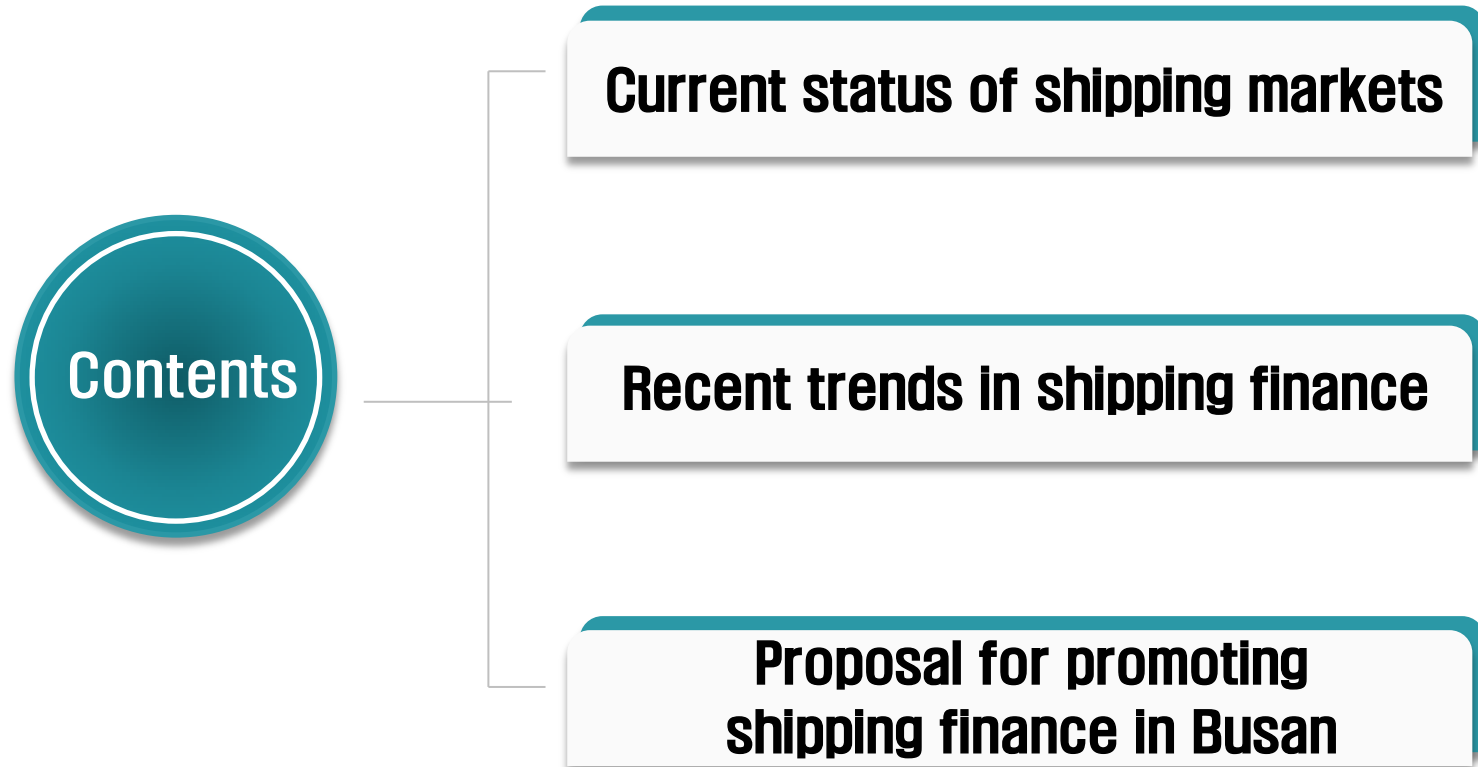


Promoting Shipping Finance through Capital Markets

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Current status of shipping markets

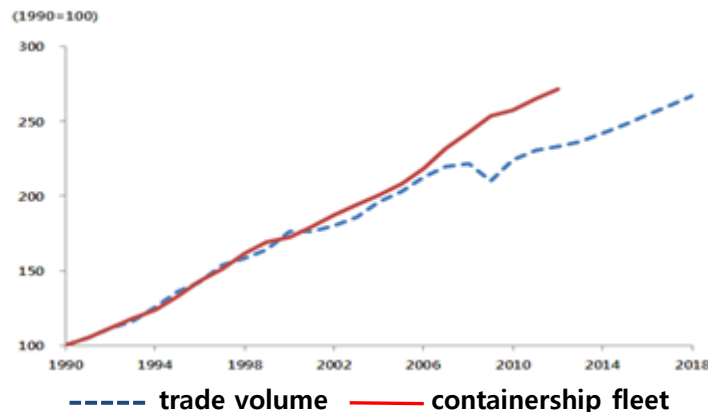
Recent trends in shipping finance

**Proposal for promoting
shipping finance in Busan**

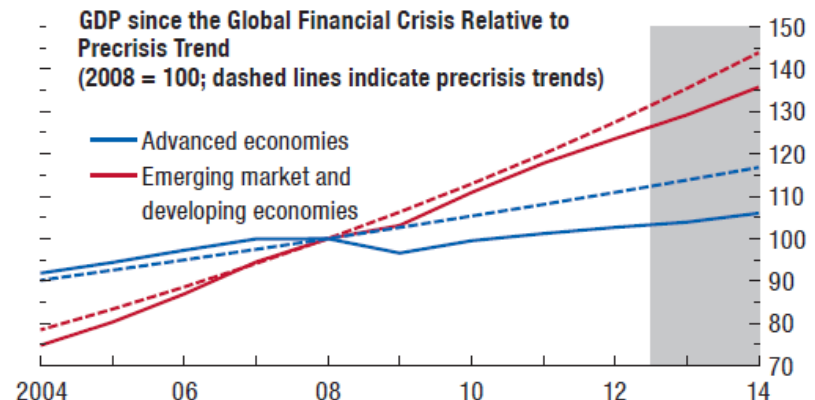
Demand and supply of vessels (1)

- **Overcapacity in the shipping markets is not expected to be resolved in a couple of years.**
 - A great deal of new tonnage was added even during the economic downturn.
 - * Danish Ship Finance estimated the spare capacity of container fleet at 24% in 2013.
- **World economies are recently showing very disappointing trends.**
 - The eurozone economy remains smaller than it was before the collapse of Lehman Brothers.
 - * GDP growth : 0.8% in 2014 and 1.3% in 2015 (IMF)
 - China's growth potential is expected to decrease further, which had been a blackhole of raw materials.

Trade volume and containership fleet



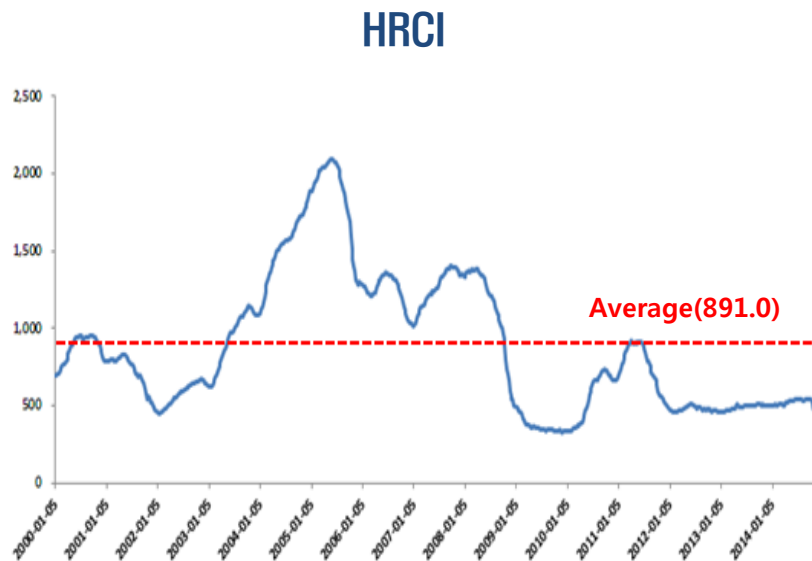
Source: BS finance research institute



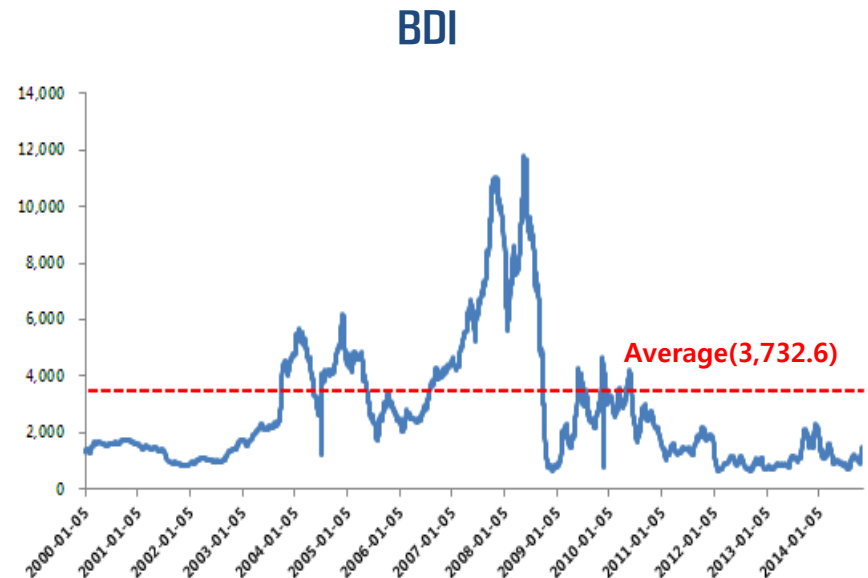
Source: IMF World Economic Outlook (2014.4)

Demand and supply of vessels (2)

- Freight rates are too low to secure proper earnings for a long time.
 - The Howe Robinson Container Index (HRCI) has remained at around 550 and the BDI at 1,000 since 2012.



Source: Clarksons



Source: Clarksons

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- **HSH Nordbank**
 - Net loss of €814 million in 2013.
 - Loan loss provision against ship finance amounted €478 million in 2013.
- **Commerzbank**
 - Shipping finance cost sharply increased due to stricter regulations.
 - It withdrew from shipping sector in 2012.
 - ※ Balance of ship finance : €13 billion (as the end of September in 2014)
- **The ECB ordered German banks to set aside an extra €1.1 billion against their shipping portfolio in October, 2014.**

Dispose of bank's risk exposure

- **Operating right of vessels and related portfolios in struggling SPVs were transferred.**
 - An SPV acquired operating right of vessels and related loans.
 - Acquiring SPV paid a part of existing loan so that exposure of previously financing bank was reduced.

[Example]

- Vessels forming the transaction : 5 tankers and 5 containerships
- Period of operating right : 5.5 years
- Loan amount : \$301.2 million
- Original lending bank : HSH Nordbank
- Navios group paid \$127.8 million in cash to HSH Nordbank and assumed \$173.4 million of subordinated HSH participating loan.
- Navios expects to use 80% of revenue net of operating expense and capital cost for loan repayment.

Basel III

- Long-term lending and non-liquid investment are avoided due to stricter capital and funding requirements.

(1) Capital requirement

$$\frac{\text{common equity}}{\text{riskweighted assets}} \geq 4.5\%$$

(2) Leverage ratio

$$\frac{\text{Tier 1 capital}}{\text{total assets (risk unweighted)}} \geq 3\%$$

(3) Liquidity coverage ratio

$$\frac{\text{high-quality liquid assets}}{\text{net cash outflows over 30 days}} \geq 100\%$$

(4) Net stable funding ratio

$$\frac{\text{stable funding available}}{\text{stable funding required}} \geq 100\%$$

Focusing on capital market solutions

- **Many European banks contracted their shipping exposures.**
 - Many banks are still under pressure of deleveraging.
 - Corporated bonds, which had been a supplementary tool before the crisis, become common source for shipping sector.
 - Bond program has been diversified from plain vanilla bond into convertible bond and covered bond.
 - CB : Issuers can save funding cost and investors have a chance of capital gain when markets are recovered.
 - Covered bonds : Banks can save funding cost and investors get higher security. (HSH Nordbank : €500 million in 2010)

(Before 2011)

Bond : Bank loan = 1 : 7.3

(2014.1~10)

Bond : Bank loan = 1 : 1.4

Source : ABN AMRO, Marine Money

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Capabilities of Korea's commercial banks in shipping sector

- **Funding cost in foreign currency** : less competitive to global banks
- **Ship finance know-how** : not much experienced
- **Risk management skill of long-term lending** : less experienced
- **Volume of assets** : Major banks in shipping sector are mainly top 50
 - ※ Nordea(T29), Deutsche Bank(T4), BTMU(T2),
HSBC(T3), BNP Paribas(T6), Credit Agricole(T5)
- **Financial climate**: limited risk appetite

Alternative investors

- **Current trends of global alternative investment markets**
 - Total assets under management of top 100 alternative asset managers : \$3.1 trillion (2012)
 - Pension funds are the largest investors (36%)
 - Other major players : wealth managers, insurance companies, sovereign wealth funds, funds of fund
 - Investment assets : real estate, PE, hedge funds, infrastructure, structured products, commodities
- **Private Funds participate in ship finance**
 - Annual average investment volume during 2010~2013 : \$3.9 billion
 - ※ Syndicated loan in 2013 : \$74 billion
 - Period : 3~7 years
 - Type : equity investment in shipping fund, joint venture with ship owner, lending, acquisition of ship or shipping loan
- **Interest in alternative investment by banks, insurance companies and pension funds is increasing.**

Expanding bond markets

- **Reducing risk from economic cycle.**
 - Shortening bond maturity into 3~5 years.
 - Guarantee by government owned financial institutions.
- **Issuing ship-backed bonds and freight-backed ABS.**
 - Lower funding cost by splitting ship company's credit risk.
- **Introducing variable coupon bond linked freight rate**
 - Coupon rate is adjusted following freight rate change.
 - Issuer : save funding cost
 - Investors : additional earning when freight rises.
- **Developing loan securitisation markets.**
 - Issuing asset-backed securities based on commercial banks and BMFC loans.
 - Attracting insurance companies, private equity and pension funds.

Widening business scope of government owned financial institution

- **Diversifying the business of Busan Marine Finance Center (BMFC)**
 - Attracting banks, insurance companies and pension funds to increase their shipping portfolios through underrighting or guarantee of bonds by BMFC.
 - ※ **Example of bond guarantee by KEXIM**
 - Borrower : Scorpio Tankers
 - Type : direct loan \$175 million, bond guarantee \$125 million
 - Use : shipbuilding oil tankers
 - Shipbuilder : Hyundai Mipo, Hyundai Samho, DSME
- **Expanding KAMCO business in acquisitions and sales of non-performing ship finance.**