

Status and trend of the global  
shipping finance focusing on  
Europe, China, and South Korea

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## Foreword: the importance of shipping finance in shipping industry

The shipping industry is a representative capital-intensive industry. While the price of a ship, which is the main asset of a shipping company, is very high, that of highly advanced maritime equipment and offshore plant is estimated to cost billions of dollars. Therefore, shipping companies rarely purchase a vessel outright with owner's capital. They rather access the banking sector or capital market for capital financing.

Since a huge downturn of the global shipping market, European financial companies and US private equity funds that used to drive the market have switched to become passive and reduced the investment in the shipping industry. This has increased the share of Chinese capital, rebalancing the shipping finance market from Europe to Asia. As the shipping crisis has particularly dwindled the lending source in which commercial banks used to play a central role, leasing companies have started to fill up the funding gap between the supply and demand of shipping finance.

After Financial crisis of 2008, the financing of shipping industry for acquisition of new vessels and conversion of old vessels to high efficiency vessels has become very important for the survivor of shipping companies. Shipping industry faced with overcapacity, bearish market and the shrink of the traditional shipping finance fund has to find another way to get financial source and improve financial management. In this moment, it is very useful for shipping industry to understand a status and trend of the global shipping finance and get implications from best practices of major shipping countries and region implemented.

As European countries, China and South Korea are key players in global shipping industry<sup>1</sup>, their shipping finance and related shipping policies have a huge impact on global shipping market. Therefore, this article aims to analyse the status and trend of global shipping finance, especially focusing on Europe, China, and South Korea.

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<sup>1</sup> Greece, Japan, China, Germany and South Korea were ranked top 5 by country of controls as of January 1st, 2016 (Institute of Shipping Economics and Logistics, 2017).

# Introduction to global shipping finance

## *Types of shipping finance*

Shipping finance that is known as ship finance, shipbuilding finance and maritime finance provides sources of funds for the building of new vessels and major conversions. Many stakeholders participate in shipping finance for different reasons and aim. Shipping company seeks finance from bank or capital market to cover insufficient fund except for its equity, meanwhile investors and financial institution seek investment opportunity in shipping to get revenue. These stakeholders may choose different type of shipping finance depending on many factors, such as interest rate, demand and supply of vessels, global economy growth, status of shipping industry and many other conditions.

Shipping finance is classified into bank financing, capital markets, government grants and others based on source of fund, and there are mixtures of these three types of fund sources as below. Of course, there are various classification on shipping finance depending on source of provider, consumer, objective of financing and so on.

### **Types of shipping finance based on source**

Bank financing	Capital markets	Government grant	Others
Mortgage-backed loans	High yield bonds	Government loans	Seller's credit
Newbuilding financing	Convertible notes	Subsidizing interest rate	Finance lease
Unsecured/corporate loans	IPOs	Cash grant to owner/shipbuilder	Operating lease
Mezzanine	Follow-on offerings	Cash or credit to allied industry	Private equity
	At-the-market offerings	Operating subsidies tied to shipbuilding agreement	Securitization
	MLPs	Favorable taxation incentives	Export credit agency's finance
	SPACs	Guarantee of private loans	

Table 1 - Source: The International Handbook of Shipping Finance, 2016

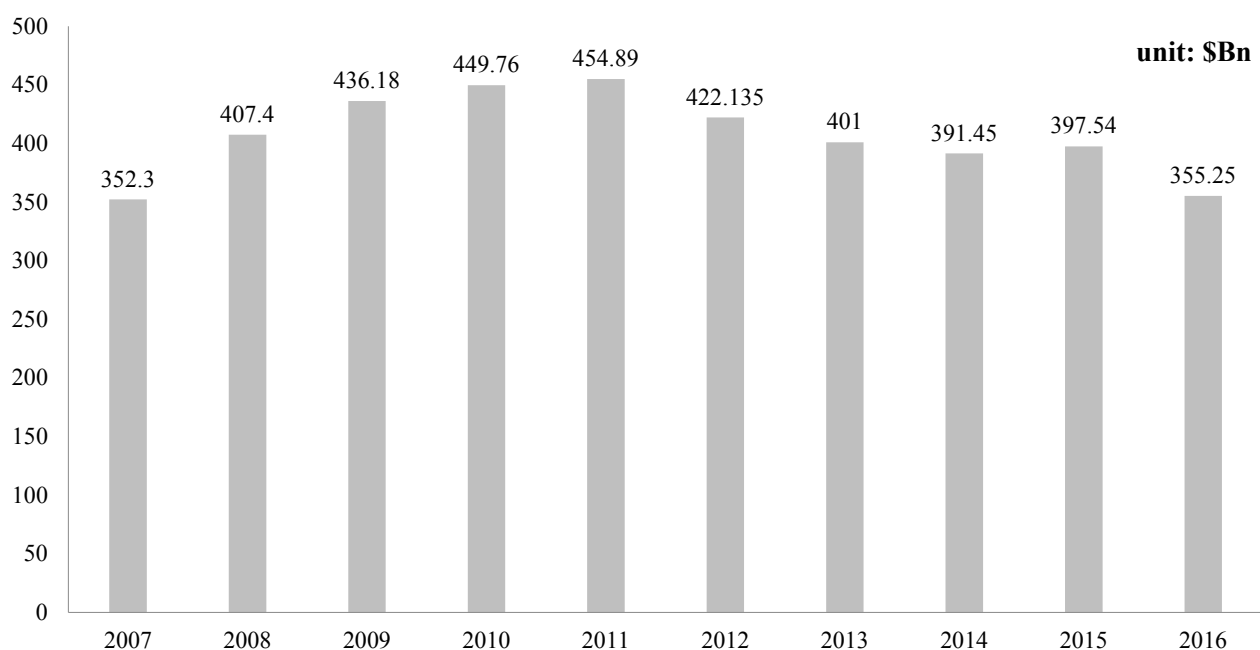
Bank financing, especially bank debt financing, is the most important source of fund for shipping industry historically. Bank debt financing is the cheapest form of external capital compared to another financial sources. Based on report written by Petrofin Bank Research, the top 40 banks lending to shipping industry was about \$355 billion in 2016, and even over \$454 billion was provided to shipping industry in 2011 by these banks.

The main types of bank financing are mortgage-backed loans, newbuilding financing, unsecured loans and corporate loans.

As shipping companies expand their fleet, the demand for shipping finance increased and more stakeholders started to seek funds from capital markets. The growth of global trade and the anticipation of high returns increased the visibility of the shipping industry to a variety of participants beyond ship-owners and commercial banks. These days, whether institutional or individual, any investor can participate in shipping finance through debt or equity products such as corporate bonds, convertible notes, common equity, private equity and so on.

In the shipping financial market, government is also an important player to offer a variety of financing assistance to activate local shipping industry and strengthen their competitiveness. The government grants include government loans, subsidizing interest rate, cash grants, taxation incentives, vessel-scraping subsidies. Some countries having state-owned or operating shipping and shipbuilding companies provide these grants and aids with favourable conditions.

**Top 40 banks' lending to shipping industry (2007-2016)**



Graph 1 - Source: Petrofin Bank Research, 2017

### *The history of shipping finance: from commercial bank loan to structured finance*

Whether the global economy is prosperous or not, there are the demand of financing in shipping industry all the time. When the global economy is prosperous, volume of global trade and the demand of shipping increase, so shipping companies are willing to expand their fleet and require a lot of capital for acquire vessels. On the contrary to this, when the global economy is in depression or financial crisis develops, the

trade volume decreases and financial institutions reduce their exposures to secure soundness and profit, and shipping companies face with scarce of funding source and liquidity. Historically, the global economy was full of ebbs and flows, as a result, the landscape and trend of shipping finance has changed depending on macro and micro economy conditions.

In the period of 2001-2008, the world economy rapidly grew and the trade volume increased with China's entry into World Trade Economy and the rise of new markets such as Brazil, Russia, India and other emerging countries, and this growth of world economy and trade volume caused increase of demand for shipping services. To provide more and better shipping services, shipping companies started to expand their fleet and converted their vessels. In this period, the freight market was also strong so, shipping companies could easily utilize bank loan with their own equity for purchase of vessels. Especially, European commercial banks were a main player of shipping finance that provided readily available, attractive priced loan for shipping companies until 2008.

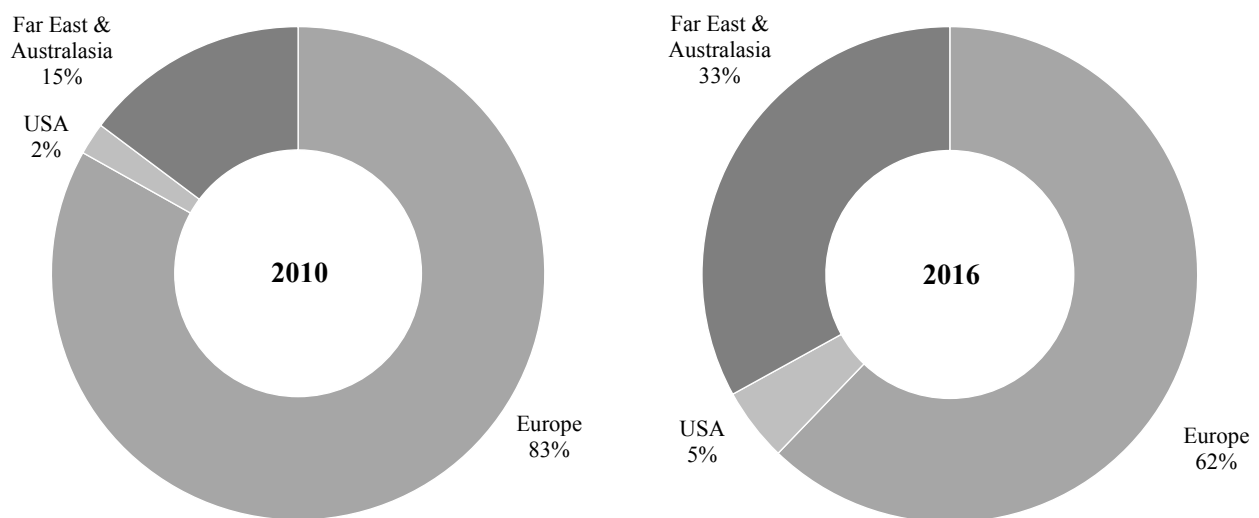
After a time of unexampled prosperity, the global financial crisis caused by the Subprime mortgage crisis of USA and European sovereign debt crisis made economy and trade shrink. Moreover, this crisis has influenced on credit financial business of commercial banks and global interbank market. Many European commercial banks have decreased their exposures to shipping industry to secure financial soundness and performance.

With this result, the demand of financing in shipping industry exceeded the supply and it has remained the demand-supply gap of shipping finance.

After 2008, new types of shipping finance covered the demand-supply gap, and the East Asia countries have become main players utilizing Export Credit Agency (ECA) finance and leasing finance. In particular, the ECAs of China and South Korea, representative countries having a competitiveness in shipbuilding industry, has provided lots of capital to the international ship-owners and shipping companies to support the export of ships that are built in their local shipyards. The leasing finance has also increased its impact on shipping industry as well as ECAs finance during the last 9 years. Because leasing companies can offer up to 100% of asset value and support pre-defined working capital, leasing finance is very useful and flexible to capital-intensive projects such as new building and offshore projects.

The shares of Far Eastern region in the global shipping finance increased from 15% in 2010 to 33% by 2016. On the contrary, the shares of European banks decreased from 83% in 2010 to 62% by 2016. Although the shares of European banks in shipping finance have decreased, Europe is still important region in shipping industry and has many commercial banks that committed to shipping finance.

### Global shipping finance portfolios according to geographical area



Graph 2 - Source: Petrofin Bank Research, 2017

## Status and trends of the shipping finance in major shipping countries

### Europe

#### The shipping industry policy of the EU

Because Europe has established and implemented policy for shipping industry through the European Union (EU), this paragraph will introduce EU policy for shipping industry instead of looking through that of each European country.

The EU adopted a ministerial declaration on maritime transport in March 2017 that outlines priorities for the EU's maritime transport policy, focusing on competitiveness, digitalization and decarbonisation. With the adoption of the so-called Valletta Declaration, EU states will focus on these three priorities by 2020, reinforcing the effort to strengthen the leading role of the shipping industry.

Specifically, EU states have decided to apply standards for safety, security, environment and labour conditions more rigorous than the international level to increase its competitiveness. In addition, EU states will establish an internal network of multimodal transport, nurture human resources to maintain excellent maritime clusters and develop a stable taxation guidelines etc. As part of an effort of digitization, the EU will promote a full and swift implementation of the Blue Belt, a harmonized electronic cargo manifest, as well as electronic authentication system for vessels and sailors.

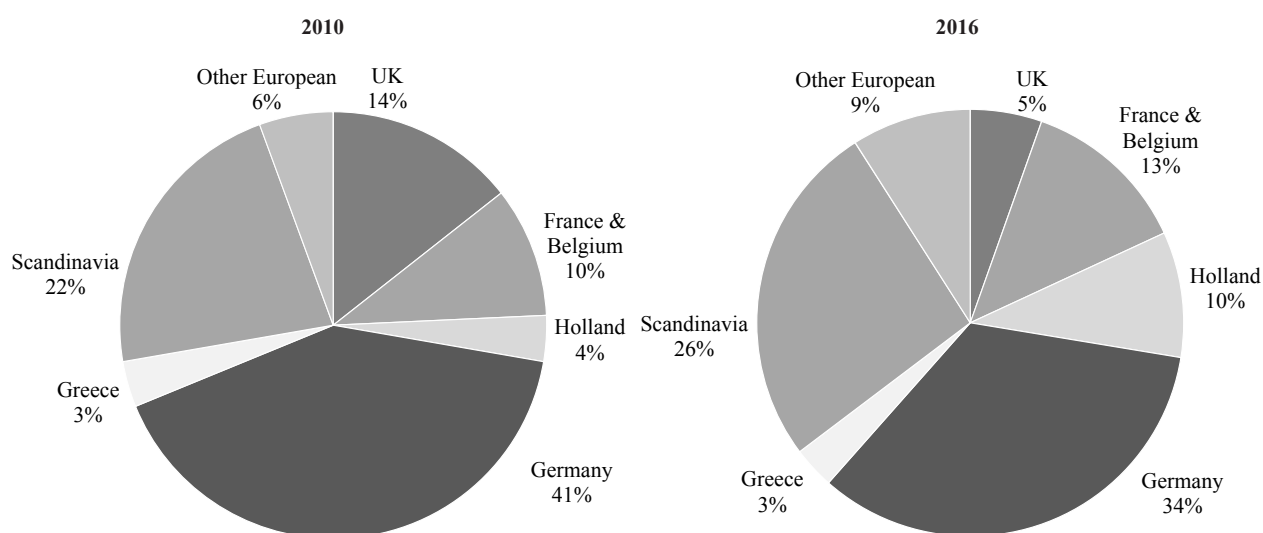
With regard to decarbonisation, EU states will actively apply IMO policy for reducing greenhouse gases, promoting the use of alternative energies and fuels for shipping, notably harmonized standards for LNG bunkering connectors and procedures for LNG bunkering in European ports. In addition, EU states will particularly encourage the implementation of the Green Shipping Guarantee program. The Green Shipping Guarantee program provides financial support to the cost for new orders of eco-friendly ships or the cost of upgrading existing vessels to eco-friendly ones.

## European commercial bank loan

European commercial bank is traditionally the main source of shipping finance, and it has a long history in shipping finance since 1850s with the expansion of steamship fleet.

The result of the European bank global ship finance portfolios in 2010 and 2016 by main regional groups shows that the share of Germany falling sharply, but this country is still the biggest lender with share of 34% in Europe. The UK and Ireland banks has lost their share drastically as Bank of Ireland has withdrawn from shipping sector.

### European banks' global shipping finance development



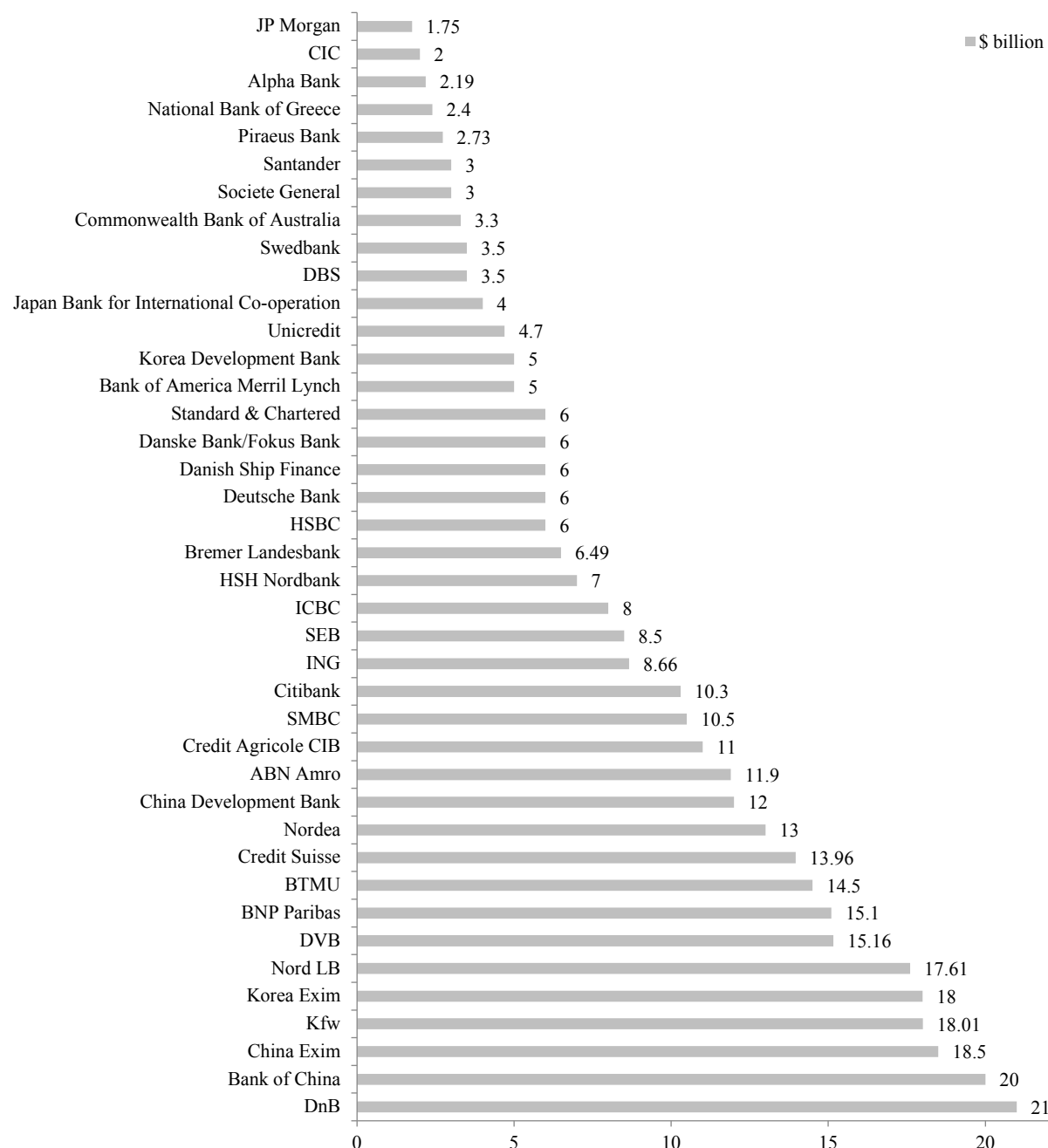
GRAPH 3 - SOURCE: Petrofin Bank Research, 2017

On the contrary, Dutch bank shows a rapid growth from 4% in 2010 to 10% by 2016, and Scandinavian, French and Belgian banks showed a slight growth as the French bank CIC has up in top 40 banks in 2016. In addition, other European banks show stability and slight growth.

Greece, financing primarily the Greek fleet, has managed to control their declining portfolios and have carefully continued to lend small amounts to their Greek clients.

The top 40 global banks have an exposure of \$355.25 billion to shipping sector as of December 2016. Many banks who have committed to shipping finance are European banks, and even 27 banks out of top 40 global banks are European banks.

#### Bank lending to shipping as of end 2016



Graph 4 - Source: Petrofin Bank Research, 2017

DNB, Norway's largest financial services group, has the largest portfolio stood at \$21 billion by the end of December 2016. Following DNB, the KfW, German government-owned development bank based in Frankfurt, is listed on the top 40 banks with exposure of \$18.01 billion.

Except for KfW, Germany has several global banks committed to shipping finance such as Nord LB, one of the largest banks in Germany, and DVB Bank, a subsidiary of the DZ BANK Group and a specialist in international transportation finance, Deutsche Bank and HSH Nordbank, Bremer Landesbank, merged with NORD LB as of September 1 2017.

Many French banks are also listed their names on the top 40 banks such as BNP Paribas, a French's largest international banking group, Credit Agricole CIB, Societe Generale and CIC.

UK, traditionally having a strong competitiveness in maritime finance and industry, has famous shipping finance institution such as HSBC, Standard Chartered and Santander that are British multinational banking and financial services companies. Greece, the representative ship-owners' county, has provided loan for its ship-owners through Piraeus Bankis, National Bank of Greece and Alpha Bank. Italy, the neighbouring country, also has a bank, Unicredit, listed on top 40.

Besides DNB, a number of banks located at Northern Europe such as Nordea, Credit Suisse, SEB, Swedbank, Danish Ship Finance and Danske Bank have participated in shipping finance actively. These Northern European banks have expanded their exposure over the years as well as the Dutch banks including ABN AMRO Bank and ING. On the other hand, HSH Bank and Commerzbank have reduced their exposure gradually in shipping.

### EU's green shipping guarantee program

As one of EU Shipping strategy, EU has implemented Green Shipping Guarantee Program that is intended to finance Shipbuilding projects including new vessels, conversion and retrofitting of vessels, and this program is designed to promote commercial investment in technologies which both improve energy efficiency and reduce harmful emissions in the European shipping sector. This program is composed of Green Shipping Loan Program which is supported by European Fund for Strategic Investments (EFSI) and Green Shipping platform which is supported by Connected Europe Facility (CEF).<sup>2</sup>

As a €50 million-loan program, Green Shipping Loan Program was approved by EFSI investment committee and European Investment Bank (EIB) in June 2016. The eligible investment projects are related with EIB transport lending policy with significant European interest such as flag, ownership, incorporation, and routes or green investments and sustainable shipping such as fuel alteration, installation of hull treatment and ballast water treatment system.

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<sup>2</sup> European Investment Bank (2016, 11 May). *Environmental and social data sheet*. Luxembourg.

This program will support up to 50% of investment costs, so the total expected support amount is around €500 million of investments, and this program provides direct senior secured loans to European corporates. In pilot phase, this program focuses on Mediterranean and Atlantic based EU ship owners who contract new build vessels with eligible projects.

Green Shipping platform is aimed to design a sustainable, scalable and commercial financial instrument that provides a solution to accelerate investments in greener shipping and can be replicated to finance compliance with future regulations on ballast water. This platform intends to reduce risk of environmentally focused shipping investments such as general fleet renewal.

This platform will support small and medium enterprises of which the annual sales are below €50 million. For efficient operation and implementation, EIB will have a partnership with commercial banks which play a front office role based on framework agreements. To achieve the main objectives of the platform, the optimal financing structure is a guarantee or funded risk participation rather than direct lending. Furthermore, this platform supports the issuance of guarantees for senior and subordinated obligations as well as taking of funded risk. EIB will support green components of retrofitting operations up to 100% and debt financing of new vessels up to 50%. Nevertheless, in all cases, there will be insufficiency of financing between 20% and 50%, EIB needs co-financing with commercial banks.

The pilot program of this platform is to be launched with France, the Netherlands and Nordic countries' financial institutions with the amount of €750 million. To put it more concretely, the CEF and EFSI will support €250 million and €500 million each. The eligible investment projects are similar to those of Green Shipping Loan Program<sup>3</sup>.

## China

### Shipping industry policy of China

China recognized the importance of marine and shipping industry after 2012 through China's 12<sup>th</sup> Five Year Plan (2011-2015), and established China's first objectives in shipping industry such as development of marine economy and establishment of marine power at national level. In 2014, China upgraded development of shipping industry as a national strategy after announcement of *The Several Opinions on Promoting the Healthy Development of the Shipping Industry*.

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<sup>3</sup> GAUDET F. (2016, 28 September). "EIB's Green Shipping Programmes" (presentation material), *Motorway of the Sea Workshop*. Brussels.

The opinions clarified shipping industry as a key industry for economic and social development which contributes to protection of sea rights and interests, enlargement of foreign trade, structure reform of industry.

In 2007, China emphasized reinforcing the reform of systems from the supply side, innovation and strengthening the protection of ecosystem during the National People's Congress, China's biggest political event and Chinese People's Political Consultative Conference. Following the policy direction at the government level, China's shipping industry has experienced significant changes. As part of the reform from the supply side, China's shipping and shipbuilding companies have carried out a large-scale restructuring. Meanwhile, China has strengthened the management of pollutants emitted from ships and controlled its emissions. In addition, it continues demolition and replacement of aging vessels. As part of such movement, the Chinese government has recently extended the period for ship scrapping subsidy program.

Furthermore, China's shipping and logistics companies will continue investing and making inroads into countries along the One Belt and One Road Initiative.

Therefore, the Mediterranean region occupies an important strategic position in the B&R, and is both a transit point and a destination. With the further development of B&R, the Mediterranean region as the key node of B&R will be more and more significant.

For example, the Mediterranean is one of the Chinese people's favorite travel destination. Goods such as wine, olive oil, textiles and leather products are very popular in China. In addition, the Mediterranean region is rich in resources, and the B&R partner countries' industries are highly complementary. These will provide the relevant countries a broad market for trade and production capacity cooperation. China has built a number of landmark projects with countries in the Mediterranean region so far.

### Increase of ECF and leasing finance

As of June 2017, The Export-Import Bank of China (China Exim), one of ECAs, provided more than \$115.1 billion (730 billion Chinese Yuan) for construction of 8,399 vessels and offshore platforms as the direct loan and grant of credit.<sup>4</sup> In 2016, China Exim and China Development Bank (CDB) decided to provide \$47.3 billion (300 billion Chinese Yuan) to the shipping and shipbuilding industry for acquisition of vessels and investment into foreign assets through strategic cooperation agreement. Both public financial institutions respectively signed development of financial cooperation agreement with China COSCO Shipping Group on August 2016 and January 2017.

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<sup>4</sup> See Eastmoney.com, 2 June 2017 [<http://finance.eastmoney.com/news/1355,20170602743267851.html>].

China Exim will provide the loan of \$18.9 billion (120 billion Chinese Yuan) for construction and acquisition of China COSCO Shipping Group's 50 vessels, and CDB will provide the loan of \$28.4 billion (180 billion Chinese Yuan) until 2021.<sup>5</sup>

Recently, China Banking Regulatory Commission encourages leasing companies and trust companies enlarge their participation in shipping industry, and plans to allow financial leasing companies to establish and operate a subsidiary specializing in shipping finance not only in mainland China, but also in Hong Kong and Taiwan. As the quarter of 2017, China leasing companies had 989 vessels and the total value of lease assets was \$18 billion (114 billion Chinese Yuan) which increased by 58% compared with the end of March 2016.<sup>6</sup>

As of November 2017, China boasts 20 leasing institutions involved in ship leasing, with the asset value related to shipping finance surpassing 200 billion Yuan. In particular, major domestic leasing companies with size of assets over 100 billion, including ICBC Leasing, Minsheng Leasing, CMB Leasing, and CDB Leasing are participating in the shipping finance market. While most of ship leasing takes the form of financial leasing in the beginning, nowadays witness an increasing share of operating lease, exceeding 30% of the total.

ICBC Leasing, a leading leasing firm in China, has provided the loan of 15 billion Yuan for exporting 70 vessels constructed in Chinese shipyards.<sup>7</sup>

### China's ship scrapping subsidy program

For acquiring high efficient and eco-friendly ship assets, China government has implemented ship scrapping subsidy program since 2013. Based on Ship Scrapping Subsidy program, China shipping company, who early scrapped their China flagships of 1,000 DWT or more at domestic ship breaking yard where China government approved, can get special subsidy from the government. Originally, this program was set to expire at the end of 2015, but the Chinese government extended this program until 2017, because of shipping companies' request for extension of term and a positive response from the shipping industry. Considering all ships that can meet the requirements apply for this subsidy after demolition, total \$1.13 billion (7.06 billion Chinese Yuan) would be provided to China shipping companies. In 2014, COSCO Holdings received \$275 million (1.74 billion Chinese Yuan) as a subsidy from China government, and \$217 million (1.38 billion Chinese Yuan) out of \$275 million was subsidy for ship scrapping. COSCO Holdings, a shipping company the most received ship scrapping subsidy,

<sup>5</sup> See Xinhua News Agency, 5 August 2016 [[http://www.xinhuanet.com/2016-08/05/c\\_1119345198.htm](http://www.xinhuanet.com/2016-08/05/c_1119345198.htm)].

<sup>6</sup> See Yicai.com, 17 May 2017 [<http://www.yicai.com/news/5286422.html>].

<sup>7</sup> See Eworldship.com, 17 November 2017 [[http://www.eworldship.com/html/2017/ship\\_finance\\_1117/133762.html](http://www.eworldship.com/html/2017/ship_finance_1117/133762.html)].

scrapped total 56 vessels of 3.14 million DWT including container ship and bulk carrier 1n 2014. In the same year, China Shipping Container Lines received \$18.9 million (120million Chinese Yuan) as a ship-scrapping subsidy.<sup>8</sup>

## *South Korea*

### Shipping industry policy of South Korea

The Korean government has set the establishment of maritime power through mutual growth of shipping and shipbuilding as one of 100 national tasks. This year, the Korean government will strengthen the support for one-stop service by establishing the Korea Ocean Business Corporation. In addition, it promotes the cooperation of shipping industry and shipbuilding industry by offering shipbreaking subsidy for eco-ships. Furthermore, the cooperation between ship owners and shippers will be enhanced, while logistics networks will be further expanded by establishing a cluster for maritime industry.

Korea also has established a long-term goal by 2022 based on eco-friendly ships, cooperation between shipping industry and shipbuilding industry and active support to shipping companies. Compared with policies of China and EU, however, Korea's effort is lagging behind in terms of securing a new source growth engine for the shipping industry. Korea's shipping industry requires sources for a long-term new growth engine by responding to digitization, technological innovation and the fourth industrial revolution. For this purpose, it is necessary to come up with effective and practical policy that can keep up with that of other major shipping countries.

### Dominance of Development Finance Institution (DFI) in shipping finance

Korean government has promoted shipping finance through establishment of Development Finance Institution (DFI) such as Marine Finance Center, Korea Maritime Guarantee Insurance Co., Korea Shipping and Maritime Transportation Co., Ltd (KSmart). As Hanjin Shipping filed for receivership and business performance of Korean shipping companies deteriorated with liquidity crisis, Korea government announced a government plan to strengthen the competitiveness of the shipping industry. As part of the government plan, the size of financial support increased to \$2.4 billion to invest in purchase of new vessels of Korea shipping companies for acquisition of high efficient and high eco-friendly ships, and KSmart was established on January 2017.

Marine Finance Center (MFC) was established to support financing of domestic shipbuilding, offshore plant, shipping industry through consolidation of shipping finance

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<sup>8</sup> See Eastmoney.com, 26 June 2015 [<http://finance.eastmoney.com/news/1355,20150626520720724.html>].

segment and human resource from The Export-Import Bank of Korea (Korea Exim bank), Korea Trade Insurance Corporation (K-sure), Korea Development Bank (KDB). The first project of MFC was to provide ship fund of KRW 340 million for Greece Oceanbulk Container that made a contract with Hyundai Heavy Industries Co., Ltd for construction of 8 container ships.

On December 2014, Korea Maritime Guarantee Insurance Co. (KMGIC) was established with initial capital KRW 60 billion which jointly financed by KDB and Korea Exim bank. KMGIC aims to promote the growth of relevant industries by providing debt guarantees for businesses in shipbuilding and vessel purchasing, and in other economically sensitive industries. Main business scope of KMGIC is to provide guarantee insurance for the purchase of vessels by shipping companies and other projects.

At the end of 2015, KMGIC provided subordinated debt performance guarantee insurance of KRW 30billion to HSLine and Dong-A Tanker for the building of new vessels. HS Line and Dong-A Tanker planned to acquire bulk carrier of 115,000 DWT and 2 containerships of 1,800 TEU. The total price of 3 vessels is about KRW 100 billion, KMGIC provided guarantee of KRW 10 billion for each vessel.

### Ship investment company and ship fund

The Korean government decided to develop ship investment company and ship fund to prevent decrease of Korean shipping companies and support the domestic shipping industry after the Asian financial crisis (1997) and global financial crisis (2008). As a result, KAMCO Ship Investment Management Company (KAMCO SIMC) was established as a subsidiary of Korea Asset Management Corporation (KAMCO) in March 2015 to professionally manage ship funds. After this establishment, Korea Shipping and Maritime Transportation Co., Ltd (KSmart), as a tonnage bank, was established with initial capital KRW 1 trillion, which jointly financed by KDB (50%), Korea Eximbank (40%) and KAMCO (10%)

The main businesses of KAMCO SIMC are the purchase and charter of ships, financing from domestic and foreign financial institutions, issuance of bonds and equities, management and disposal of purchased ships on behalf of ship investment company. As of March 2018, KAMCO SIMC has been operating 45 ship funds of Korea tonnage ship investment company and already cleared 33 ship funds of KAMCO global ship investment company.

## Types of shipping finance based on source

The name of ship fund	The name of Ship	Date of Establishment	Status
KAMCO global ship investment company No.1-17	Hyundai Atlas, Hanjin Tacoma, Hanjin New Orleans, Hanjin Bombay, Hanjin Shanghai, Hanjin San Francisco, Hanjin Los Angeles, Hanjin Wilmington, Hanjin Valencia, Hanjin Nagoya, Hanjin London, Hanjin Washington, Hanjin Beijing, Hanjin Berlin, Hanjin Paris, Hanjin Rome, Hanjin Oslo	2009.07.03	Completion
KAMCO global ship investment company No.18	Universal Crown	2009.11.18	
KAMCO global ship investment company No.19-23	Heung-A Tokyo, No.2 Green Pioneer, No.3 Green Pioneer, Hanjin Richard Bay, FEG Success	2010.03.19	
KAMCO global ship investment company No.24	Global Brave	2010.06.18	
KAMCO global ship investment company No.25	Global Frontier	2010.08.03	
KAMCO global ship investment company No.26-27	Global Genesis, Global Hope	2010.08.18	
KAMCO global ship investment company No.28-33	Daebo IBT, Dong-A Peneus, Dong-A Tyche, Dong-A Ether, Silver Bridge, Hyundai Glory	2011.11.13	Proceeding
Korea tonnage ship investment company No.1-2	Sea Honesty, Sea Future	2015.04.09	
Korea tonnage ship investment company No.3, 4, 6, 7	Ultra Omega, SM Aurora, Wooyang Banders, Ricsea	2015.10.19	
Korea tonnage ship investment company No.5	GNS Harmony	2015.10.21	
Korea tonnage ship investment company No.8-13	T Symphony, T Prime, Sunny Young, Wise Young, Wooyang Friend, Youngheung	2016.06.15	
Korea tonnage ship investment company No.14-18	F Sun, Golden Denise, DK Lone, DK Itonia, Hyundai Tacoma	2016.11.09	
Korea tonnage ship investment company No.19-36	SM Mumbai, SM Tokyo, MSC Kwangyang, MSC Spain, MSC Portugal, SM Jakarta, SM Vancouver, SM Tacoma, SM New York, SM Norfolk, SM Savannah, SM Newcastle, SM Gladstone, SM Samarinda, SM Challenger, Star Clipper, Star Skipper	2017.04.24	
Korea tonnage ship investment company No.42-45	KG Asia, SM Charleston, SM Tianjin, SM Qingdao	2017.11.14	

Table 2 - Source: KAMCO Ship Investment Management Company website ([www.kamcosimc.com](http://www.kamcosimc.com))

KSmart, as a tonnage bank, purchases vessels from shipping companies at market value and charters with low charterage to shipping companies to improve the financial structure of shipping companies KSmart also invests in paid-in capital increase and permanent convertible bonds and supports shipbuilding companies by purchasing. As of March 2018, KSmart invested in paid-in capital increase of KRW 104.3 billion and permanent convertible bonds of KRW 600 billion of Hyundai Merchant Marine

Company Limited to secure capital expansion for the loss on disposition taking place during the Sales&Lease Back.

#### Investment status of KSmart

Investment Type	Product		Beneficiary
Ship fund (Holding ships)	Korea Ship Global No.1	Hyundai Forward, Hyundai Unity, Hyundai Grace, Hyundai Dynasty, Hyundai Voyager, Hyundai Supreme	Hyundai Merchant Marine Company Limited
	Korea Ship Global No.2	Hyundai Brave, Hyundai Courage, Hyundai Faith, Hyundai Force	Hyundai Merchant Marine Company Limited
Ship fund (Sale and Lease Back)	Korea Ship Global No.3	Dong-A EOS	Dong-A Tanker
	Korea Ship Global No.4	Golden Pioneer	Heung-A Shipping Co.,Ltd.
	Korea Ship Global No.5	Dongyang Chemi	SUNWOO TANKER
Paid-in capital increase	Capital increase by issuing new stocks	KRW 104.3 billion	Hyundai Merchant Marine Company Limited
Permanent convertible bond	Permanent convertible bond (issue a single account)	KRW 600 billion	Hyundai Merchant Marine Company Limited

Table 3 - Source: Korea Shipping and Maritime Transportation Co., Ltd website ([www.ko-smart.co.kr](http://www.ko-smart.co.kr))

#### Construction plan of investment business

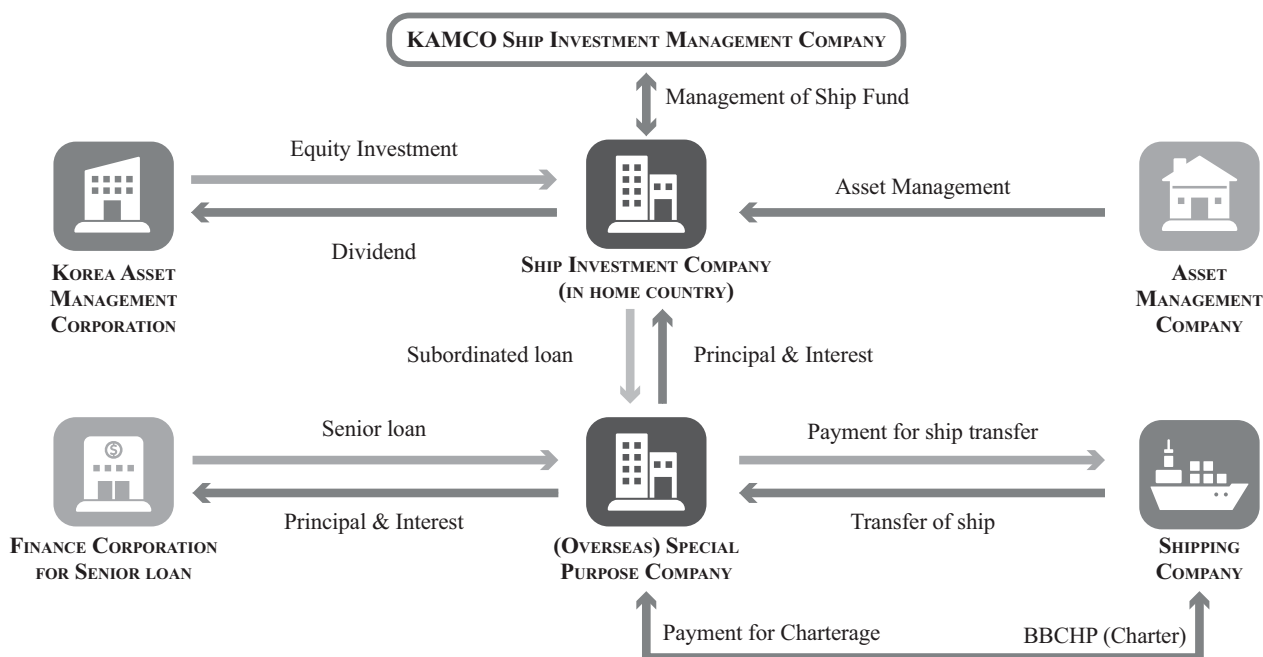


Figure 2 (a) - Source: SRM on Kamcosimc website ([www.kamcosimc.com](http://www.kamcosimc.com))

### Construction plan of investment business

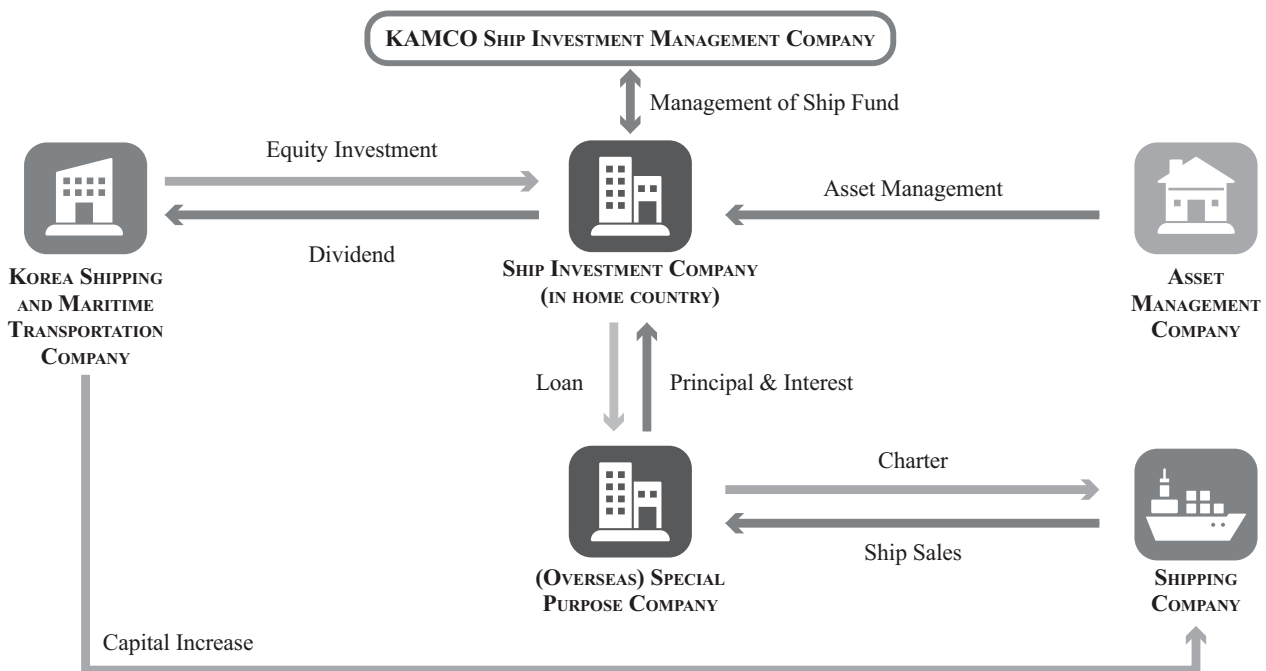


Figure 2 (b) - Source: SRM on Kamcosimc website ([www.kamcosimc.com](http://www.kamcosimc.com))

## Conclusions

This paper examined the status and trends of global shipping finance by period and types. In addition, the case studies on shipping finance of European countries, China and South Korea implied that financing is a key for the revitalization and development of the shipping industry. The sources and forms of shipping finance have become more diverse, ranging from European driven commercial banking to East Asian dominant ECF and leasing finance. Trend of shipping finance is continually changing, and the size of shipping finance has fluctuated over the past few years. As shipping finance plays a major role in the survival and development of shipping companies, further studies and analyses in this area are required. However, it is difficult to access to and collect financial data from financial institutions and shipping companies because these are very credential and sensitive as private data. For this reason, this study was mostly dependent on literature data from books, newspaper, articles, financial institutions and government websites, and there remains the constraint to obtain accurate figures and data on shipping finance.

Accordingly, shipping research institutes of each country should cooperate to share the data on shipping finance to develop more precise analysis and best practices and offer suggestions for the shipping industry.

# Appendix

## The list of export credits agencies

Region	Country	Name of the agency
Europe	Austria	Oesterreichische Kontrollbank AG (OeKB)
	Belgium	Credendo
	Czech Republic	Export Guarantee and Insurance Corporation (EGAP), Czech Export Bank
	Denmark	Eksport Kredit Fonden (EKF)
	Estonia	KredEx
	Finland	Finnvera, Finnish Export Credit Ltd (FEC)
	France	Bpifrance Assurance Export
	Germany	Euler Hermes Aktiengesellschaft
	Greece	Export Credit Insurance Organisation (ECIO)
	Hungary	Hungarian Export Credit Insurance Ltd and Hungarian Export-Import Bank plc
	Italy	Servizi Assicurativi del Commercio Estero (SACE)
	Latvia	Latvian Guarantee Agency (LVA)
	Luxembourg	Office du Ducroire (ODL)
	Netherlands	Atradius
	Norway	Export Credit Norway, Garantiinstituttet for eksportkreditt (GIEK)
	Poland	Korporacja Ubezpieczeń Kredytów Eksportowych (KUKE)
	Portugal	Companhia de Seguro de Créditos
	Slovak Republic	Export-Import Bank of the Slovak Republic (Eximbanka SR)
	Slovenia	Slovenska izvozna in razvojna banka, d.d. (SID)
	Spain	Compañía Española de Seguros de Crédito a la Exportación (CESCE)
	Sweden	Exportkreditnämnden (EKN), AB Svensk Exportkredit (SEK)
	Switzerland	Swiss Export Risk Insurance (SERV)
	Turkey	Export Credit Bank of Turkey (Türk Eximbank)
	United Kingdom	UK Export Finance
Middle East	Israel	The Israel Export Insurance Corp. Ltd. (ASHRA)
America	Canada	Export Development Canada (EDC)
	Mexico	Banco Nacional de Comercio Exterior
	United States	Export-Import Bank of the United States (Ex-Im Bank)
Asia	China	China Export&Credit Insurance Corporation, Export-import Bank of China
	Japan	Nippon Export and Investment Insurance , Japan Bank for International Cooperation
	Korea	Korea Trade Insurance Corporation , The Export-Import Bank of Korea
Oceania	Australia	Export Finance and Insurance Corporation (EFIC)
	New Zealand	Export Credit Office (ECO)

Table I - Source: OECD (<http://www.oecd.org/tad/xcred/eca.htm>), ECA Watch ([www.eca-watch.org](http://www.eca-watch.org))

maritime  
economy