Prospects of Shipping Market & Future of Port Industry

Professor Joon-Soo Jeon

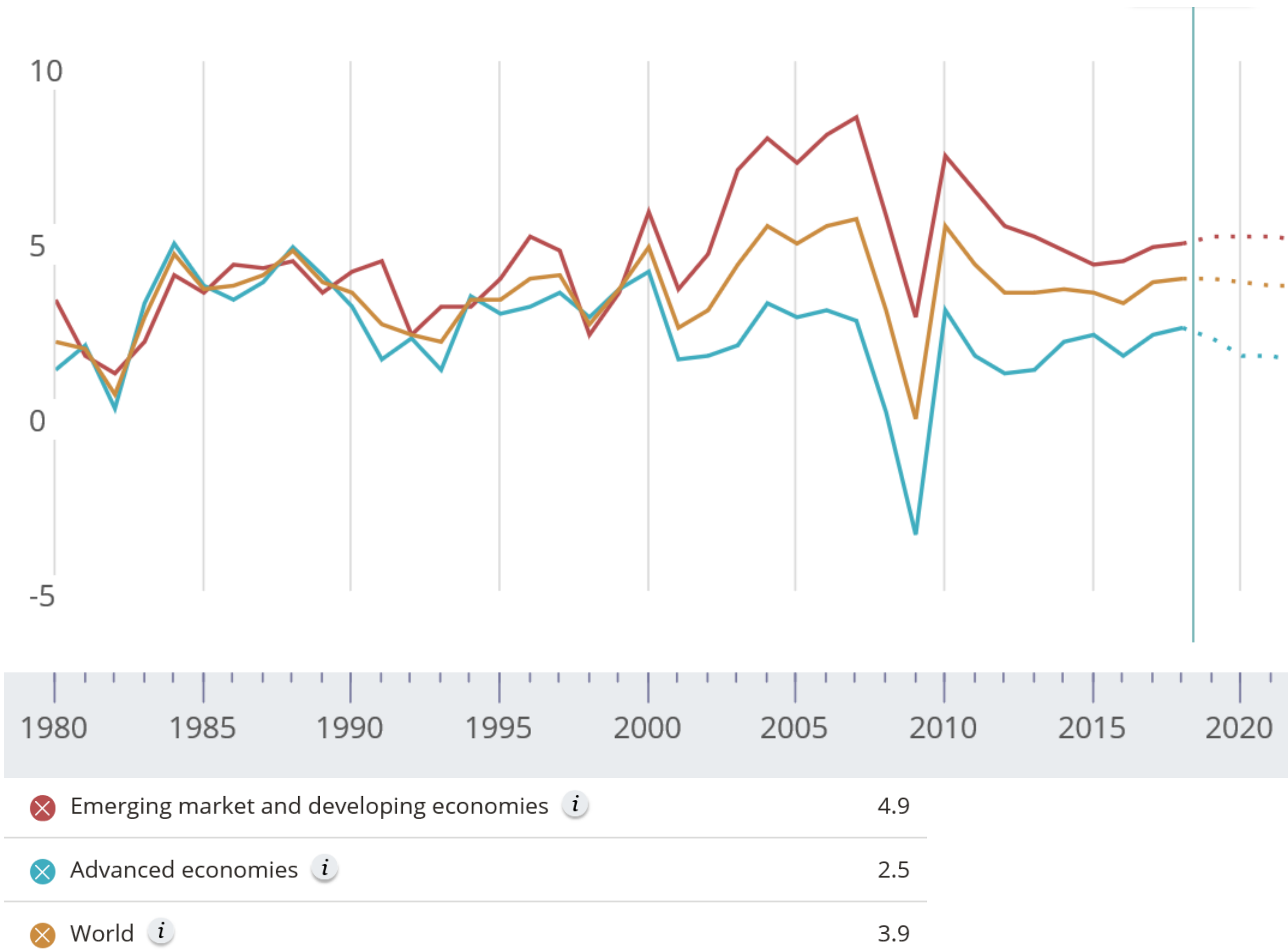
Continued difficulties in the shipping industry due to oversupply and low freight

- The shipping industry has maintained a steady trend of boom and recession as the world economy changes
- However, it has been declining for eight years since 2009
- Container freight rates have fallen by about 32 % since 2008 due to oversupply of vessels and slow demand growth [CCFI : 2008 average 1,122 → Dec 2016 spot 774 →Apr 2018 spot 750]
- Bulk freight rates fell 83 % over the nine years since 2008 due to a continued demand and supply imbalance [BDI : 2008 average 6,390 → Dec 2016 spot 1,196 →Apr 2018 spot 1,052]

[Fig. 1] shipping market trend (1980~2017)

World economy is *Subdued Demand* by IMF

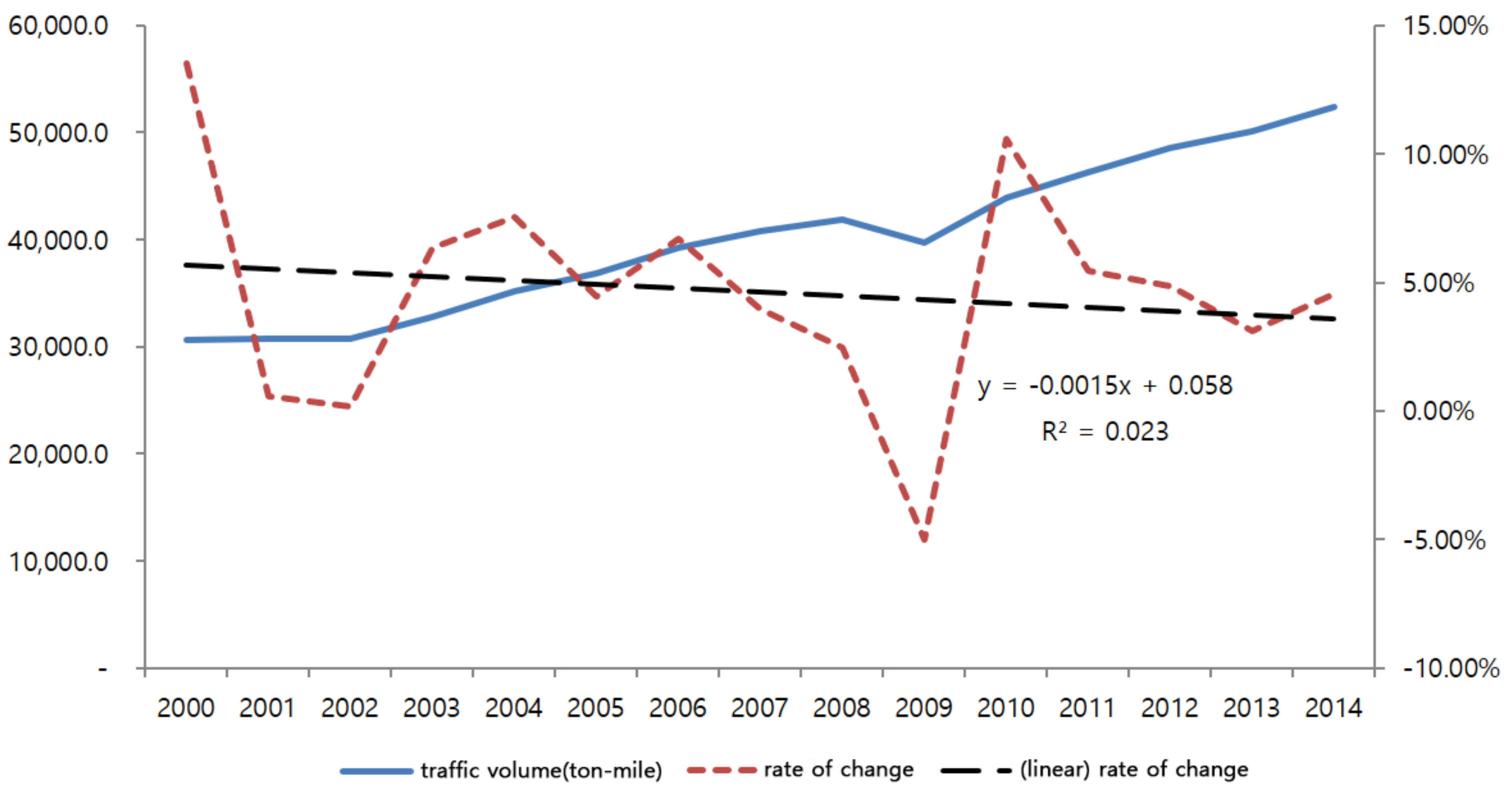
[Fig. 2] GDP Growth Rate



The change of trade volume by GDP change

- The World GDP 1% impacts on the traffic volume 100 million tons and 539 billion ton-miles
- Additionally, the growth of ton-mile seems to be stagnant, rather to be slowing down

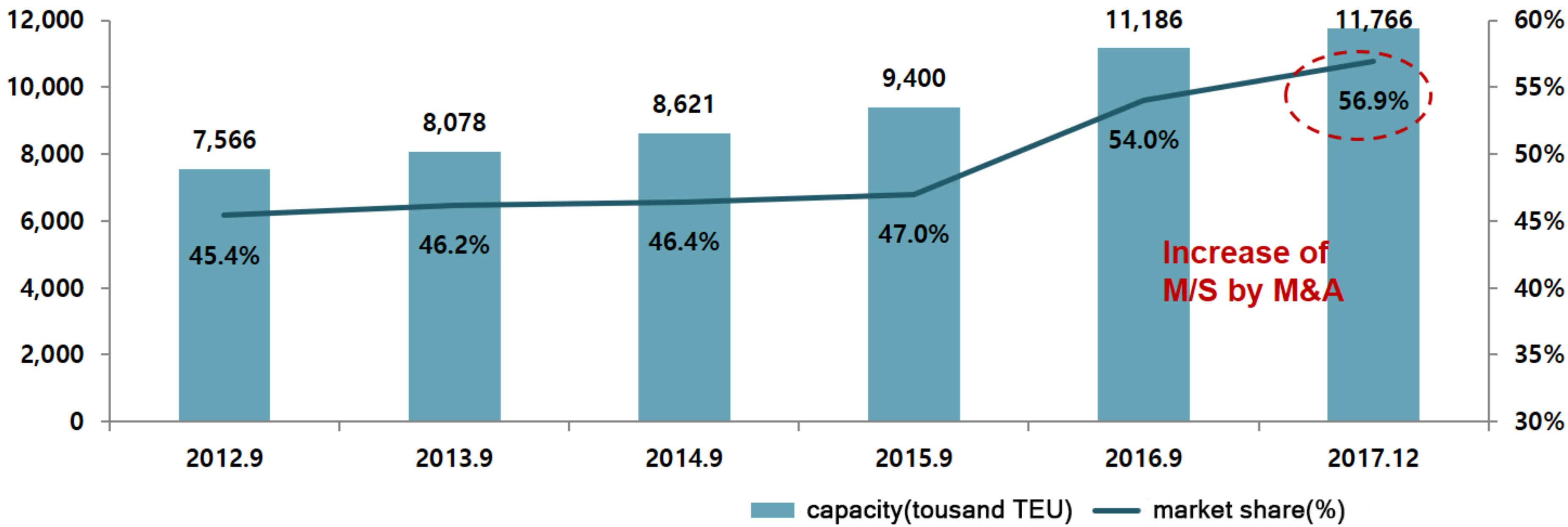
[Fig. 3] The relations between GDP growth rate and traffic volume



The oligopoly of mega alliance by M&A

- European companies are considering M&A as a model of growth without an increase in supply
- Global top 5 shipping companies share increase → Expansion of oligopoly
- Global top 7 liners M/S was 53% in 2008 but now global top 5 liners M/S is 83%
- After Maersk has taken over Hamburg Süd, the M/S changes to 18.4%(380 million TEU)
- After integrating the three Japanese companies, it becomes the world's sixth-largest supplier with M/S 6.6%(130 million TEI) in Apr 2018

[Fig. 4] The ship's space and supply M/S of Top 5 Liners



DATA : Alphaliner, *Monthly Monitor*, Yearly

The oligopoly of mega alliance by M&A

- **Due to deteriorating freight rates, most global top liner sales have decreased year-on-year, resulting in operating profit deficits**

[Tab. 1] Top Liner's deficit (2000~2017)

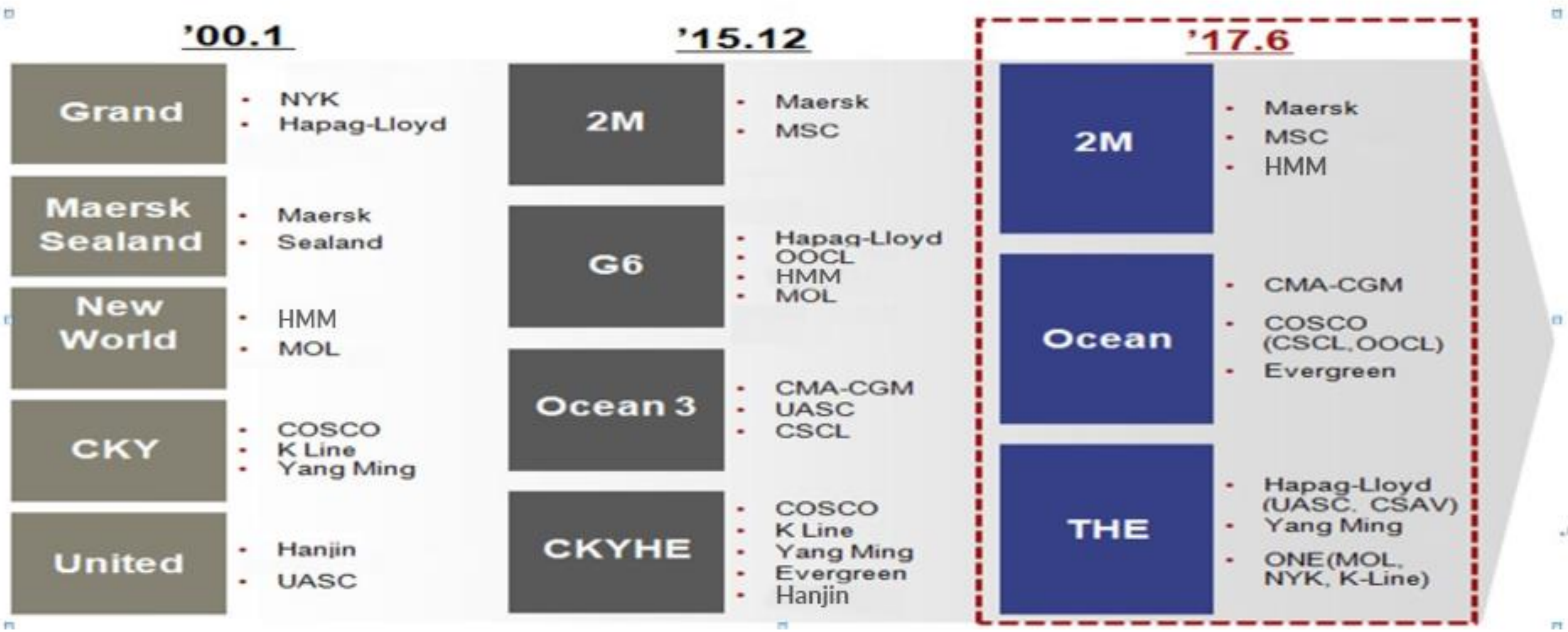
RANK	2015	2016	year on year	2016 Profit Rate
Maersk (1)	23,729	20,715	△3,014	△2.0%
COSCO * (3)	12,652	15,277	2,625	△8.5%
CMA-CGM (4)	15,674	15,977	303	0.2%
Hapag-Lloyd (5)	10,296	9,005	△1,291	1.6%
Evergreen (7)	4,434	4,124	△310	△7.8%
Yang Ming (8)	4,227	3,824	△403	△12.8%

*** COSCO's revenue include CSCL and OOCL for M&A**

The oligopoly of mega alliance by M&A

◆ **Four Alliance have been reduced to three and the number of companies of alliance changed form fourteen to nine**

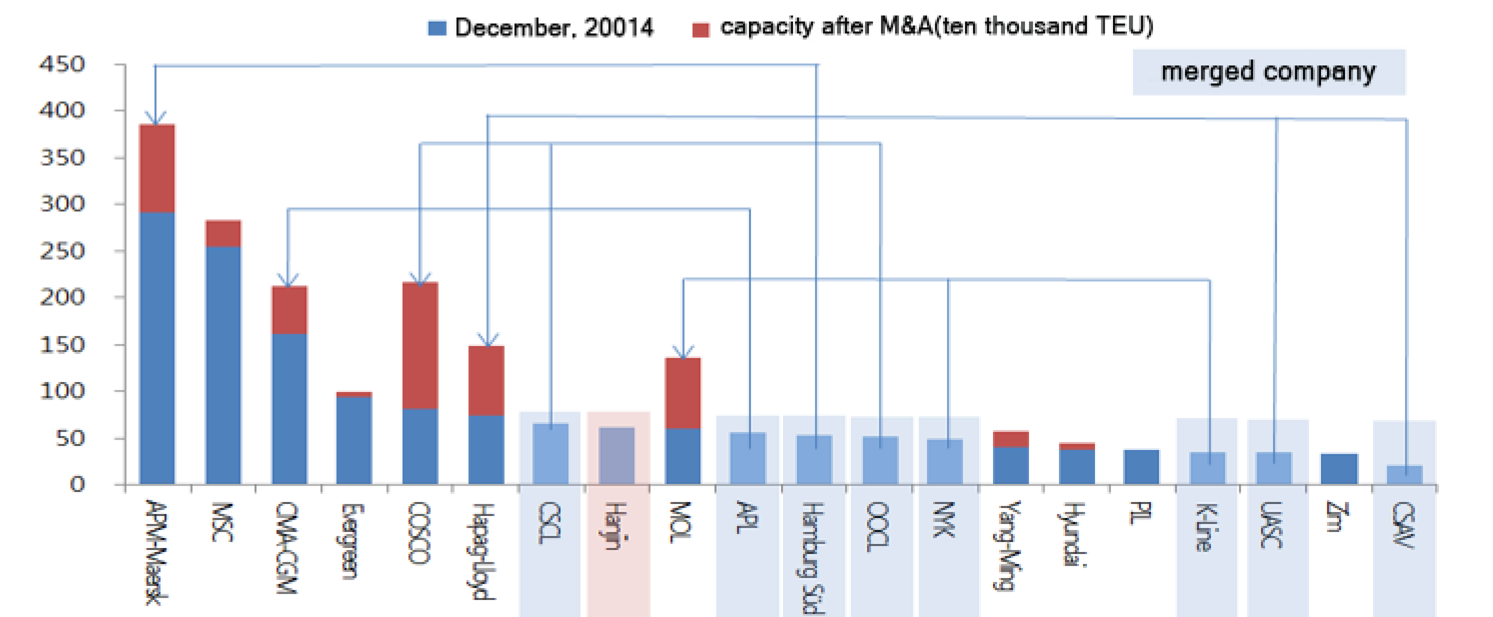
[Fig. 5] Alliance Trend (2000~2017)



The oligopoly of mega alliance by M&A

- **The top shipping merger brings 20 companies together into 11 companies (the top shipping company means a company with at least 1 million TEUs)**

[Fig. 6] M&A Trend

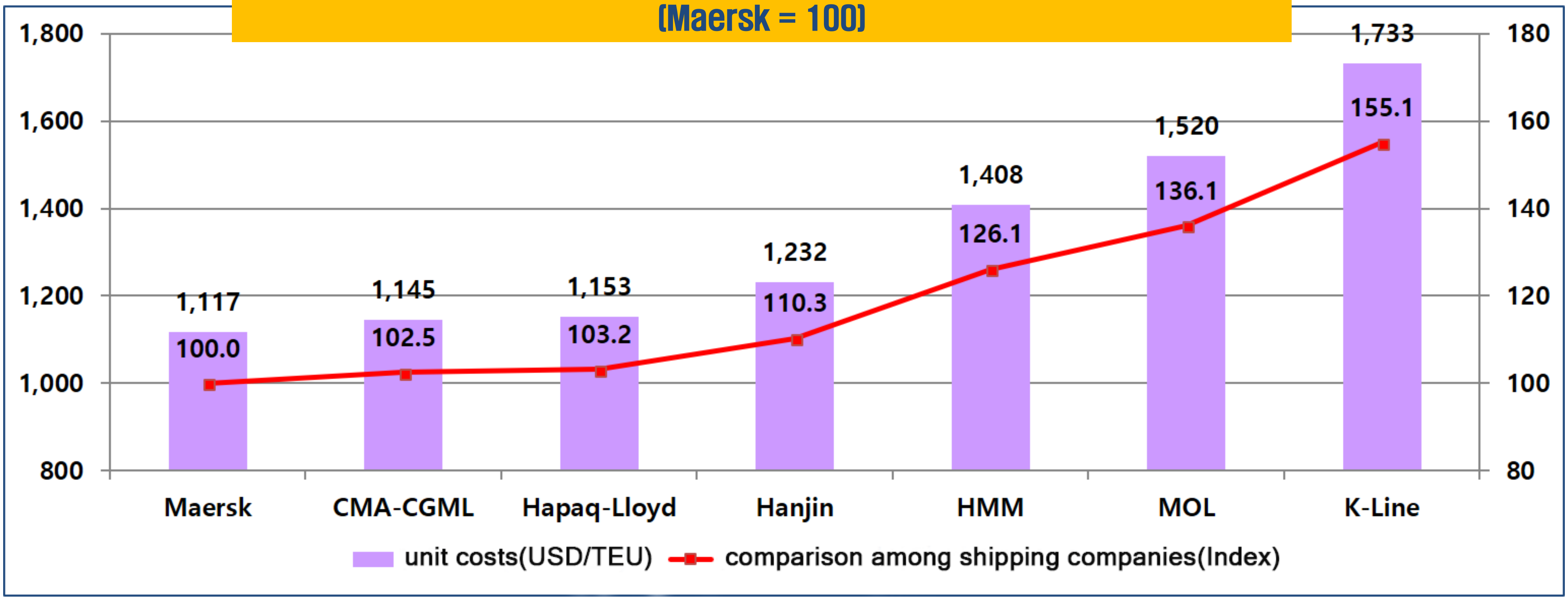


RANK																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	1	2	4	7	3	6	–	–	5	–	–	–	–	8	9	10	–	–	11	–

Asian shipping companies weaken cost competitiveness

- **Maersk recorded the lowest unit costs (Korea and Japan shipping companies are 10 ~ 55% higher than Maersk)**

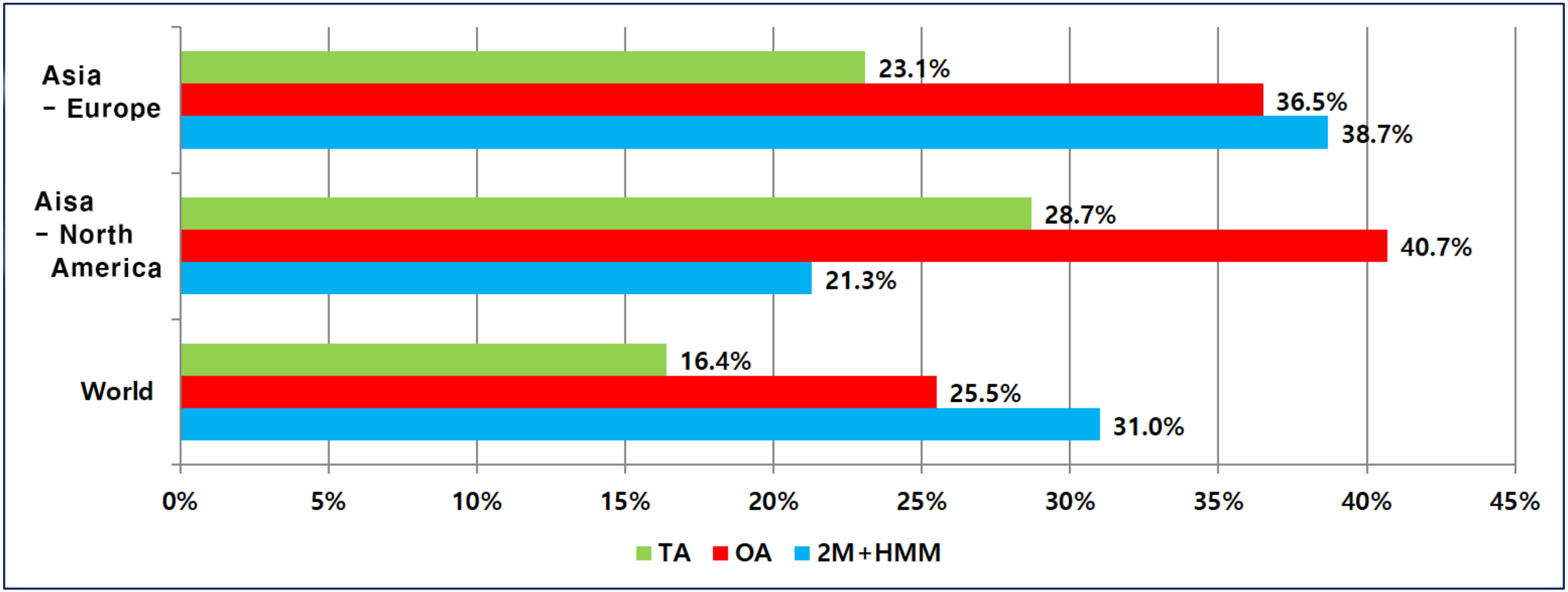
The cost competitiveness comparison among main shipping companies (Maersk = 100)



DATA : IR of each company

Concerns about recurrence of the chicken game by the 2M – OA duopoly

- The alliance reorganization added up to the 2M - OA duopoly
- The prenotification of cutthroat freight competition in east and west lanes: Asia-Europe, Asia-North America etc.

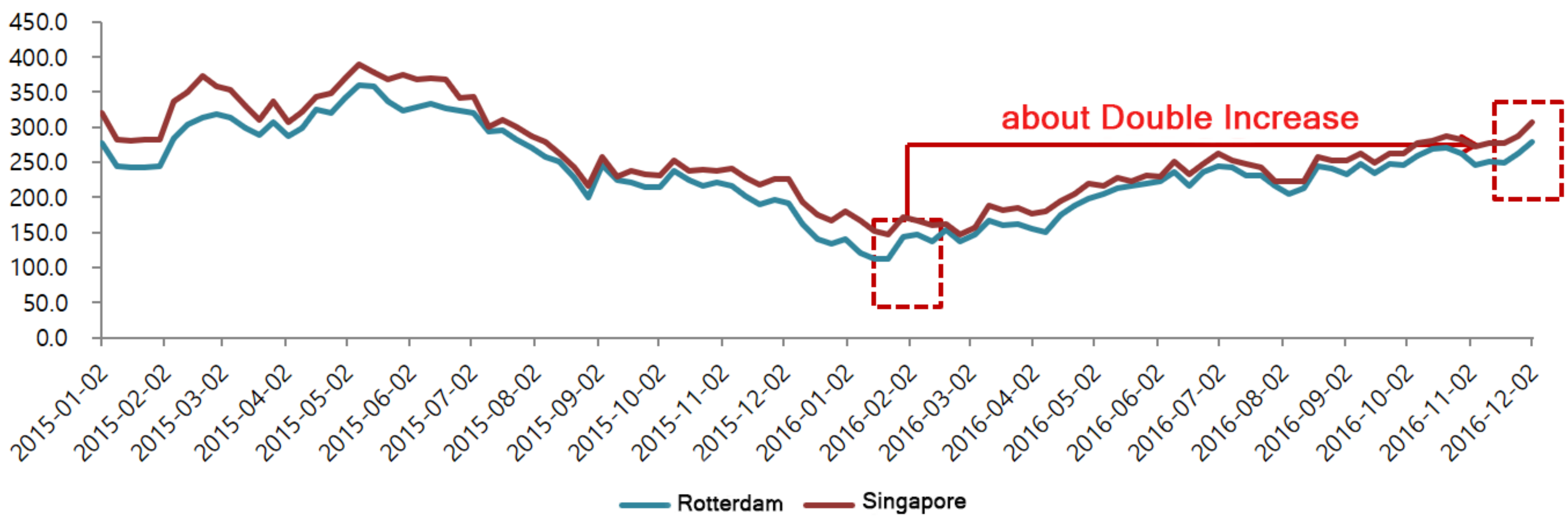


DATA : Alphaliner, Monthly Monitor, 2010. 10/ The alliance weekly capacity except Hanjin

Bunker prices more than tripled

- The U.S. oil production has been reduced and international oil prices have risen due to reduced inventory
- International oil prices are likely to rise due to successful OPEC reduction agreements
- Ship fuel oil level slowly rising, as of April 2018, after doubling in 2016, Rotterdam $385, Singapore $405

[Fig. 7] The Trend of Bunker price (USD/Ton)

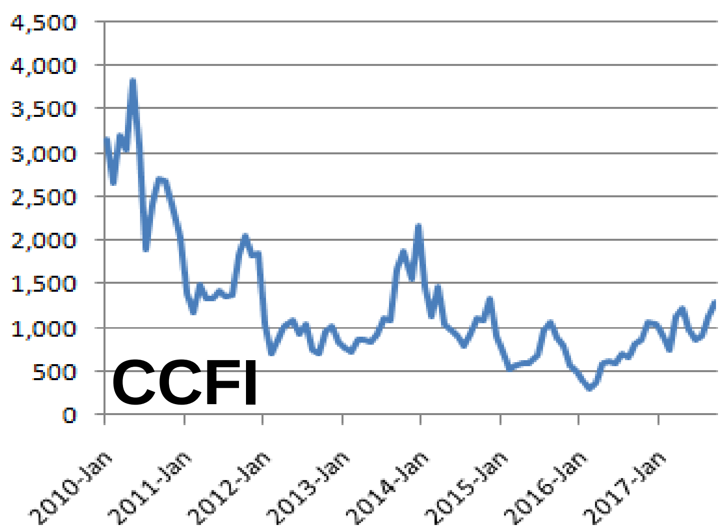


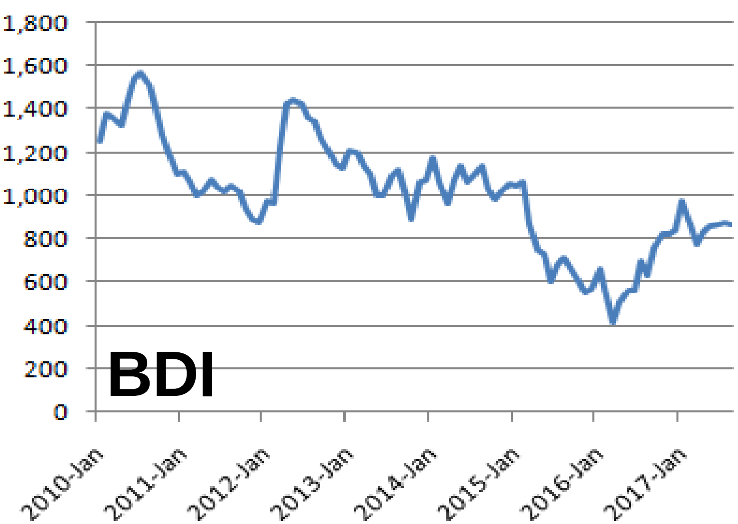
DATA : Clarkson(www.claeson.net/market)

A bit of a recovery in fares amid low market conditions

- **(Bulk) After a record low BDI due to slowing economic growth in China and oversupply in the market, some signs of market recovery shown**
- **(Container) The low freight market has continued due to the influx of super large vessels and coupled with slow economic recovery**

[Fig. 8] The latest CCFI and BDI





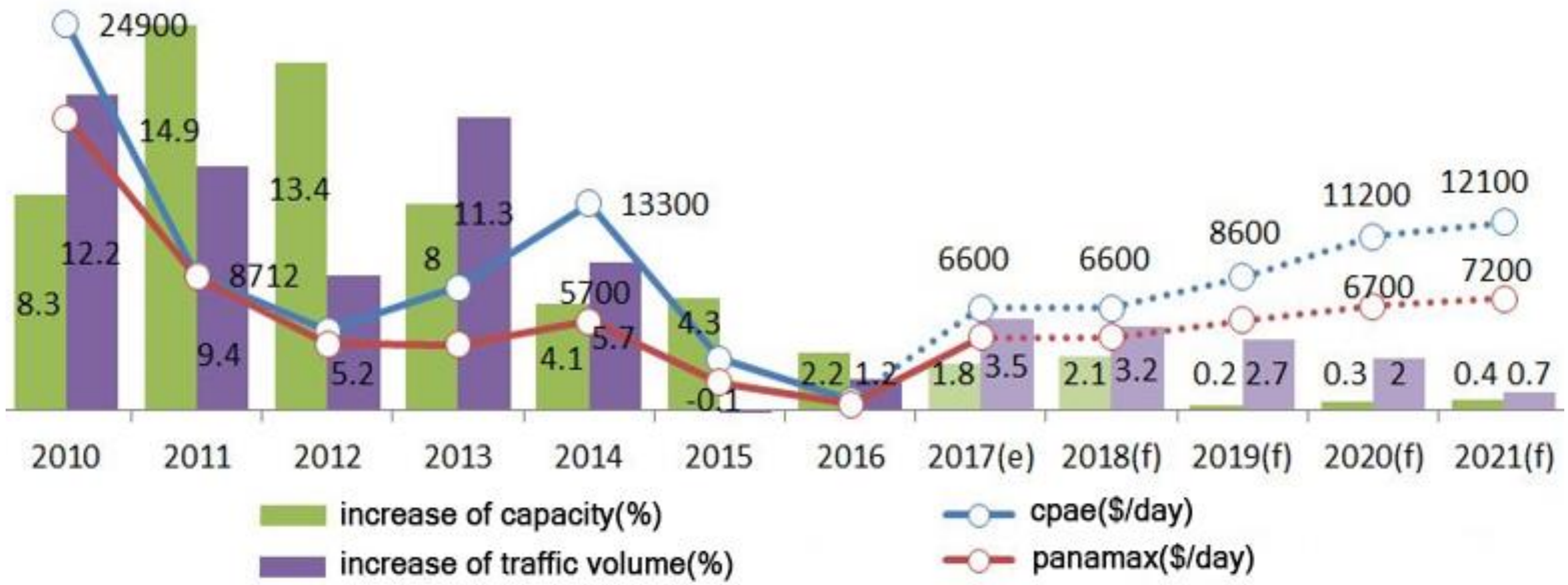
Freight Type	2012	2016	decrease from 2012	2017	A yoy growth rate
CCFI	1,171	711	△39.3%	820	15.3%

Freight Type	2012	2016	decrease from 2012	2017	A yoy growth rate
BDI	920	673	△26.8%	1,145	70.1%

A bit of a recovery in fares amid low market conditions

◆ **(Bulk) As traffic volumes are recovering and the volume is expected to increase at a limited level, a gradual recovery in profits is expected**

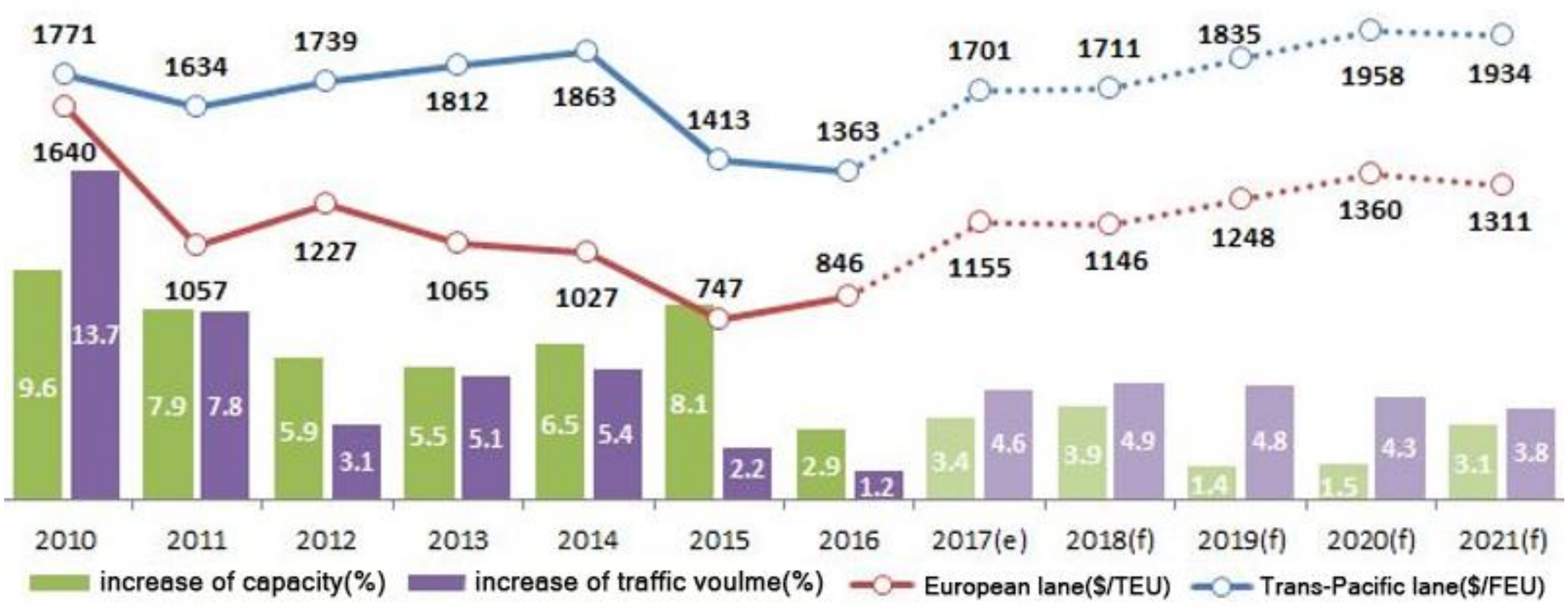
[Fig. 9] Bulk Carrier upbeat slowly



A bit of a recovery in fares amid low market conditions

◆ **(Container) The supply and demand imbalance is easing, but economic uncertainty due to the spread of trade wars and the existence of variables such as the expansion of orders for super-size vessels**

[Fig. 10] Container upbeat slowly



Current Situation and Prospects of Shipping Market

- **After a successful year in 2017 during which container lines made profits, financial results were down again in the first quarter of 2018. In light of the current U.S. – China Trade War, the market will further go down.**

- **On the demand side, trade volumes are rising due to improved economic conditions, however, trade wars caused by protectionism initiated by the U.S. dampen any future prospects. The supply side is expected to come back into balance.**

- **The environmental factors, which are largely driven by IMO regulations, will contribute towards putting the shipping market back into balance. All issues involved are complicated and unpredictable. This is an irrational market that defies the laws of economics. Learning to cope with these uncertainties is a challenge for everyone involved, especially for the developing countries.**

- As of 1 January 2020, IMO decided to strengthen the regulation of sulphur cap to 0.5% for all ships around the world. It will be the strongest regulation in shipping history.

- There are three main ways to respond to SOx regulations. The first is to install a scrubber and to continue to use the conventional fuel oil. The second is to use alternative fuels, such as LNG. However, this requires a structural change to the vessel which is costly. The third is to replace the conventional fuel with low sulphur fuel oil. Regardless of how you prepare to cope with the new regulation, the shipping industry will be burdened with additional fuel costs. This will further aggravate the already crippled shipping industry which has been hit by long depression. This will phase out many financially weak shipowners and will restore the balance of demand and supply.

Challenges & Future of Port Industry

- Bigger alliances exercise more monopoly power
- Ever increasing ship size and the cost of subsequent adaptation of port and connected hinterland infrastructure
- Volatility in energy prices
- New energy landscape and transition to alternative fuels
- Increasing environmental pressure
- Potential changes in shipping routes

Challenges & Future of Port Industry

- The shipping industry is facing a huge challenge and consequently the port industry is facing a huge challenge as well. Above all, the new technology will bring about innovative structural changes to the port industry.

- With the Fourth Industrial Revolution soon approaching, a big task for the ports is to adapt to the technology revolution.

- To take best advantage of the core technology of the Fourth Industrial Revolution, such as IoT, Cloud, and Big data, ports should become a safety port, eco port, life port and future port.

- At the 2016 Busan Port International Conference, Mr. Meier of the Hamburg Port Authority depicted a road map for the future, encouraging partner ports to go beyond traditional bilateral port agreements by establishing a global chain of smartPorts. The ultimate vision of chainPort is to develop and introduce leading-edge processes and technology, to optimize the supply chain in and between ports, and to create value added to port customers.

Challenges & Future of Port Industry

- Currently, the imminent environmental regulation of IMO requires ports to cope with the new requirements relating to the IMO Regulation, including supplying alternative fuels besides the conventional bunkering.

- Ports need to be more proactive with respect to any change. Ports have influential power on shipping, however, ports have not yet materialized their power to exercise. For instance, as ship size has grown, ports have been scrambling to invest more tax payers' money in order to build infrastructure to accommodate larger vessels, not to mention trying to influence the development of hinterland infrastructure to increase their capacity to cope with massive inflow of containers from larger container vessels whilst the benefits are negligible.

Challenges & Future of Port Industry

- Port collaboration is essential for jointly facing the challenges of the uncertainty and instability of the port industry. Especially in this age of uncertainty and instability caused by connectivity volatility, environmental restrictions, fuel price volatility, larger vessels, concentration and bigger alliances of the shipping industry, ports must have a collective voice and speak with “one voice” to convey their common interests.

- To this end, the Port Authorities Roundtable was inaugurated in 2015, with the aim of creating a platform for twelve leading port authorities to exchange views on common issues and to promote collaboration in areas of common interests.

Thank you!