



WIN G&D

Winterthur Gas & Diesel

*Merchant Shipping
and Shipbuilding Markets*

R. Stiefel

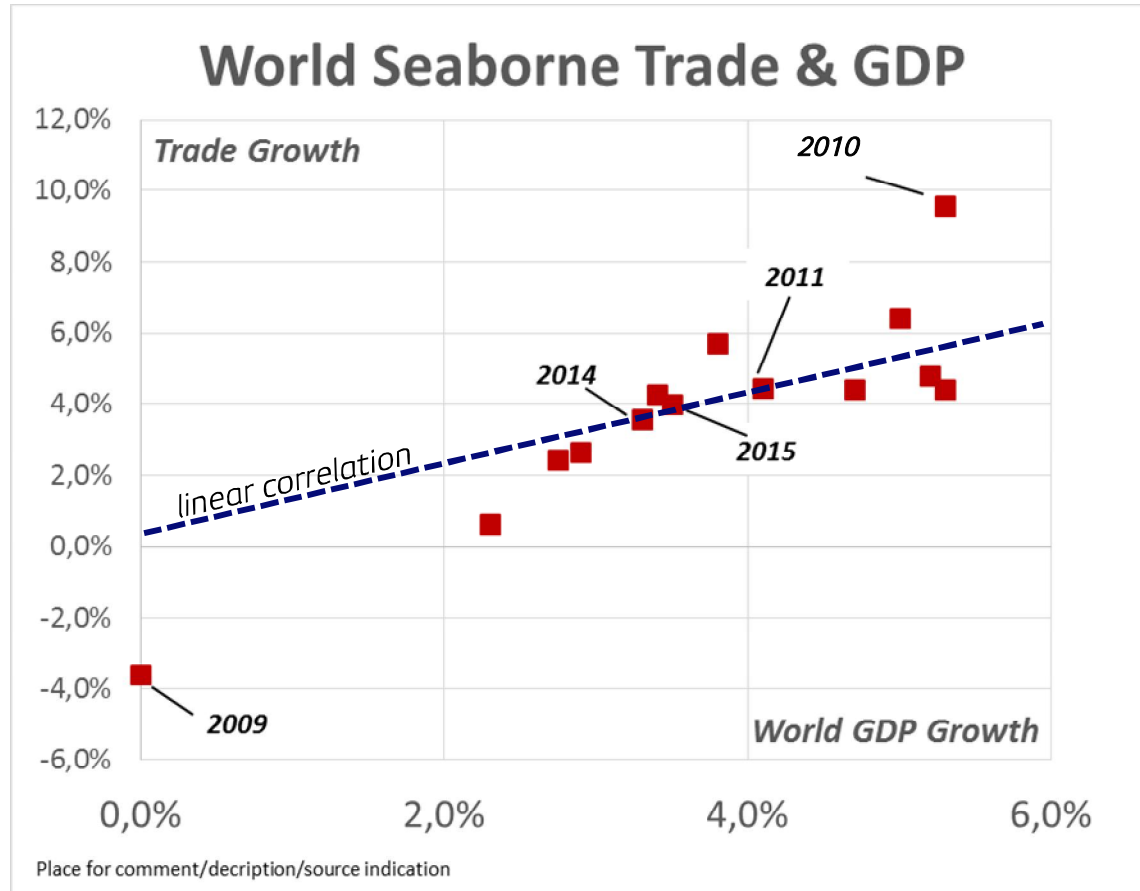
**Licensees'
Conference 2015**

Interact. Inspire. Innovate.

**INTERLAKEN
6-9 SEPT 2015**

Dependency of Seaborne Trade and GDP

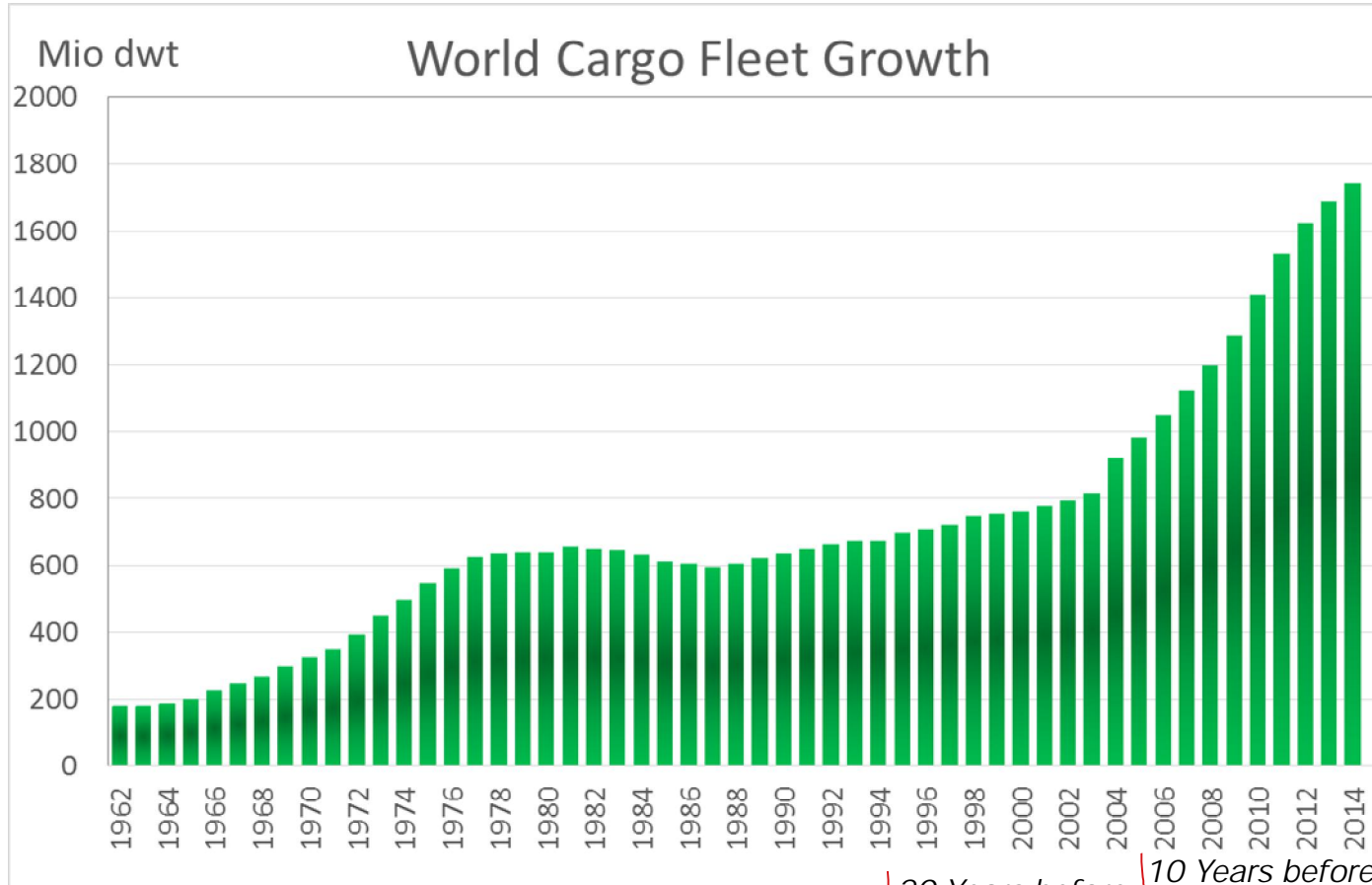
Our macro-environment



- In previous decade trade growth was 1.5 or 2x GDP growth
- After credit crisis correlation became close to linear
- Lower growth rates will become “normal business”

Nevertheless World Fleet is Increasing.....

Demand for transportation is here to stay and grow



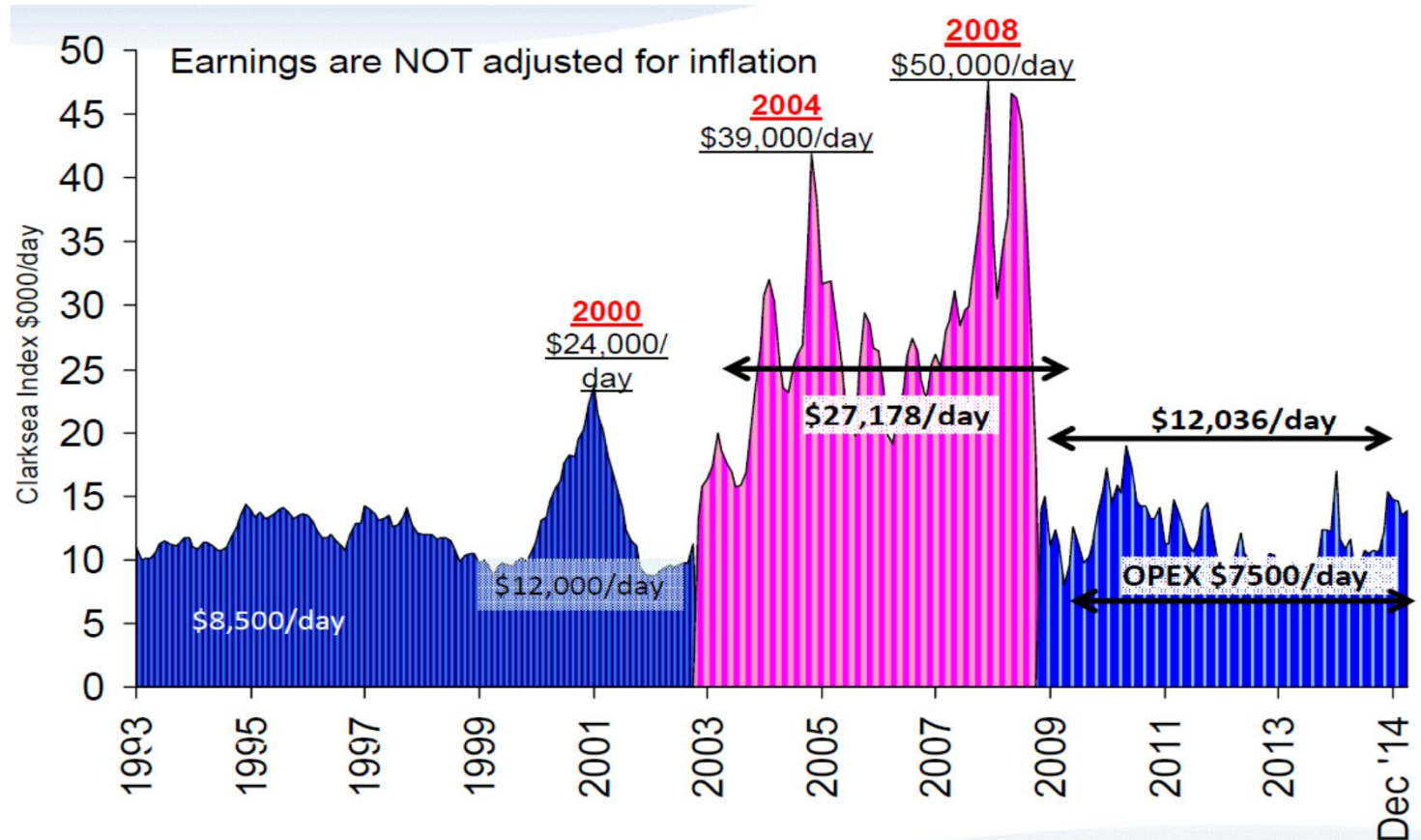
- Demand drivers:*
- Population growth
 - Industrialisation
 - Globalisation
 - Containerisation

4% fleet growth today represents same tonnage amount as 11% growth in 1994 or 8% in 2004!

20 Years before 10 Years before
2.6x 1.9x

Earnings Up and Down

The money machine has been spluttering for quite some time



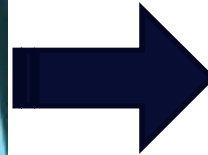
Weighted average earnings of tankers, bulkers, containerships & gas

Source: clarkson

Volatility in Shipping Markets is Up

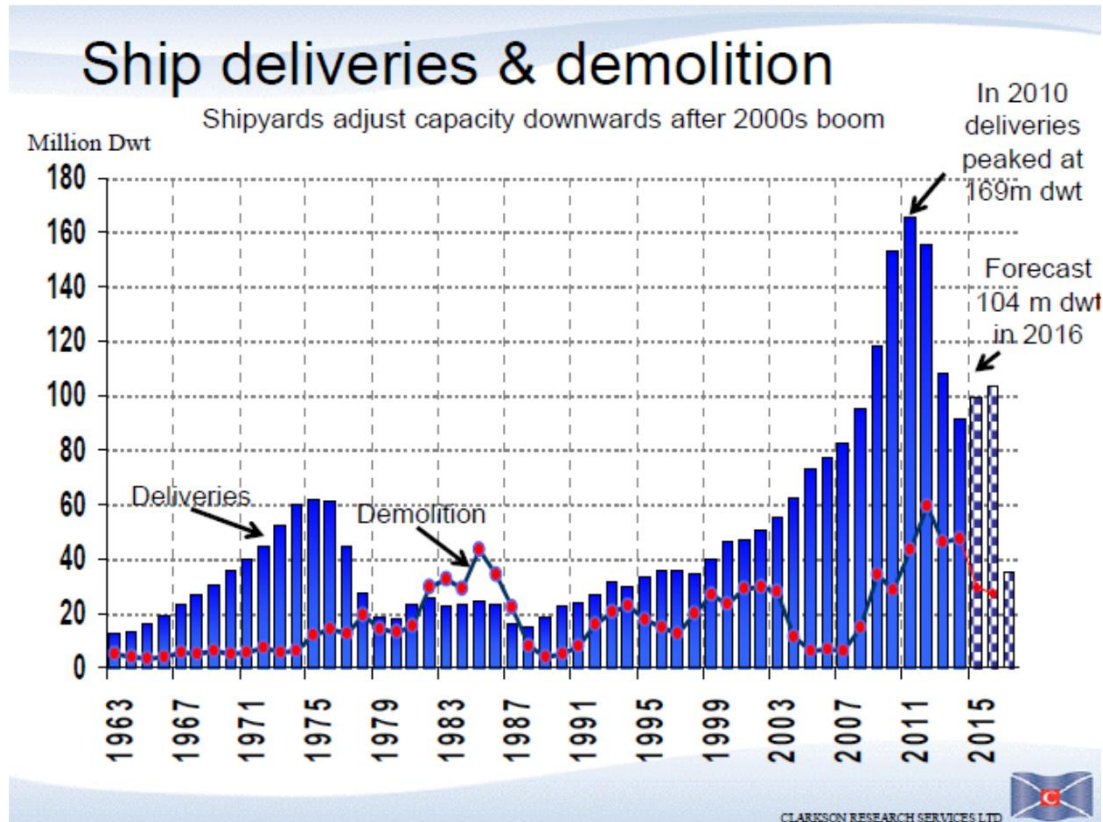
New reality

- Every decade shipping is facing a different situation*
- New players (investors) are entering the scene*
- Seaborne trade patterns and transported goods change constantly*
- Geopolitical developments influence shipping*
- Rules and Regulations set to change the framework*



Fleet Growth Adjusted Downwards

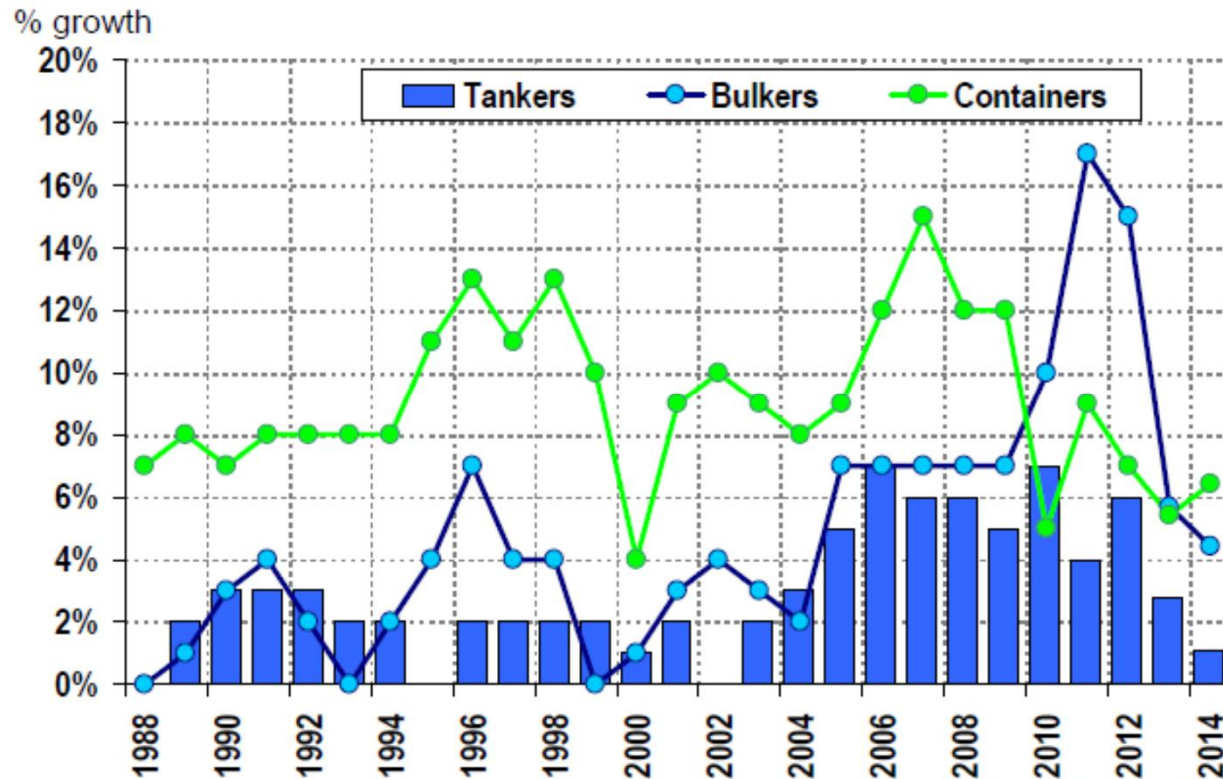
Supply and demand balance coming closer...



– The fleet growth rate has slowed from 9% to around 4% pa. This is roughly in line with trade growth!

– The shipbuilding industry has had to adjust capacity downwards in a painful process

Every Shipping Segment Follows its Own Rules



- Biggest decline in bulker fleet growth!
- Containers picking up due to ordering boom for mega-size vessels prior to Tier III introduction.
- Tanker segment in 2014 at historical low level – recovering in 2015.

Bulker Market Highlights

Capes rally sputters

The capesize revival has slowed, but brokers remain positive about final quarter

AFTER a busy fortnight, the capesize sector gave a cooling off

Dry Bulk Perspectives
Capesize

"We are starting to see some vessels in the fix for longer duration Brazil... because rate

Age of the ultramax as huge order backlog hits the market

Ultramaxs are on the way to becoming the dominant ship type in the handy bulker trades with 11% more cargo capacity and an additional hold compared to supramaxes

Adam Corbett London

The ultramax bulker fleet is set to show tremendous growth and become a significant part of the handy bulker trading fleet as a huge backlog of orders is delivered into the market over the next three years.

Ultramaxs, the largest type of handy bulker and generally categorized as between 60,000 dwt and 64,999 dwt, currently only make up 6% by number and 9% by deadweight (dwt) of the total handy bulker fleet of between 20,000 dwt and 69,999 dwt.

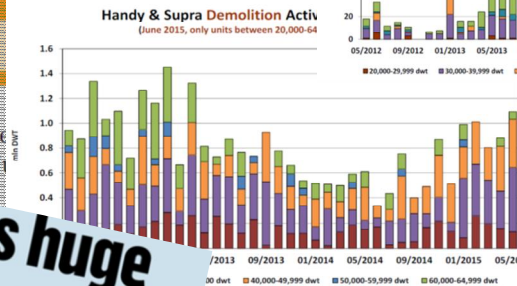
Until the past few years, the most popular investment choice of owners had been supramaxes, between 50,000 dwt and 59,999 dwt, now accounting for 46% of the handy fleet by dwt.

Supramax models such as Tsuneishi Heavy Industry's STES S2 came fitted with cargo-handling equipment, a limited length overall (LOA) and large cargo capacity, presenting a wide range of trading options especially to developing regions. They were highly regarded by operators for their trading efficiency and flexibility. There are currently 1,879 supramaxes trading.

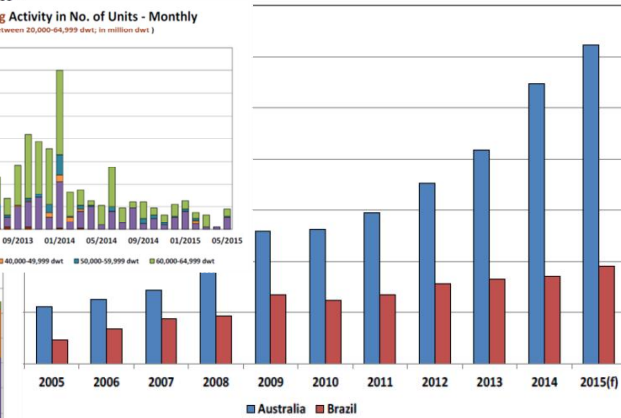
Yet all that could change. Recent trends suggest the ultramax is on course to take over from the supramax

OKER, SUPRAMAXES ARE STILL VERY POPULAR IN THE MARKET BUT OWNERS ARE INCREASINGLY BEING ATTRACTED TO ULTRAMAX DESIGNS BY THE HIGHER CARGO CAPACITY AND FUEL-EFFICIENCY RATING.

\$6 per tonne on July 21 before falling back to \$5.80 on July 22



Chinese Imports from Australia and Brazil (source: various; in mln tonnes)



- Slow improvement in rates in 3Q. 2015
- New efficient designs trigger interest
- Low ordering and high scrapping levels good for the future earnings
- Mining companies' fight for market shares increases BC demand
- Wealth increase drives food consumption (import) in China and India

Container Market Highlights

NYK net profit more than quadruples in April-June

Japanese shipping giant benefits from Crystal Cruises sale and better earnings in tanker, container and air cargo businesses

NIPPON Yusen Kaisha recorded strong year-on-year growth in net profits for April-June, with better performances of its tanker, container and air cargo businesses and a one-off gain from the sale of Crystal Cruises, writes Max Tingyao Lin.

Net profits of the Japanese shipping giant more than quadrupled on year to ¥43.1bn (\$356m) from...



MOL records higher April-June profits but remains gloomy on container prospects

Japanese shipping giant predicts full-year loss for box unit with weak freight rates and volume

MITSUI OSK Lines reported higher earnings for the April-June period on lower bunker prices and a depreciated yen, but weak rates in container shipping prompted the company to cut its yearly profit outlook, writes Max Tingyao Lin.

The Japanese shipping conglomerate posted net profits of ¥12.7bn (\$104.4m) in the first quarter of its fiscal year, up around 50% from ¥8.5bn during the year-ago period.

Group-wide revenue increased to ¥449.4bn from ¥443.9bn as the Japanese currency depreciated by nearly 20% on year.

The container unit of MOL, which posted six annual losses over the past seven years, saw



K Line posts stronger first-quarter results

Improved performance in tanker and containership Japanese operator

KAWASAKI Kisen Kaisha posted stronger year-on-year results in the three months from April to June, bolstered by improvement in its tanker and containership business, writes Cichen Shen.

The Japanese shipping group's net profit surged 138.2% to ¥10.2bn (\$83.3m) while ordinary income grew 125.1% to ¥14.6bn, according to its quarterly report.

Operating revenue, dragged



K Line's net profit surged 138.2% to ¥10.2bn (\$83.3m) while ordinary income grew 125.1% to ¥14.6bn.

Silver lining behind boxship charter-market correction

by Ian Lewis London

The correction in the vessel charter market is good because it discourages speculative ordering, says leading lessor Danaos Corp chief executive John Coustas.

Danaos, one of the top 10 owners of ships destined for the charter market, stands to be affected by the drop of around 10% in rates over the past month.

But the correction was expected because of an exaggerated rise in Coustas during a conference call.

He concedes that the correction in the second quarter partially took back some of the gains realised earlier in the year.

Charter market ships are still around 38% higher than a year ago, according to ConTex figures, enabling Coustas to argue that

and the continuous cascading of larger ships into the charter market.

"We're definitely going to see lower levels," he said. "[But] I don't believe there is going to be a peak about a year or year-and-a-half ago."

Coustas says newbuilding orders are mainly confined to ultra-large containerships (ULCs) up to



JOHN COUSTAS: Chief executive of Danaos Corp. Photo: KENNY HOCKEY

- Liner operators earn more!
- Order boom for mega-size vessels prior to Tier III introduction
- Will vessel sizes grow further?
- Yards fight hard for "mega-size" orders

Tankers and LNGCs

Sector buzzes with orders and steel changing hands

Tankers hit top gear



Lloyd's List

lloydslist.com | Monday August 3, 2015
Leading maritime commerce since 1734

TEN acquires four crude tankers for \$316m

Purchase of York Capital VLCCs and Yasa suezmaxes comes as earnings hit seven-year high

TSAKOS Energy Navigation has clinched about \$316m worth of new crude oil tanker acquisitions as it enjoys its strongest earnings since 2008, writes Nigel Lowry. Unveiling its highest second-quarter and six-month profits for seven years, it had purchased two very large crude carriers under construction from US-based hedge fund York Capital



Tank

In order to s...
ly the sa...
world's

Summer sun shines on tankers

As crude tanker operators bask in unseasonably strong markets, fundamentals appear generally positive for the year ahead

with VLCC rates at their highest levels in the seven years since the 2008 financial crash, the crude market is showing both a...

• POSITIVE OUTLOOK: VLCC owners can relax on the beach as the sun shines on rates. Photo: BLOOMBERG



Shipyards scoop mixed bag of LNG orders in first half

Number of newbuildings matches that seen in the first six months of 2014 but without the prospect of last year's second-half boom

- Low crude prices drive demand growth
- Unexpected high earnings and investment activities in the crude segment
- Consolidation on owner side
- Caution rising for later in 2016 and 2017!
- LNGC ordering low compared to 2015
- Projects are delayed and postponed – also triggered by low crude price – but will happen!
- LNG is a growth business



Global Development Affecting Merchant Shipping



Suez versus Panama battle heats up in Asia-US trade

Exclusive: Data compiled by the TSA shows that Suez Canal is gaining market share as service patterns change

THE Suez Canal now regularly handles more container traffic bound from Asia to the US than the Panama Canal, as traditional service patterns are adjusted in response to shipper demands and the arrival of larger vessels, writes Janet Porter.

The turning point came in May 2014, with many lines reconfiguring their networks

Tax hike could trigger Greek plot
Cyprus refuge plan

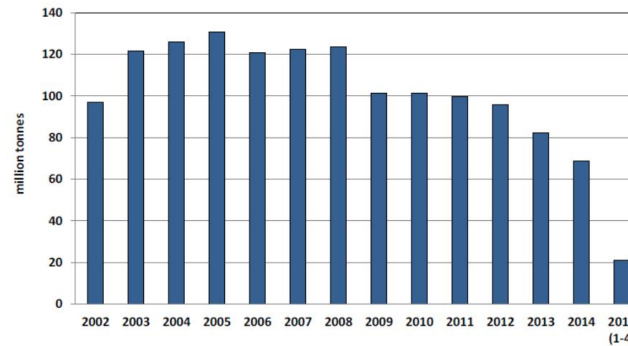
Big names in Greek shipping have taken pre-emptive action to switch some of their activities to Cyprus if the government in Athens is forced to

Cosco and China Shipping to speed up consolidation with joint reform penal

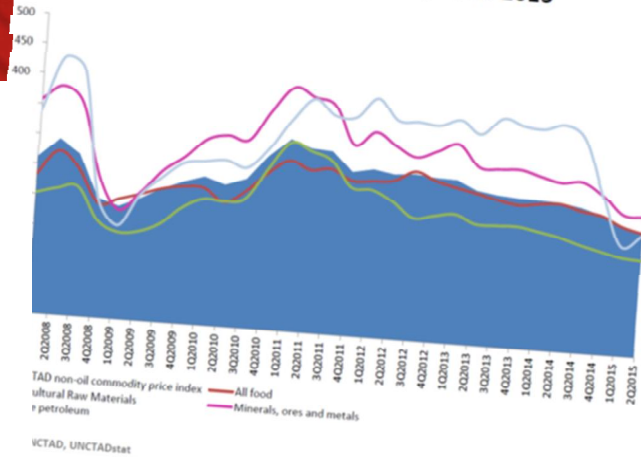
Integration between China's two largest shipping groups is expected around 2017



Iran Crude Exports - Annual
(Source: JODI; in million tonnes)



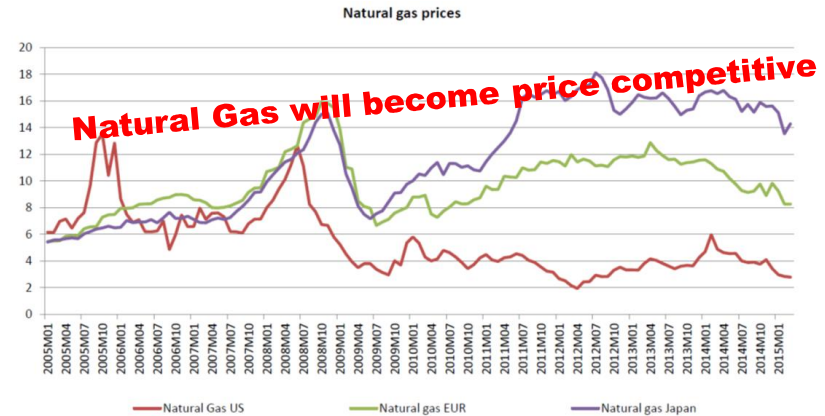
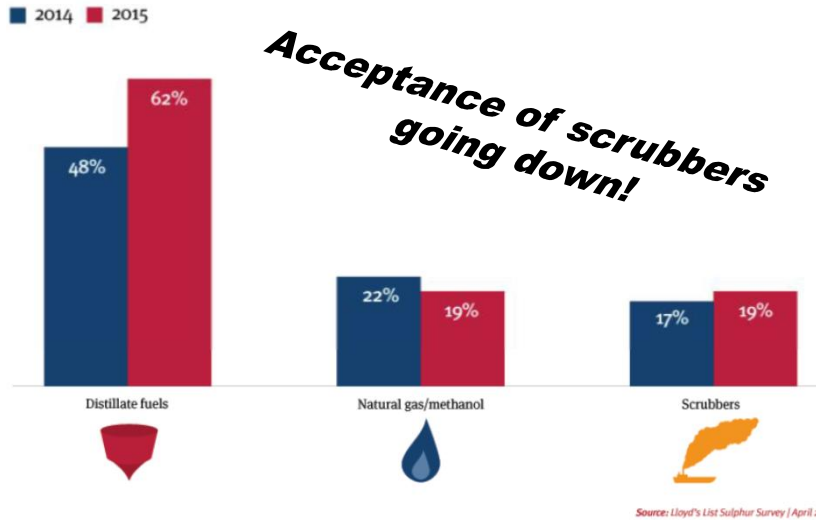
Commodity price indices, 2008-2015



- Suez/Panama canal developments
- End to Iran sanctions
- Greek debt crisis
- Consolidation on owner side
- Reduced commodity values

Emissions Regulations Create Opportunities

Which solution do shipowners think is best suited to meet the SOx challenges in emission control areas from 2015?



Source: World Bank
 US: Henry Hub Louisiana
 Europe: average importborder price
 Japan: LNG import price CIF

IMO TIER III

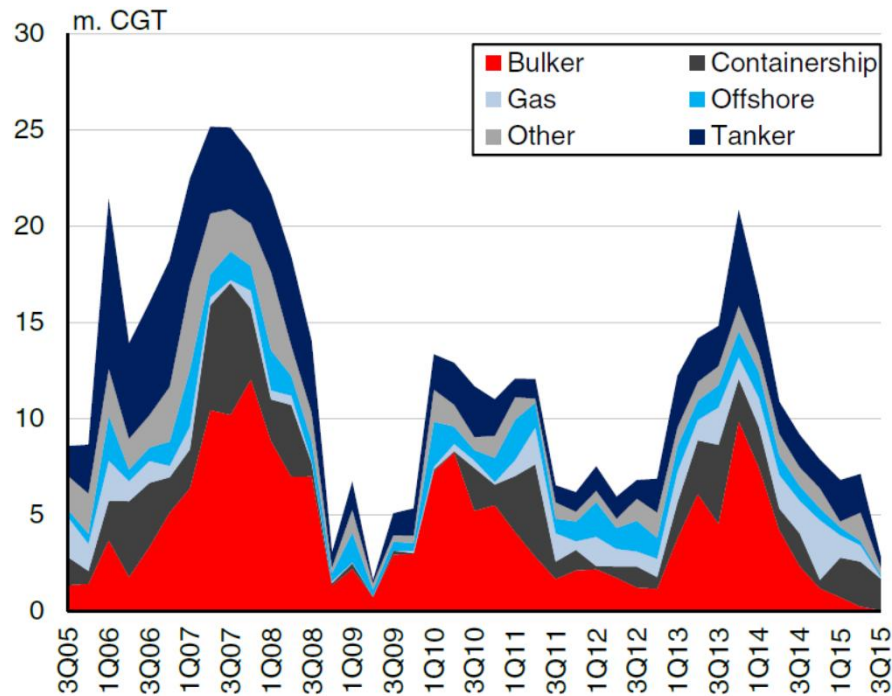


- LNG as fuel has a bright future due to low emissions
- Infrastructure for bunkering under development
- Boom to be expected as soon as global sulphur cap is introduced (2020/25?)
- MEPC 68 decision on "Otto Cycle" engines positive for X-DF
- Tier III engines will make up 40 to 60% of deliveries by 2020, depending on the study

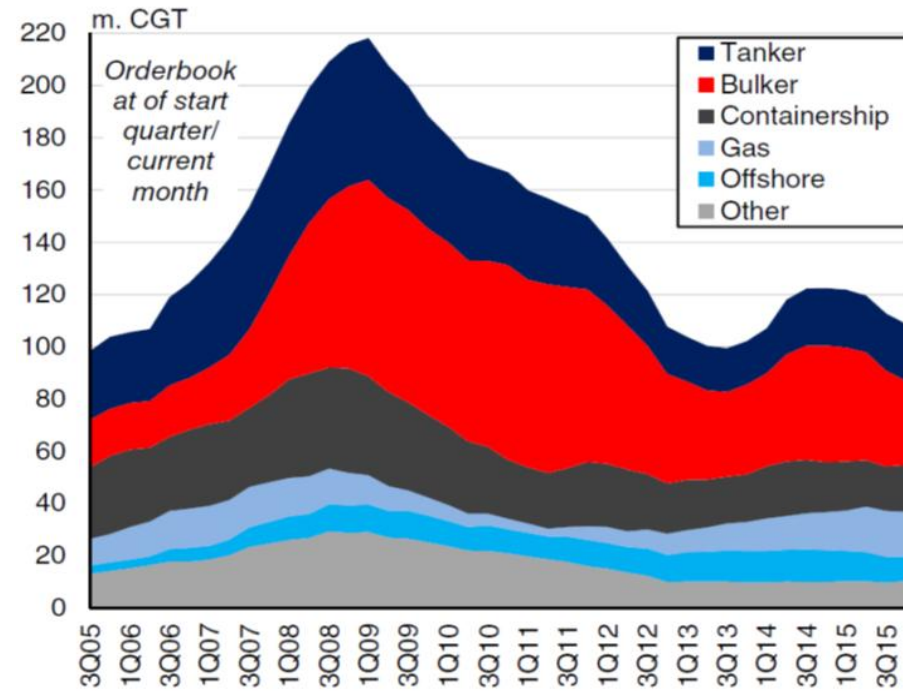
Shipbuilding Markets

Output cut by half

Quarterly Contracting



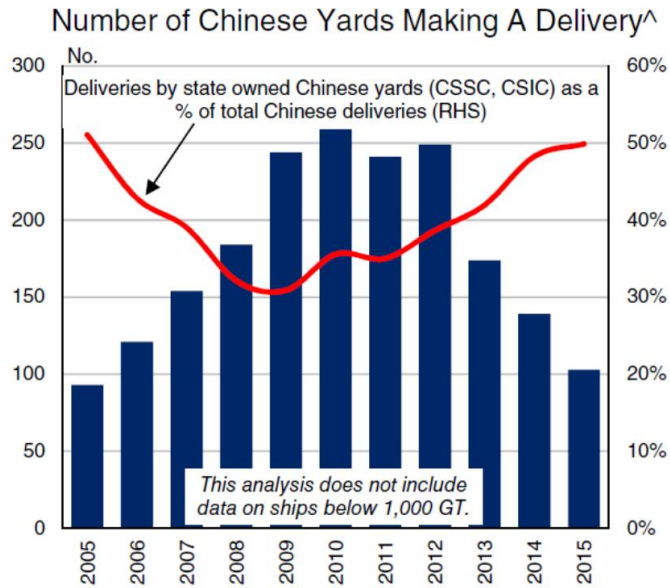
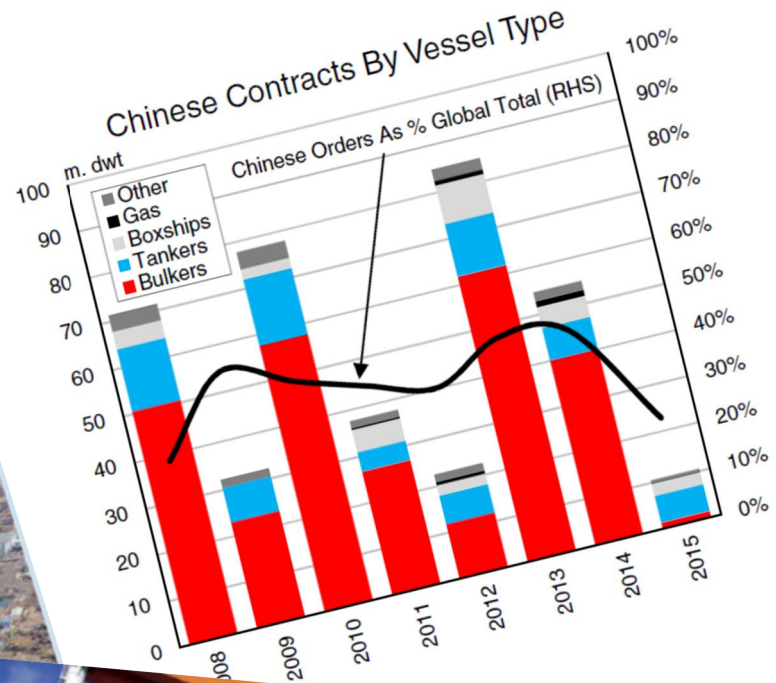
Quarterly Order Book



- Ordering highly volatile in the last 10 years
- Global order book at 50% of peak and stabilising on this level

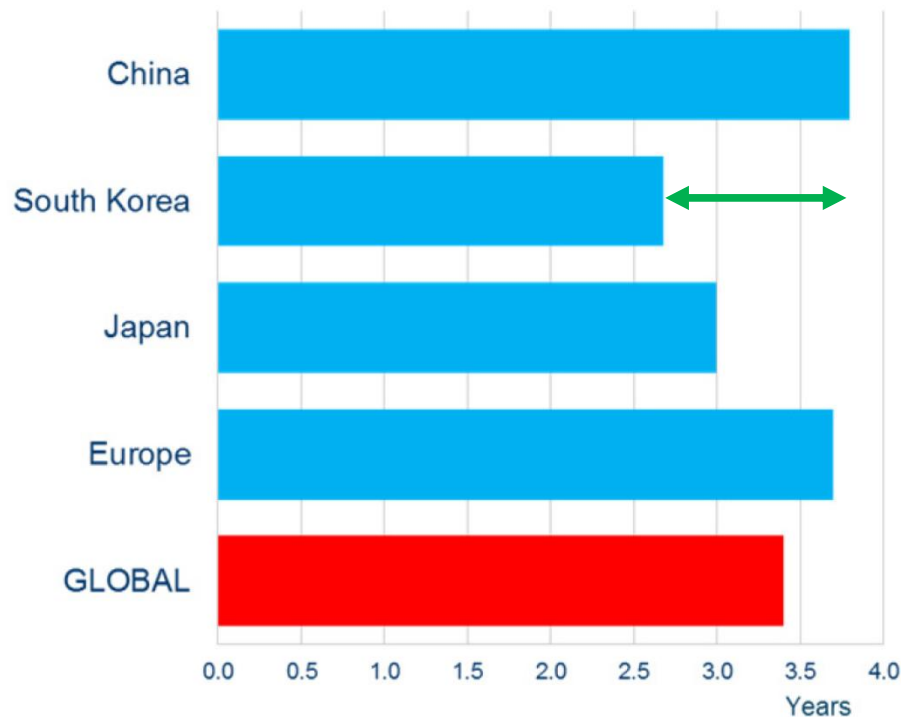
Shipyard Highlights

Painful capacity adjustments



Yard Forward Order Books

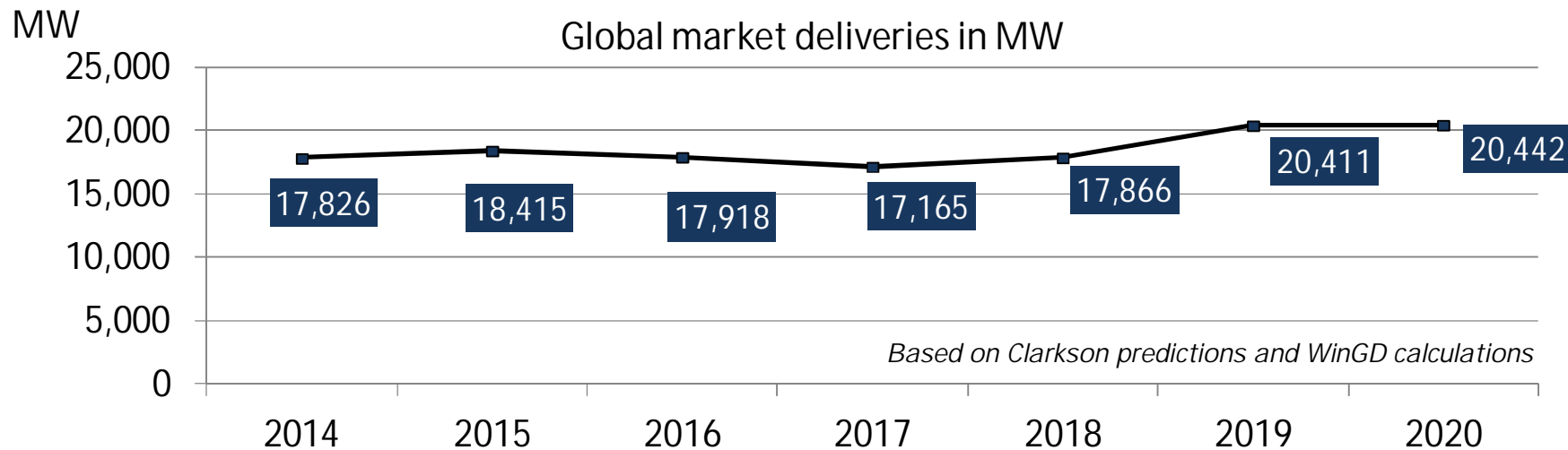
Yards "forward cover" with current order books (March 2015)



- *The shorter coverage of Korean yards and weakening offshore demand has triggered yards in South Korea to aggressively take Merchant orders in 2015*
- *2nd and 3rd Tier yards in China are having difficulties finding orders and cash*
- *Consolidation and reduction of yard capacity ongoing in all countries*

Low-speed Market Size Prediction

Our playing field



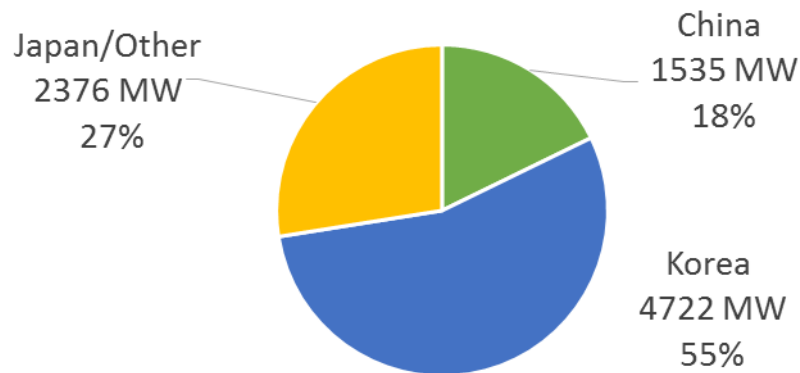
Next 5 years

- The delivery of low-speed engines is predicted to hover around 18,000 MW pa*
- The lowest volume to be expected in 2017*
- Recovery to above 20,000 MW from 2019 onwards*

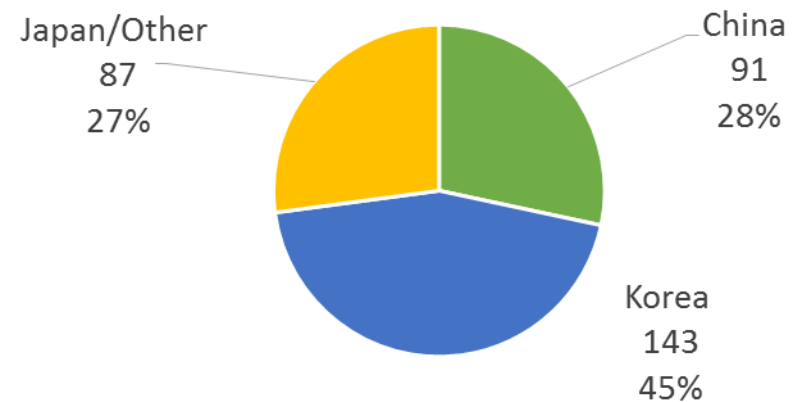
Our "Business" in 2015

Low-speed engine market this year

2-stroke Orders 1/2Q.2015
(8633 MW)



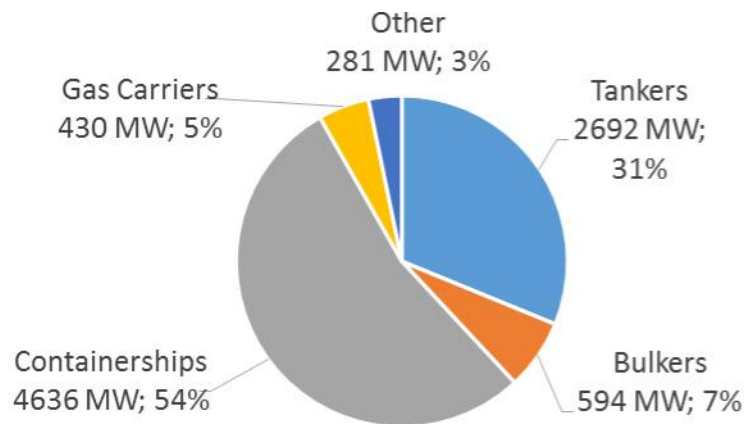
2-stroke Orders 1/2Q.2015
(321 vessels)



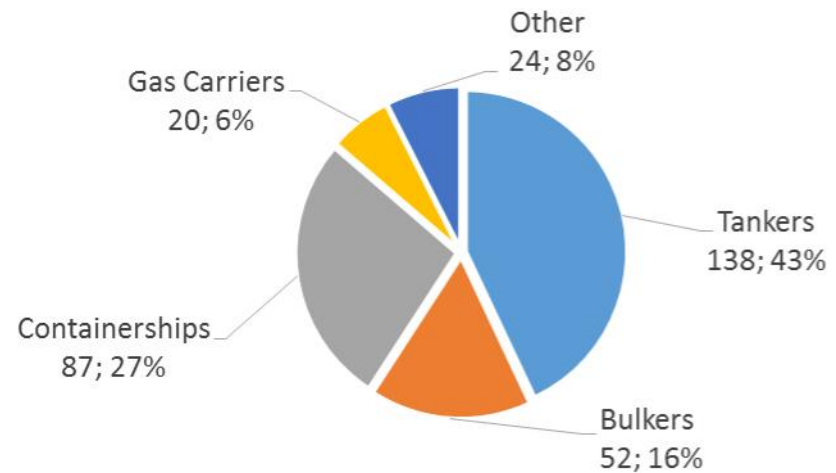
- Order intake in Korea very strong YTD
- China slow with expected increase second half of 2015
- Japan gained market share through mega-size container vessel orders

Ship Types Ordered 1/2 Q. 2015

2-stroke Orders 1/2Q.2015
(8633 MW)



2-stroke Orders 1/2Q.2015
(321 vessels)

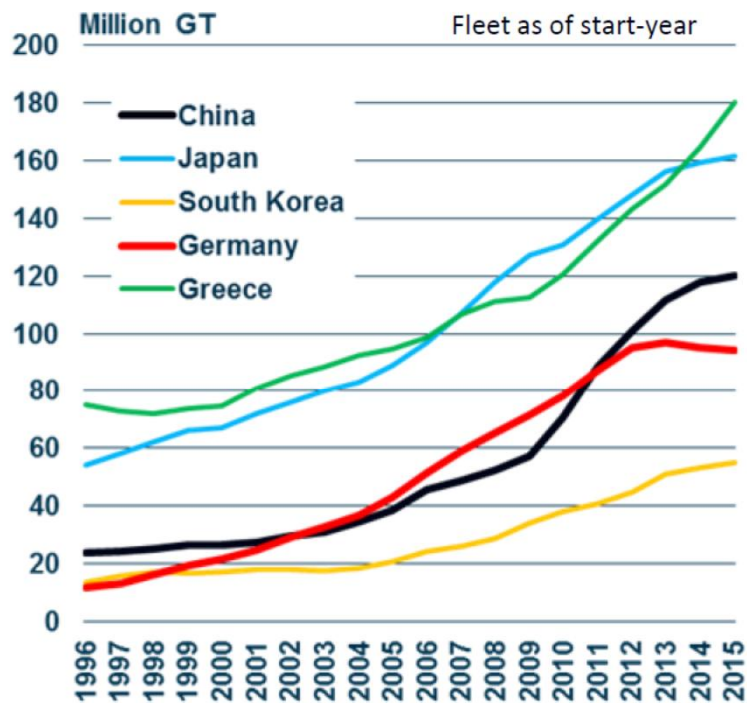


- Tankers in greatest demand
- Container vessel most decisive for our business
- Bulker ordering on hold
- Gas carriers became a much bigger segment in recent years

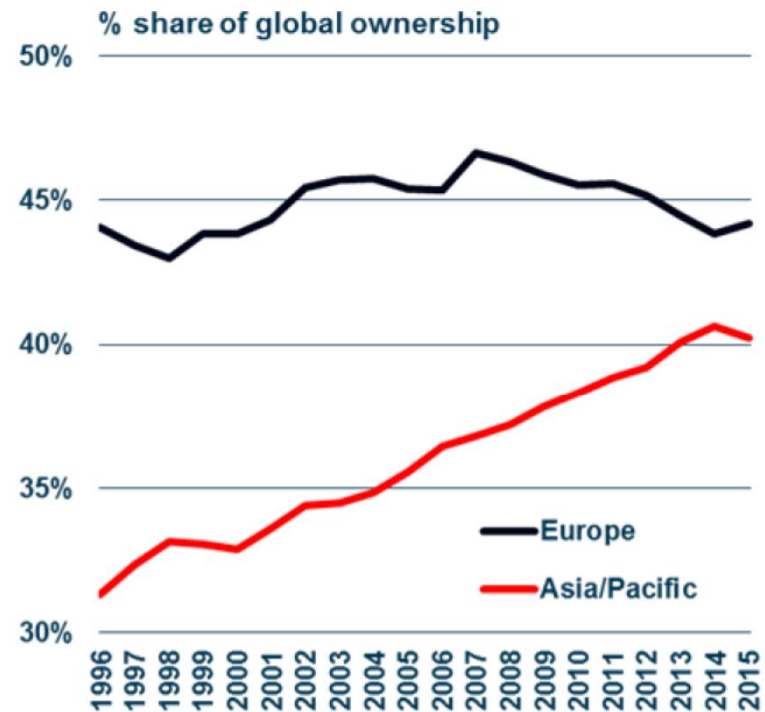
Shipping Trends – Who is Investing?

Where the money comes from

Regional Ownership –
Top Five Nations



Regional Ownership –
Europe vs. Asia

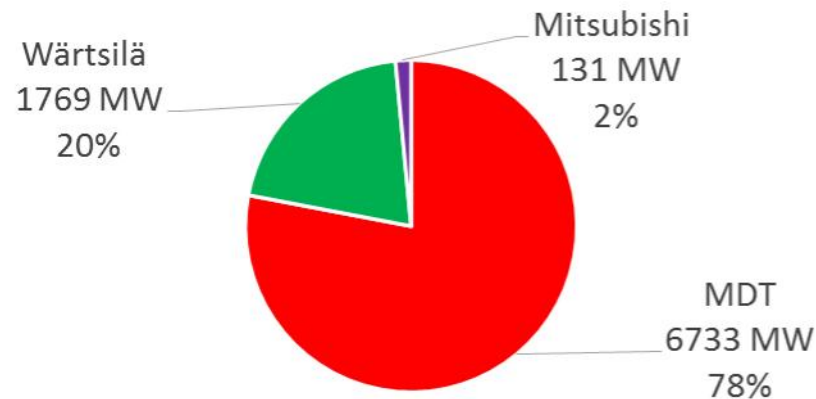


Source: Clarkson Research, World Fleet Monitor February 2015. Includes both cargo carrying and non-cargo carrying merchant vessels over 100GT in size. Europe includes non EU.

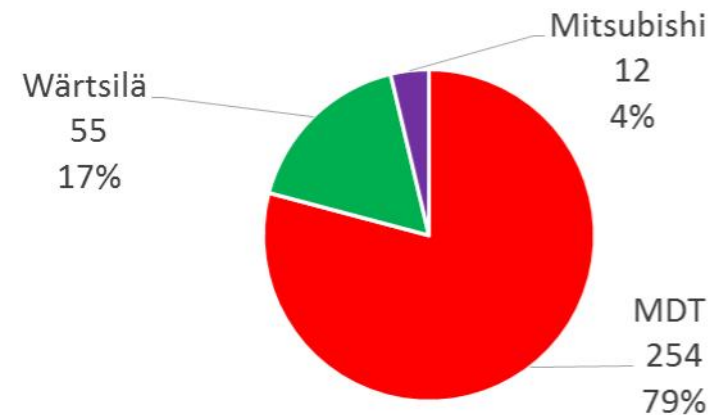
Market Shares for Low-speed Engine Brands

What we achieved together

*2-stroke Orders 1/2Q.2015
(8633 MW)*



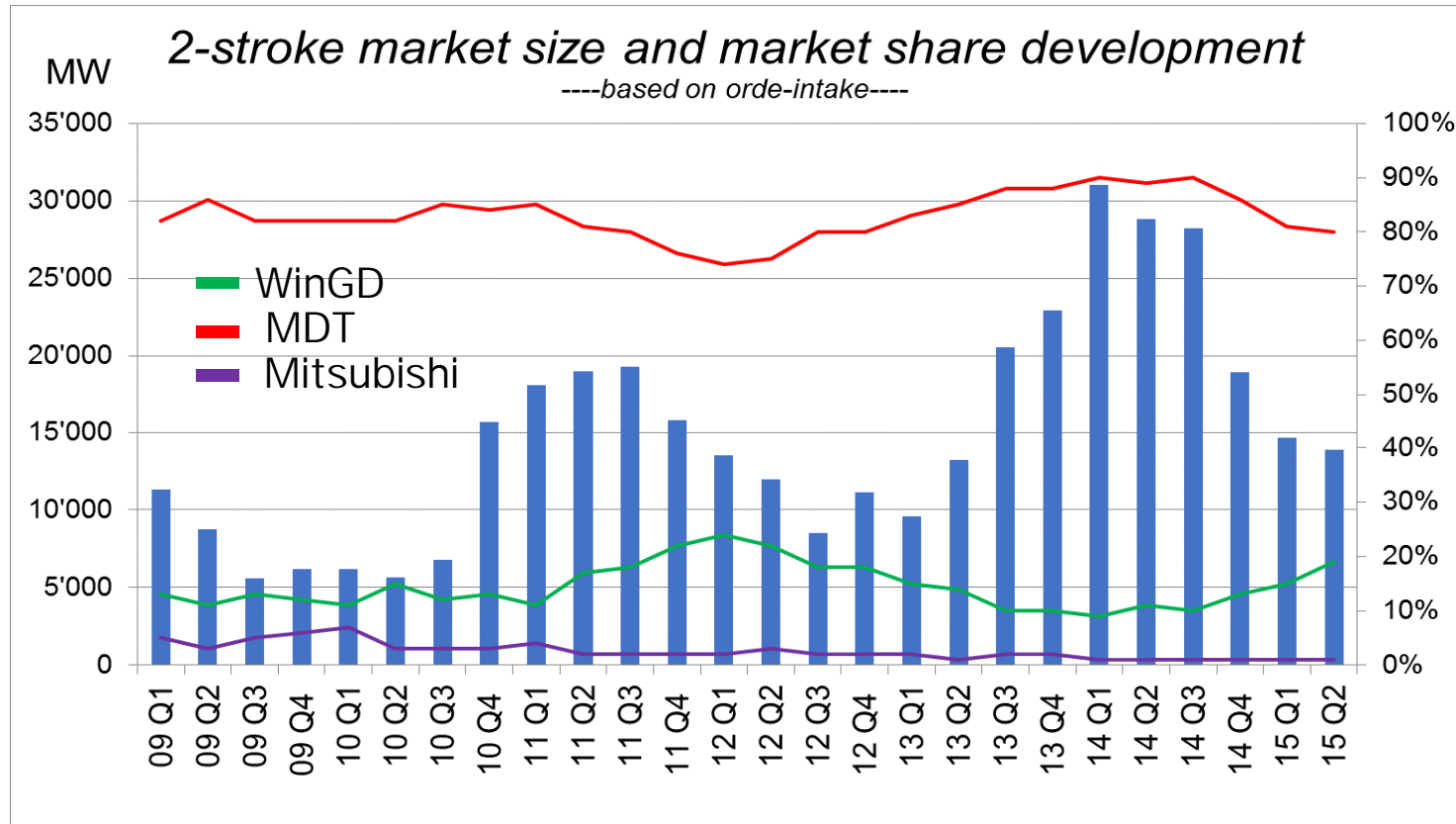
*2-stroke Orders 1/2Q.2015
(321 vessels)*



- Strong recovery of market share for WinGD in 1/2 Q. 2015 (+6% points)
- Generation X engines are popular and represent YTD 80% of our OI
- X82 most successful engine: 45% of MW / 1/3 of the engines ordered
- Breakthrough of the X92 for mega-size container vessels
- Low-pressure DF engines make up 14% of our OI


Historical 2-s Market Share Distribution

Our "temperature curve" is pointing in the right direction



12 month rolling

169 References for Generation X Engines*

<i>W-X engine</i>	<i>Vessel type</i>	<i>Firm orders</i>	<i>Licensee</i>
X35 X40 	44k DWT Bulk Carriers 15k DWT Tanker	21 engines	YMD YCMP 3 Maj
X62 	55k DWT Bulk Carriers 64k DWT Bulk Carriers 81k DWT Bulk Carriers 88k DWT Bulk Carriers 115k DWT Product Carriers 115k DWT Crude Oil Tanker	22 engines	HHI-EMD HHM QMD
X72 	150-210k DWT Bulk Carriers 3,800 TEU containerships	38 engines	HHI-EMD Doosan DMD CMD
X82 	VLCCs VLOCs > 9,000 TEU Containerships	75 engines	HHI-EMD DU QMD
X92 	9,000 TEU containerships 14,000 TEU containerships 20,700 TEU containerships	13 engines	HHI-EMD Doosan

* as of August 2015

33 References for 2-Stroke Dual-Fuel Engines*

<i>W-XDF engine</i>	<i>Vessel type</i>	<i>Firm orders</i>	<i>Licensee</i>
50DF 	14k DWT LNG Carrier 15k DWT Chemical Carrier 1,400 TEU container vessel 15k DWT Asphalt tanker	13 engines 110,880 kW	YCMP DU
X62DF 	175k DWT LNG carrier	10 engines 143,100 kW	Doosan
X72DF 	174k DWT LNG carrier	10 engines 161,250 kW	HHI-EMD Doosan

* as of August 2015

X-DF Breakthrough in LNGC Market

Success story to be continued

- Major Owners, Operators, Yards and Consultants recognise the benefits of the X-DF concept for LNGC
- Latest orders prove that X-DF will soon become the most popular solution for LNGC



The payback period for the LNGreen solution is less than 1 year, compared to the baseline design.

LNG Weekly Report
19 June 2015

BRAEMAR ACM
SHIPBROKING

Charter Rates

Gas Prices

- ▼ Henry Hub \$2.77 (\$2.81)
- ▶ Middle East \$7.00 (\$7.00)
- ▼ NBP \$6.70 (\$6.75)
- ▼ EAX \$7.25 (\$7.40)

All figures quoted are USD per Mmbtu

Market Comment

In the Newbuilding world it seems likely that MEG's period at the top of the tables will not be long lived. Those with knowledge of these things say that XDF is likely to become much more popular for future orders. So the first DFDE's built in 2008 will not be 10 years old before MEG becomes the most popular design, but as things are the first MEG ships will be hardly 3 years old before the XDF design takes over.

Considering that Steam Turbines reigned supreme from the early 1970's until 2008, it is safe to say that the LNG business has not known such technology changes before. This without doubt will impact cost and reliability and those arranging annual schedules are no longer able to book flights on specific dates to visit their ships with any degree of certainty. Bear in mind however that daily fuel consumption has halved in less than 10 years, so these changes are demonstrably worth it.

COSSMOS
DNV-GL

