the demolition may further decline as the structural dismantling approaches the end. Meanwhile, delivered capacity may drop sharply in 2018 thanks to the effective capacity control in the past two years. But the delivery rate may pick up further as market confidence gradually recovers. Shanghai International Shipping Institute estimates that the growth rate of international dry bulk shipping fleet capacity may slow down a little to about 2% by 2018, continuing to underperform that of shipping volume growth.

- **BDI averaged at 1,100-1,300 points**

To conclude, the International Dry Bulk Shipping market remains in a phase of recovery and adjustment. The growth rates of supply and demand stand in a favorable range. The China Shipping Prosperity Index Report of Q4 2017 points out that the shipping industry has entered the best-ever phase in the past seven years and will continue the steady recovery in 2018. The BDI for 2018 is expected to remain at around 1,100-1,300 points. However, as the Baltic Exchange adjusted its BDI calculation method by removing Handysize carriers, the BDI may be subject to a larger impact from large carrier shipping market, and greater undulation. With the further development of shipbuilding techniques, ship delivery periods have been drastically shortened. The rising capacity supply has generated some risks to market recovery. We should be alert against market speculation and bargain-hunting by market players which will result in a further increase in capacity supply and a prolonged recovery cycle in the market. A cautiously optimistic attitude is advised for later recovery in the market.

International Shipping Market Analysis Report

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