



Price Developments – Evaluating Sector Attractiveness

Dr Adam Kent - Maritime Strategies International (MSI)

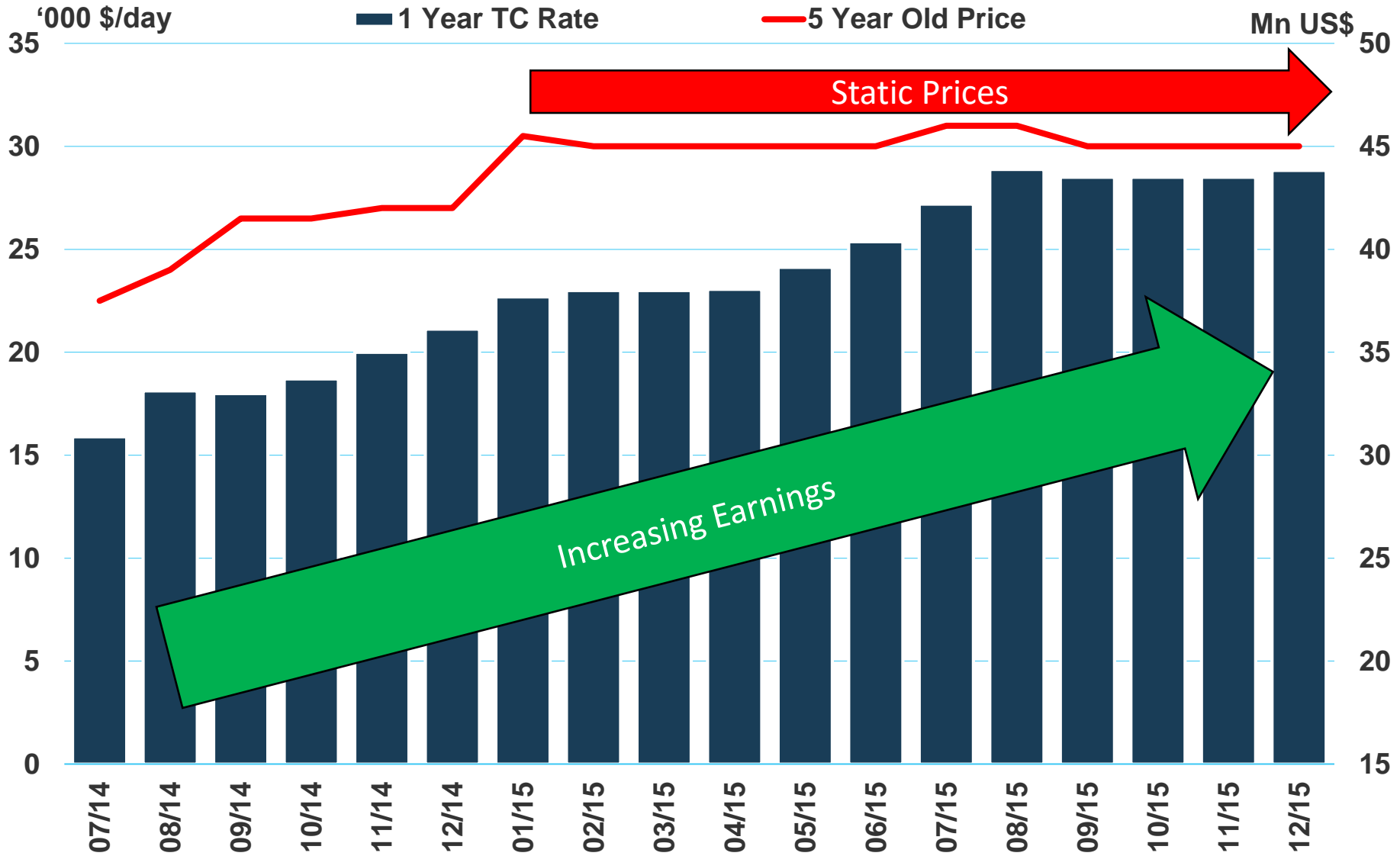
7th Annual Marine Money London Ship Finance Forum – 27th Jan 2016

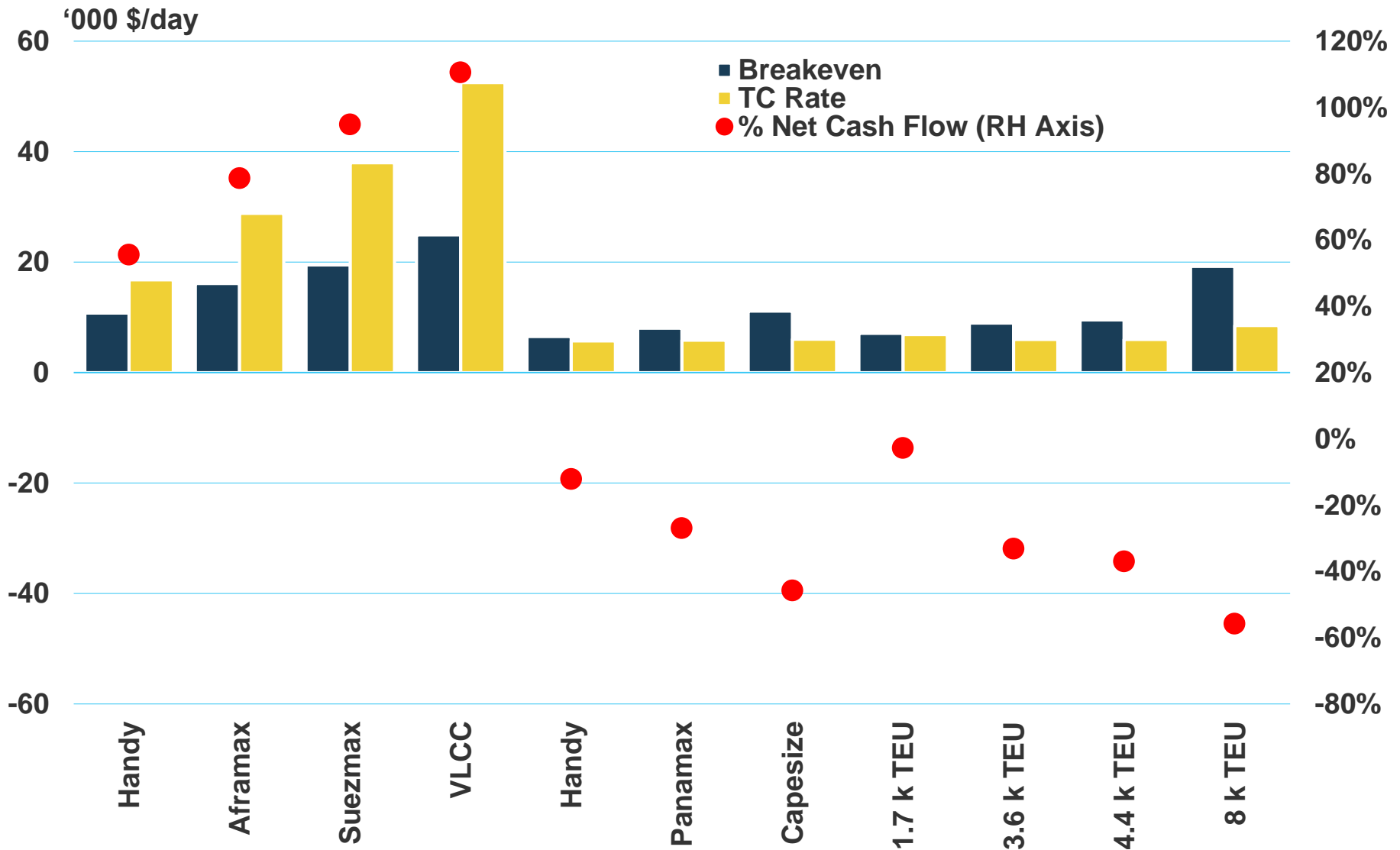
Price Developments – Evaluating Sector Attractiveness



1. What determines secondhand prices
2. Newbuilding prices
3. Scrap prices
4. Earnings
5. Secondhand prices
6. Forecast Marine eValuator (FMV)

Prices - Conundrum





Based on 60% financing



- **Current Replacement Cost** - Sets Upper Reference
(Yard Prices: Highly Unstable; Major Market Risk)



- **Expected Earnings** - Sets Depreciation Rate
(TC Rate, Vessel Life Expectancy)



- **Residual Scrap Values** - Sets Floor to S&P Market
(\$/LDT:Limited Influence or Up-/Downside Risk)

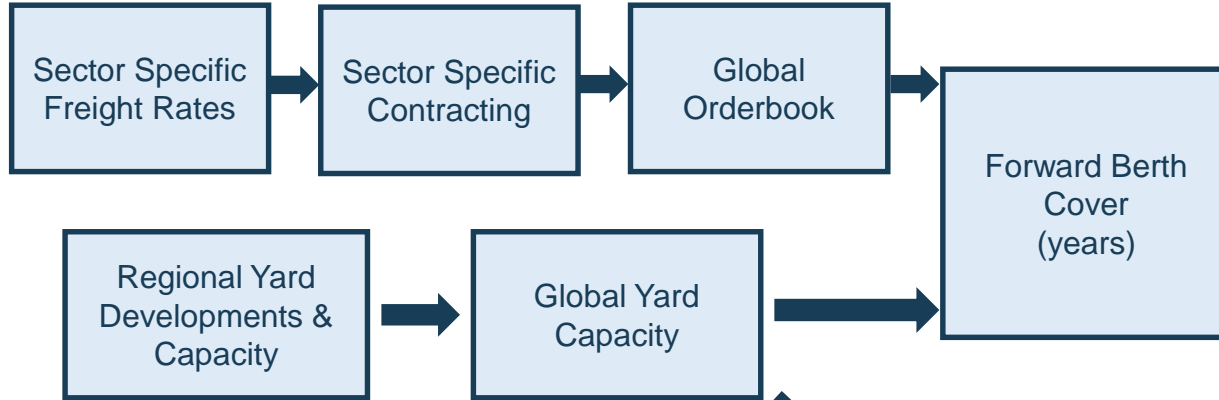


Price Developments

Newbuilding Prices



Forward Cover = Pricing Power



Average Yard Price Index (\$ CGT)

Newbuilding Price (by vessel type by size)

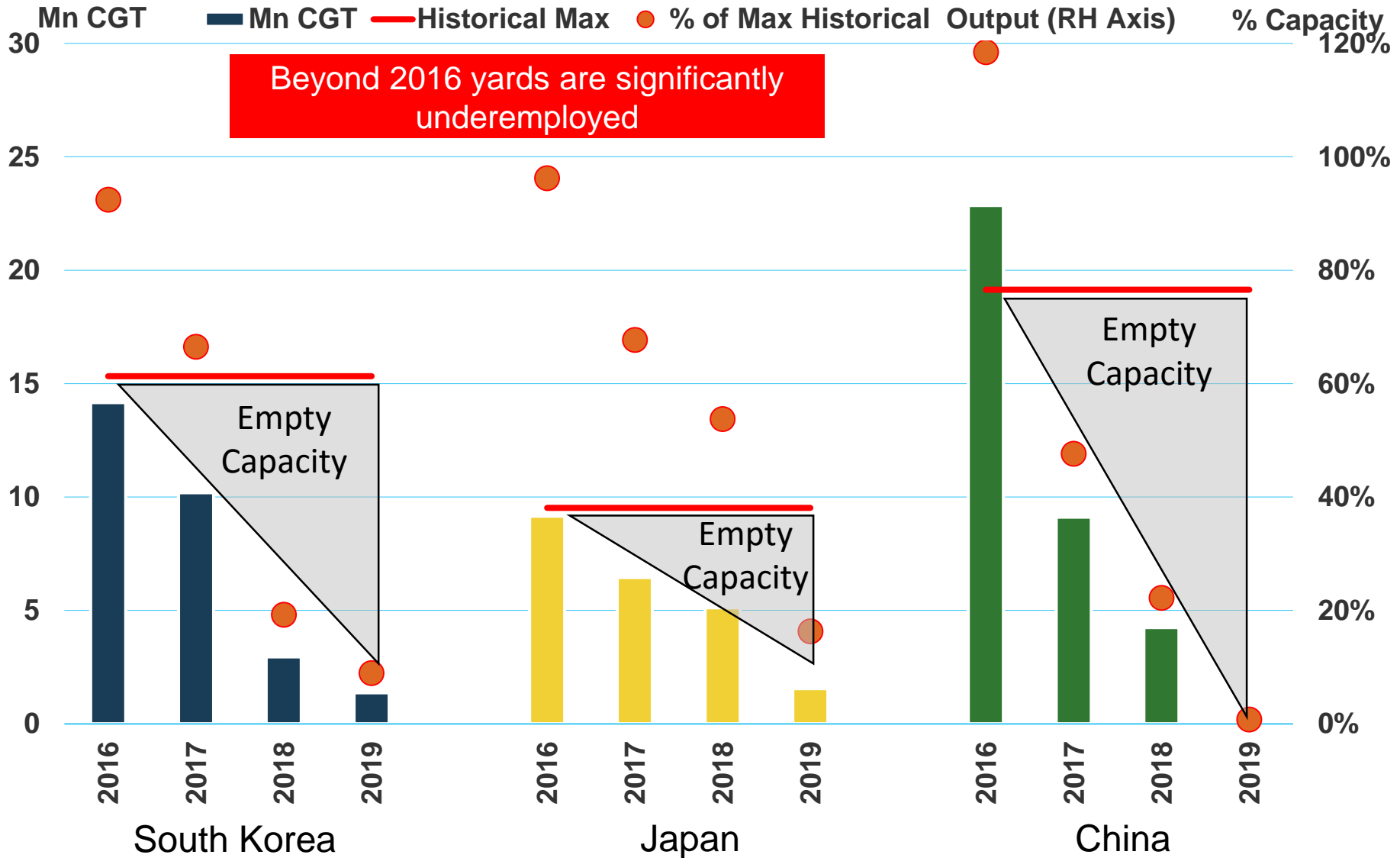
Global Cost Components (steel & machinery price, exchange rates)

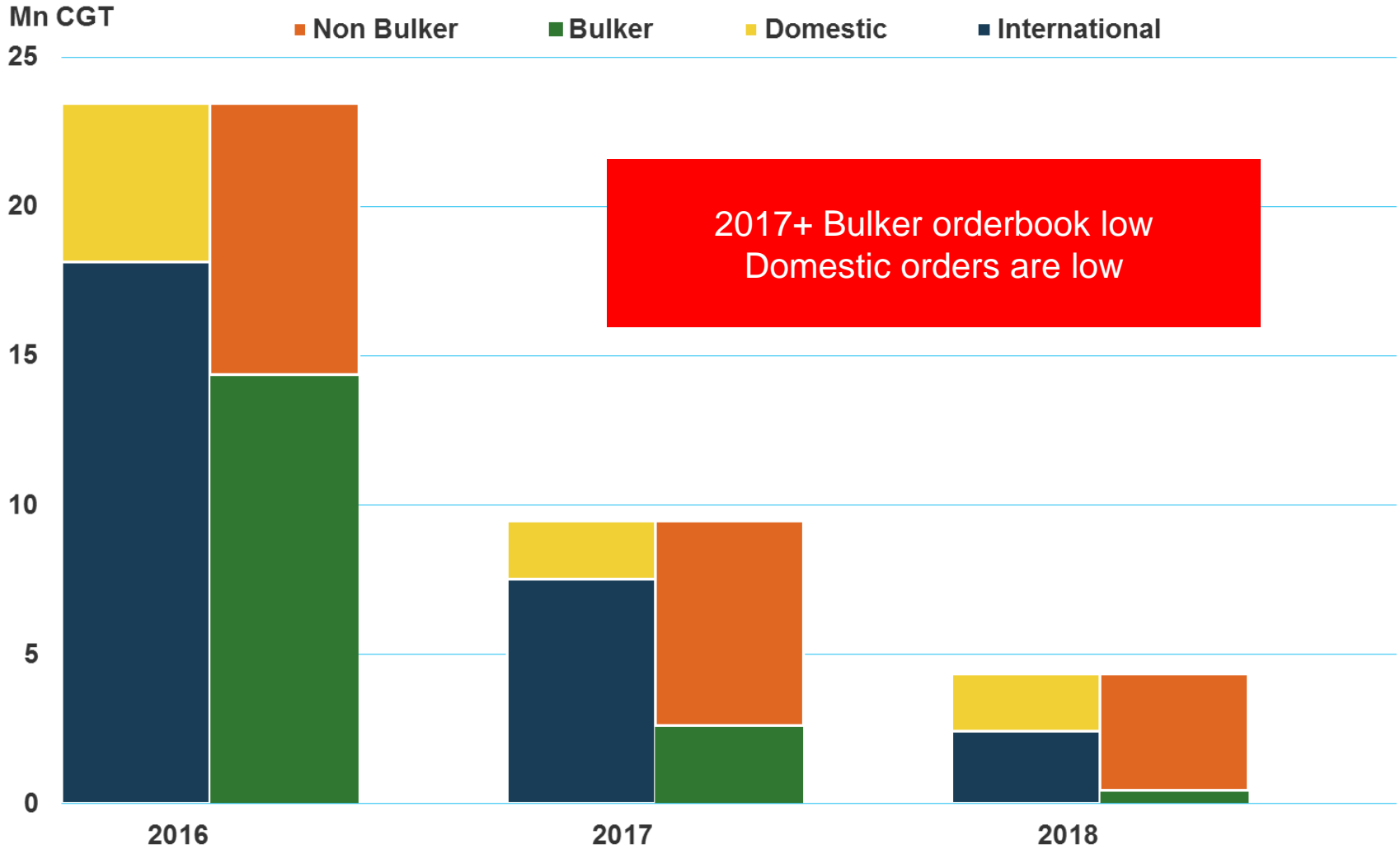
Regional Cost Components (wage, inflation, productivity)

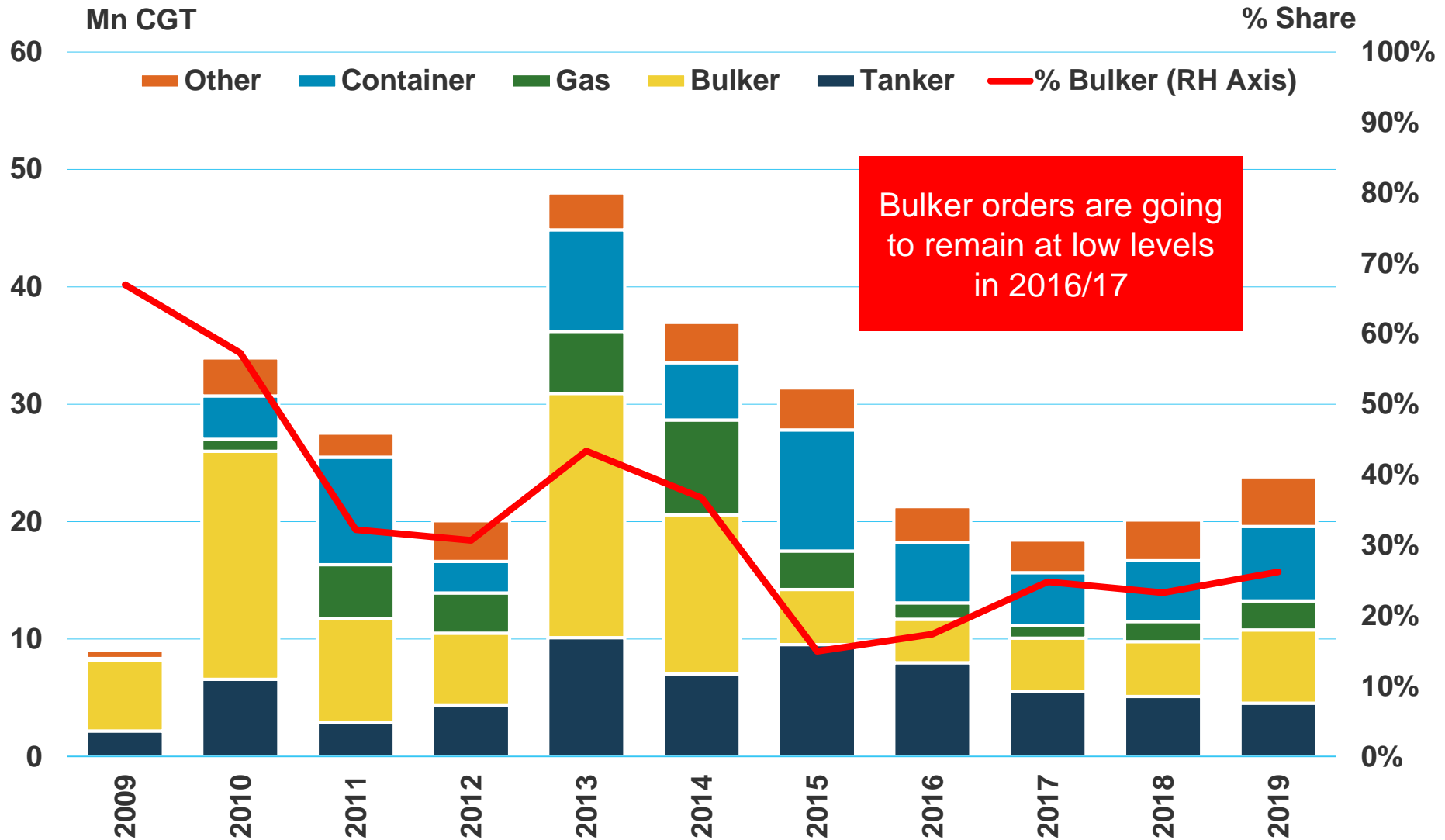
Weighted Average of Yard Costs

Costs = Pricing Floor

Are the Yards Panicking Yet?

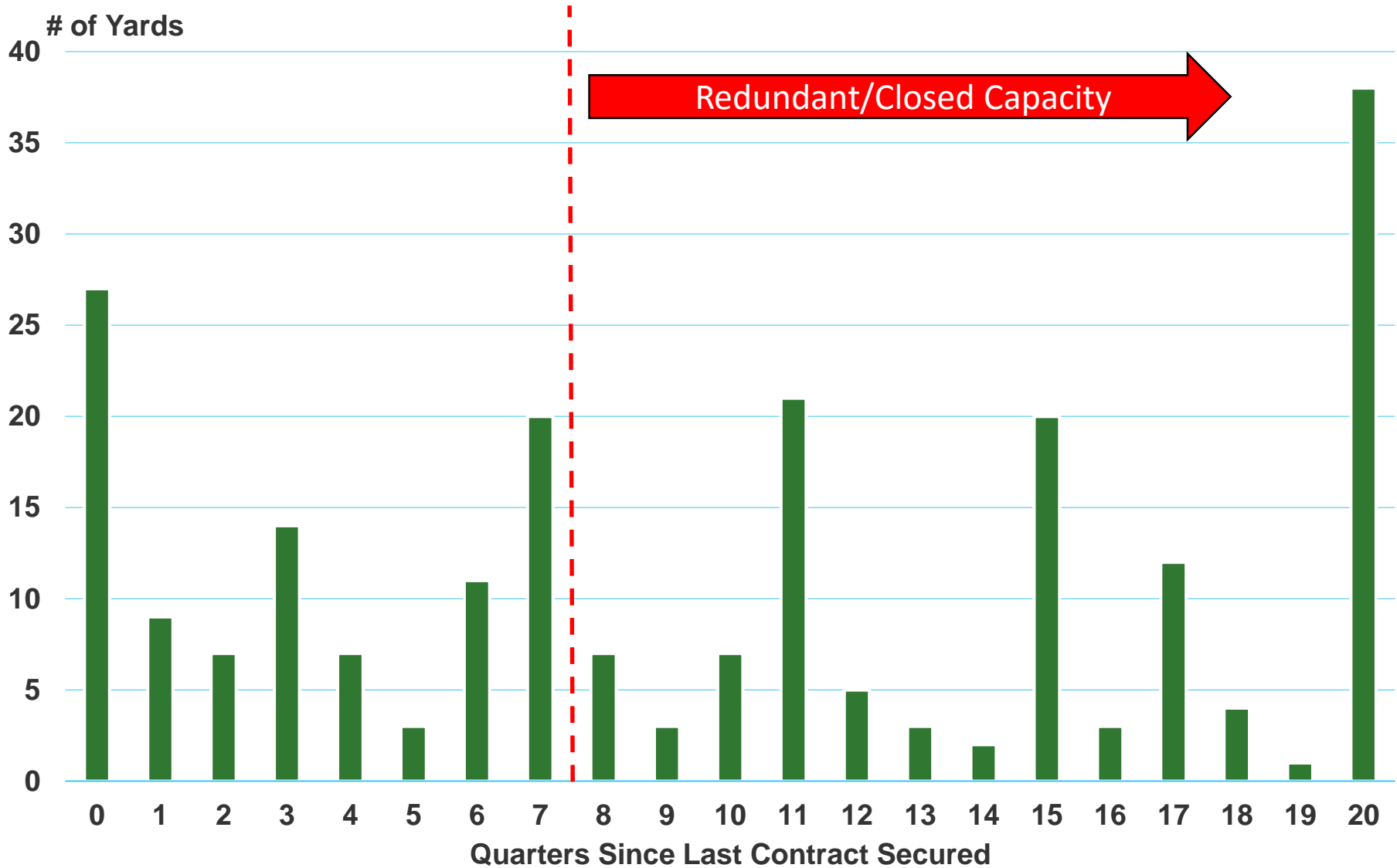




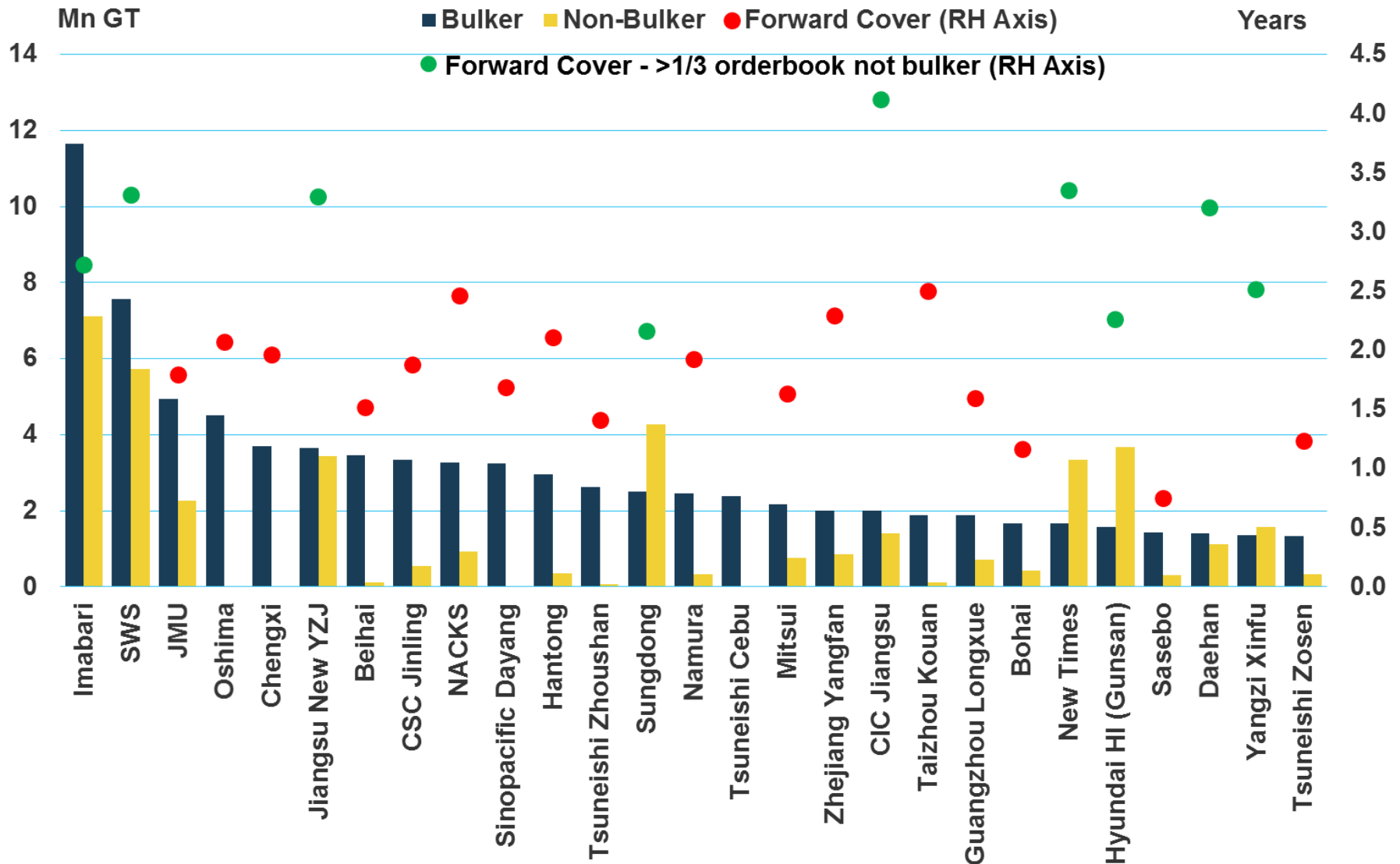




Quarter Since Last Order – Chinese Yards



Diversified Portfolio Route to Survival



Wuzhou Shipyard becomes first state-run shipyard to go bust

DECEMBER 30TH, 2015 JASON JIANG GREATER CHINA, SHIPYARD

Zhoushan Intir... **Sainty Marine plays down liquidation** from Zhejiang Zhong... making it the fi...

Zhejiang Shippi... **Financially troubled shipyard Sainty Marine, is still making efforts on its** bankruptcy with... expected to reveal details before February 6.

Wuzhou Shipye... **Shanghai Zhong...** containership,...

The court will e...



Shipbuilding Co reports.

The core busine said.

However, DSME

Doubts have be as the respectiv

The decision co merchant fleet

World Maritime

UPDATE 1-Daewoo Shipbuilding announces restructuring after \$2.6 bln Q2 loss

Korean yard losses to hit \$6.7bn

HHI, Samsung and DSME to post huge combined operating deficit for 2015.

January 08th, 2016 08:59 GMT by Gary Dixon
Published in **FINANCE**

South Korea's biggest yards are facing a combined operating loss of more than KRW 8 trillion (\$6.66bn) for 2015.

The Yonhap news agency said it would be the first time that Hyundai Heavy Industries (HHI), Samsung Heavy Industries and DSME had all posted deficits in the same year.

They have been hit by delays, cancellations and the general shipping malaise.

The agency cited industry data as showing DMSE on course for an operating loss of about KRW 5 trillion, HHI likely to post KRW 1.5 trillion and Samsung KRW 1.7bn.

"It is the first time ever that the shipbuilding industry has chalked up such a dismal result," one unnamed observer said.

"The situation in 2015 was worse than during the country's foreign exchange crisis in the late 1990s."

finances before signing off the

y, most recently land in Incheon, while it it can get through the shipbuilding operates a giant yard in the north of the

arter

Back to Lloyd's List Asia FINANCE

e Editor

If you everytime we write more like this.



ing heavily from weak or negative margins commercial ships and offshore projects.

Related articles

- ▶ Yard Talk | Will South Korean taxpayers continue subsidising newbuilding orders?
- ▶ DSME wins contract to build two LNG carriers
- ▶ Offshore woes drive DSME to \$2.1bn second-quarter loss
- ▶ DSME denies accounting fraud charge
- ▶ DSME sells stake in steel supplier

Three shipyards (Sacheon, sale or will sell individually,"

mental orders from shipbuilding and shipping industries, kely to succeed."

oil PricewaterhouseCoopers and Samsung Securities, who deal, have been in talks with a domestic ship equipment ie sale of the main Sacheon yard.

fit was KRW 74.6bn (\$63.65m) in the first nine months of

en bigger rivals like Hyundai Heavy and DSME are racking

STX faces crunch as creditors' patience runs out

South Korean yard could find itself in court if it fails to produce a convincing workout

November 19th, 2015 18:00 GMT by Irene Ang Singapore Adam Corbett London
Published in **WEEKLY**

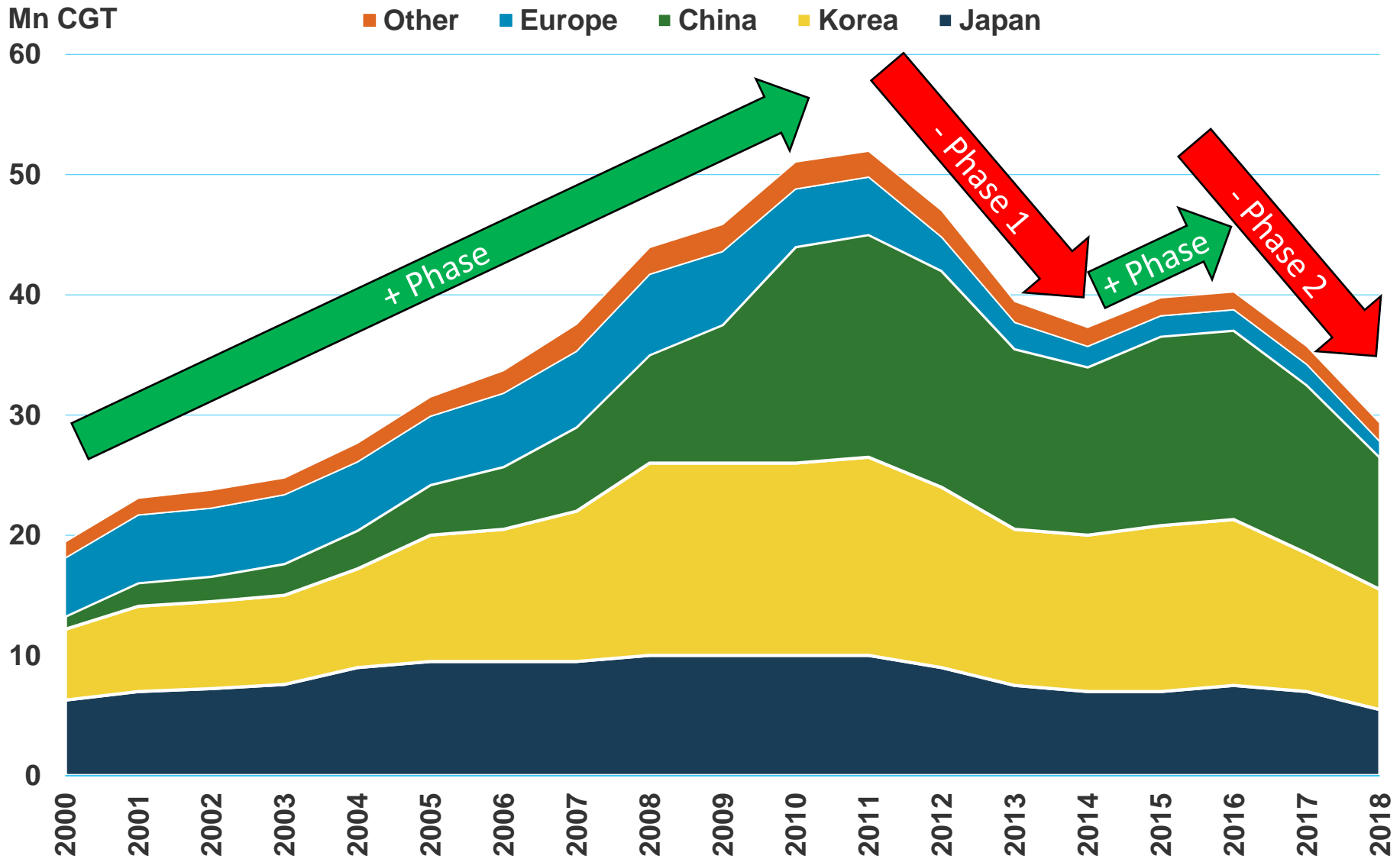
STX Offshore & Shipbuilding (STX O&S) could be forced in receivership if it does not come up with a strong restructuring company around.

Informed sources say the fate of the embattled South Korea sealed by the end of this month when it will be decided wh working under its creditors' control or go into court protection.

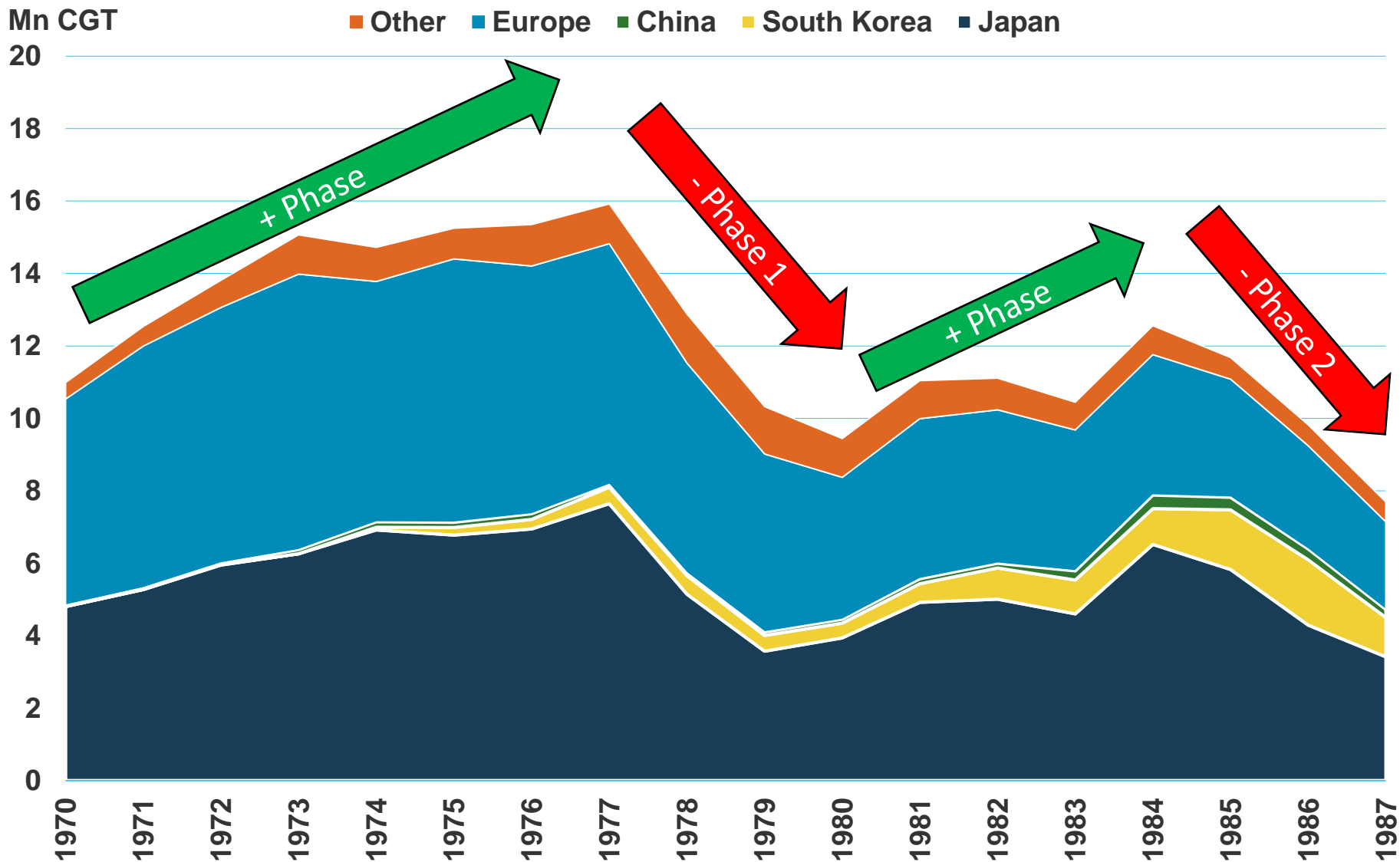
"STX O&S's major creditor, Korea Development Bank [KDB], is under immense pressure from the state to let go of the loss-making shipyard," said one market source. "There is little that STX O&S can currently do, as it already went through a restructuring programme when it volunteered to go under the bank's management two years ago," he added.

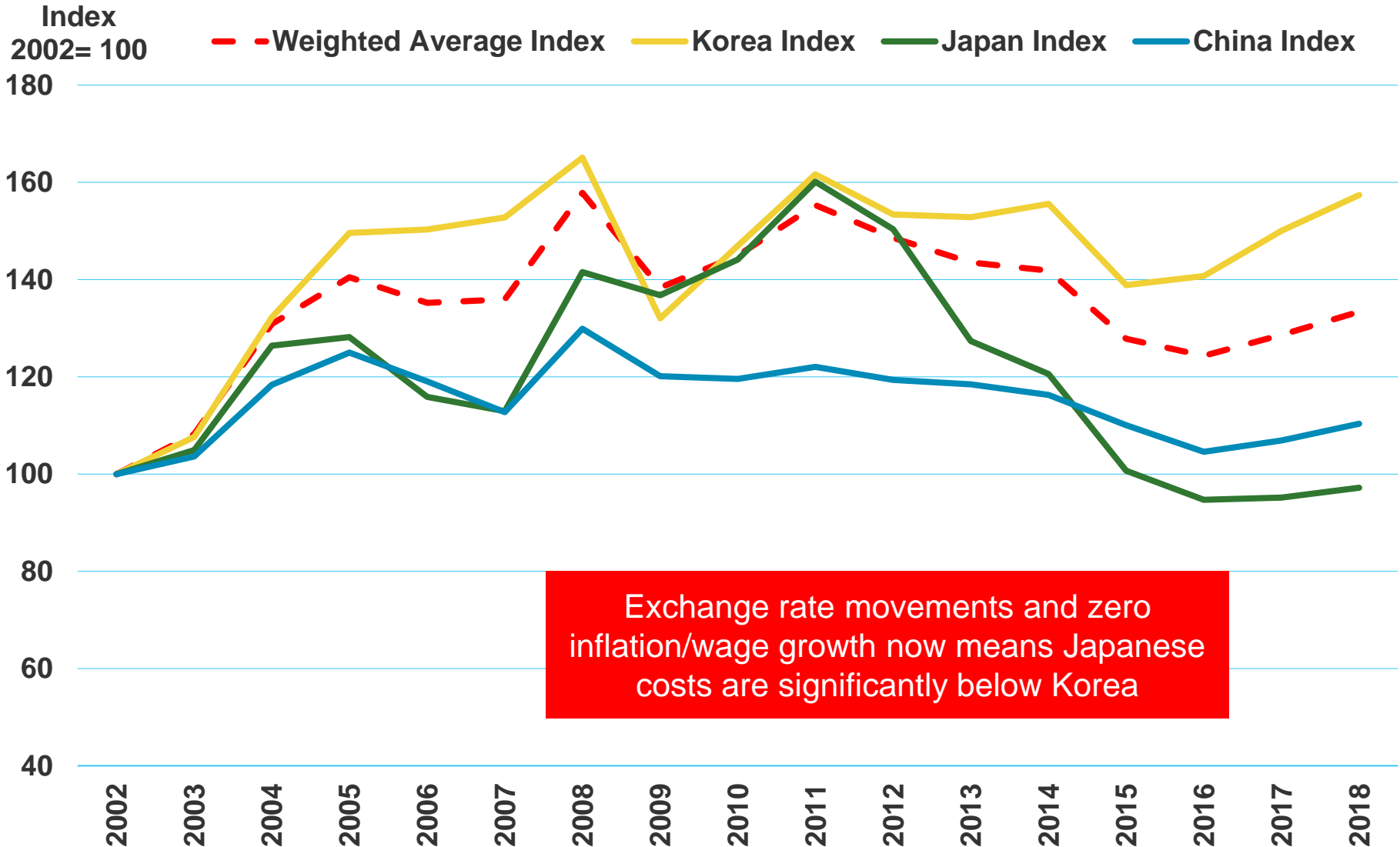
Some of the measures the shipbuilder carried out during that first round included slimming down its workforce by 30% and selling its Busan facility. But, at the same time, it transformed its Goseong block-assembly factory into a shipbuilding yard to construct mega-size boxships.

Effective Shipyard Capacity (Merchant)

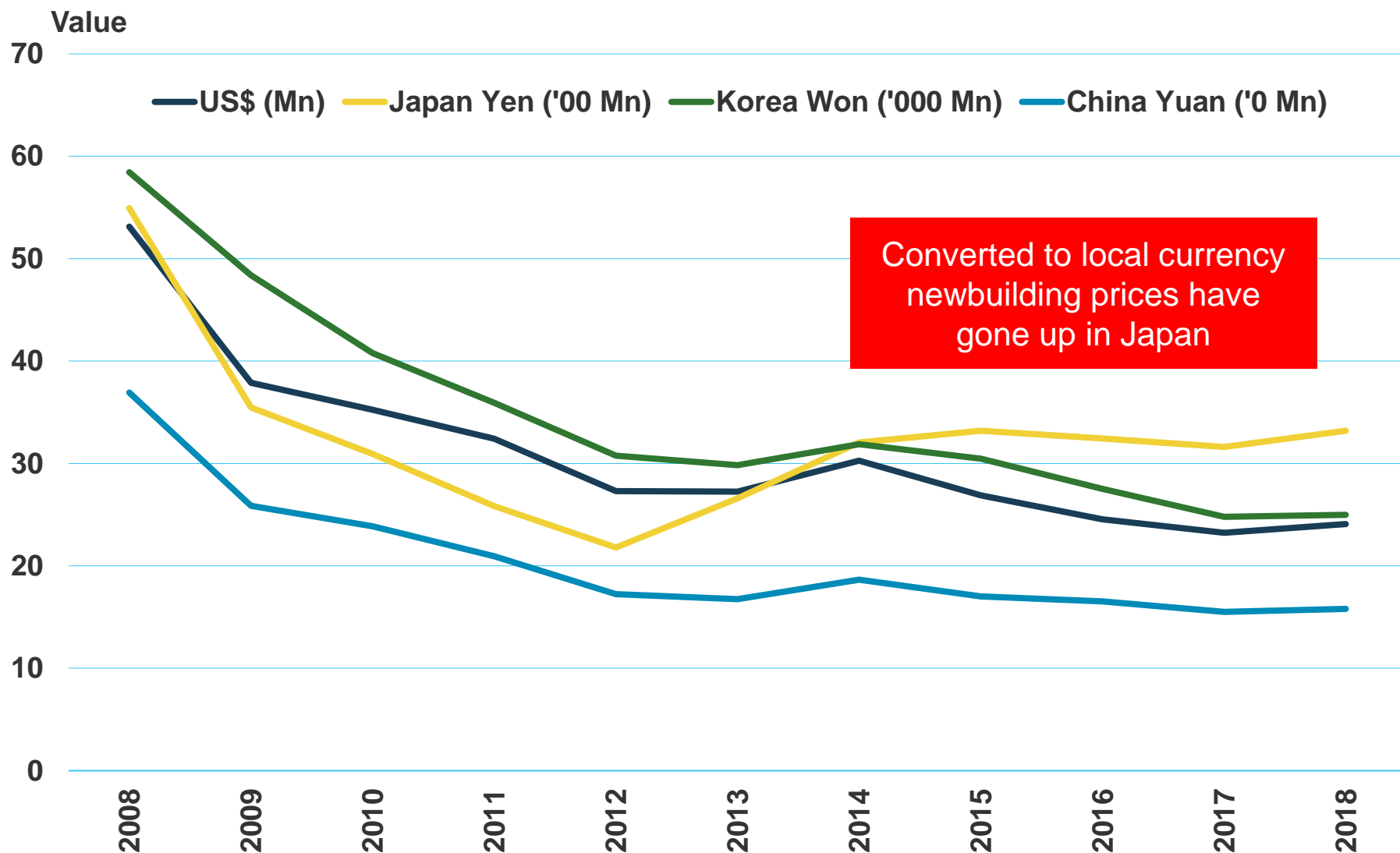


Shipyard Capacity – Déjà Vu





Exchange Rate Impact – Panamax Bulker

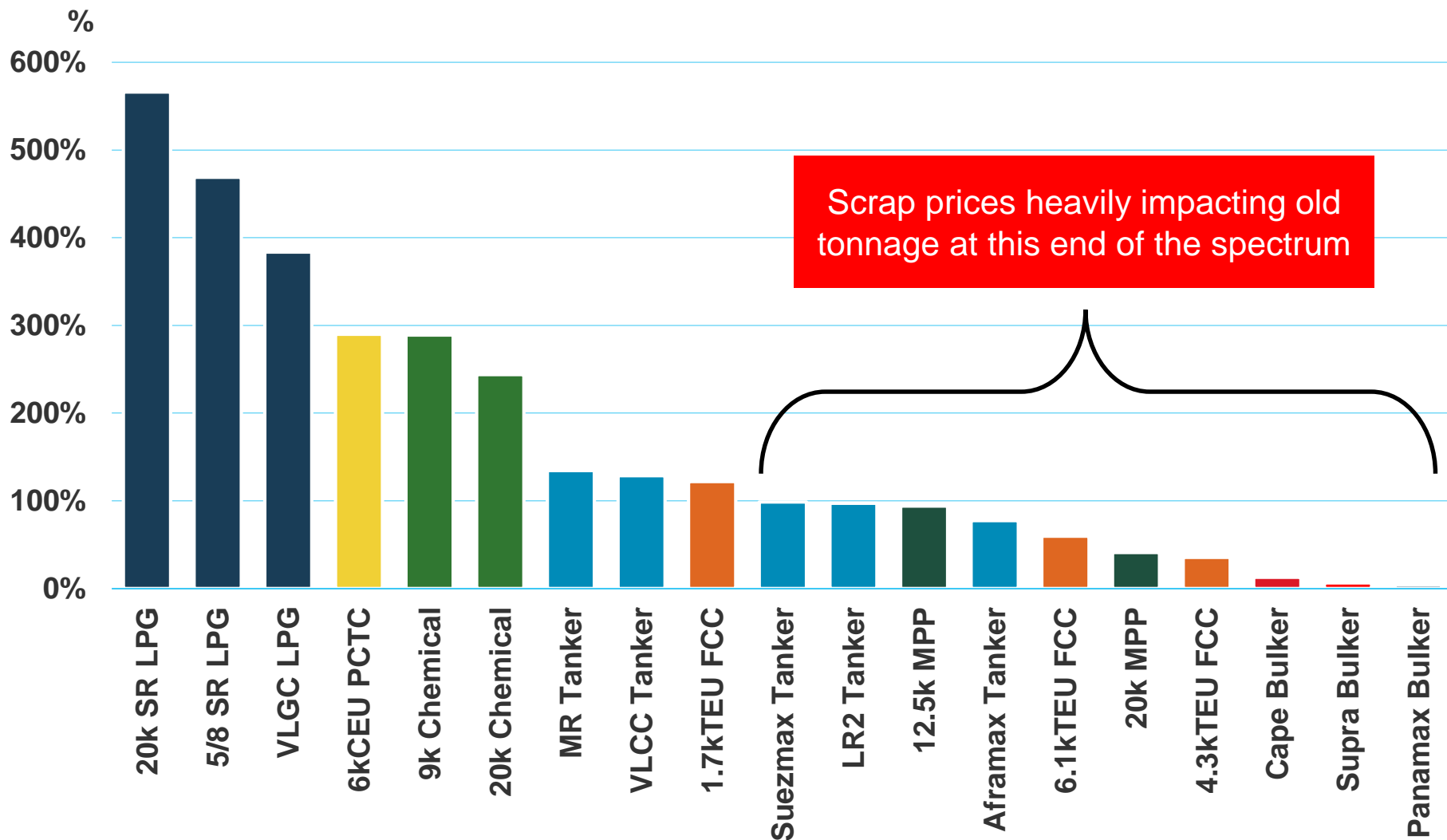


Price Developments

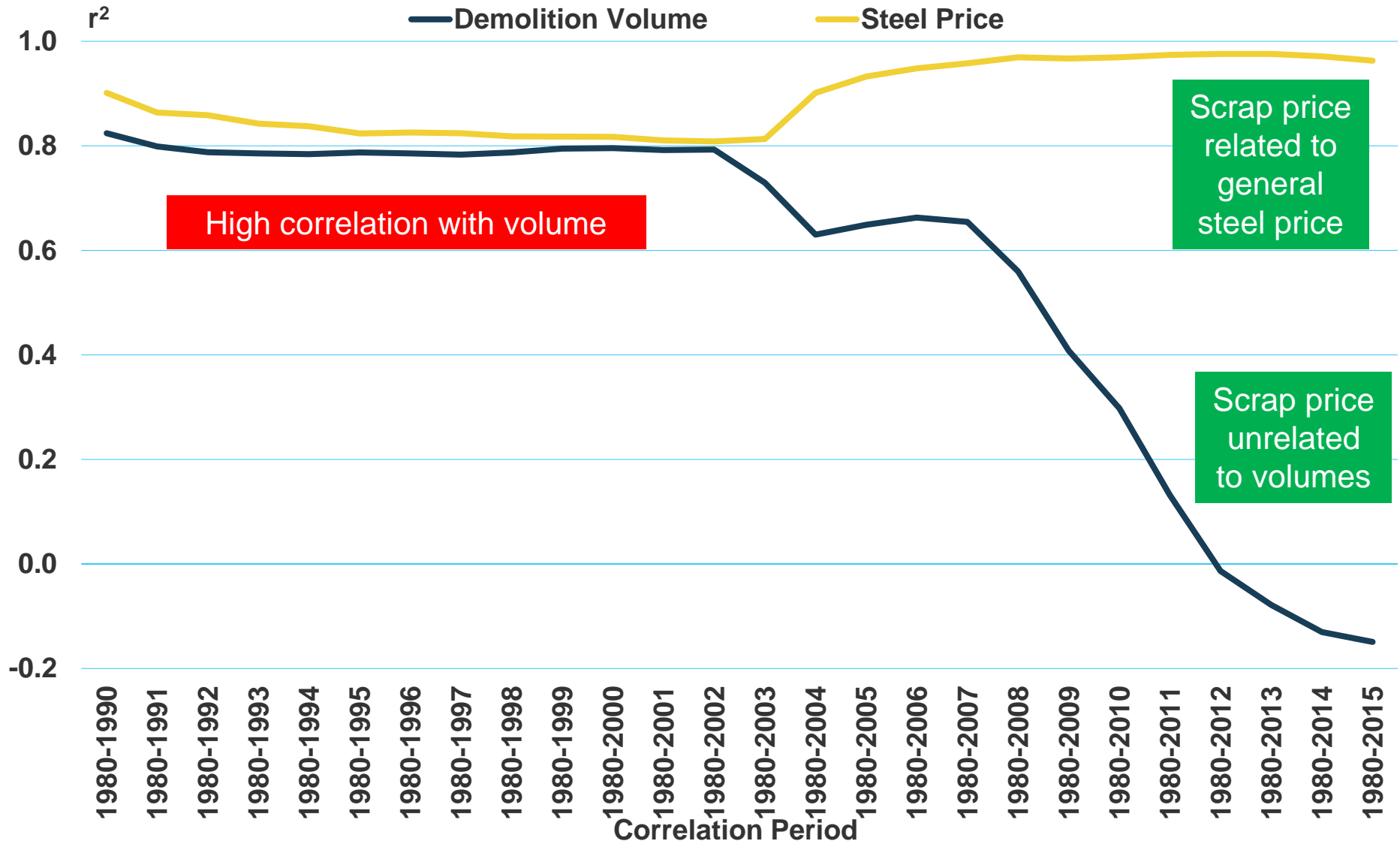
Scrap Price

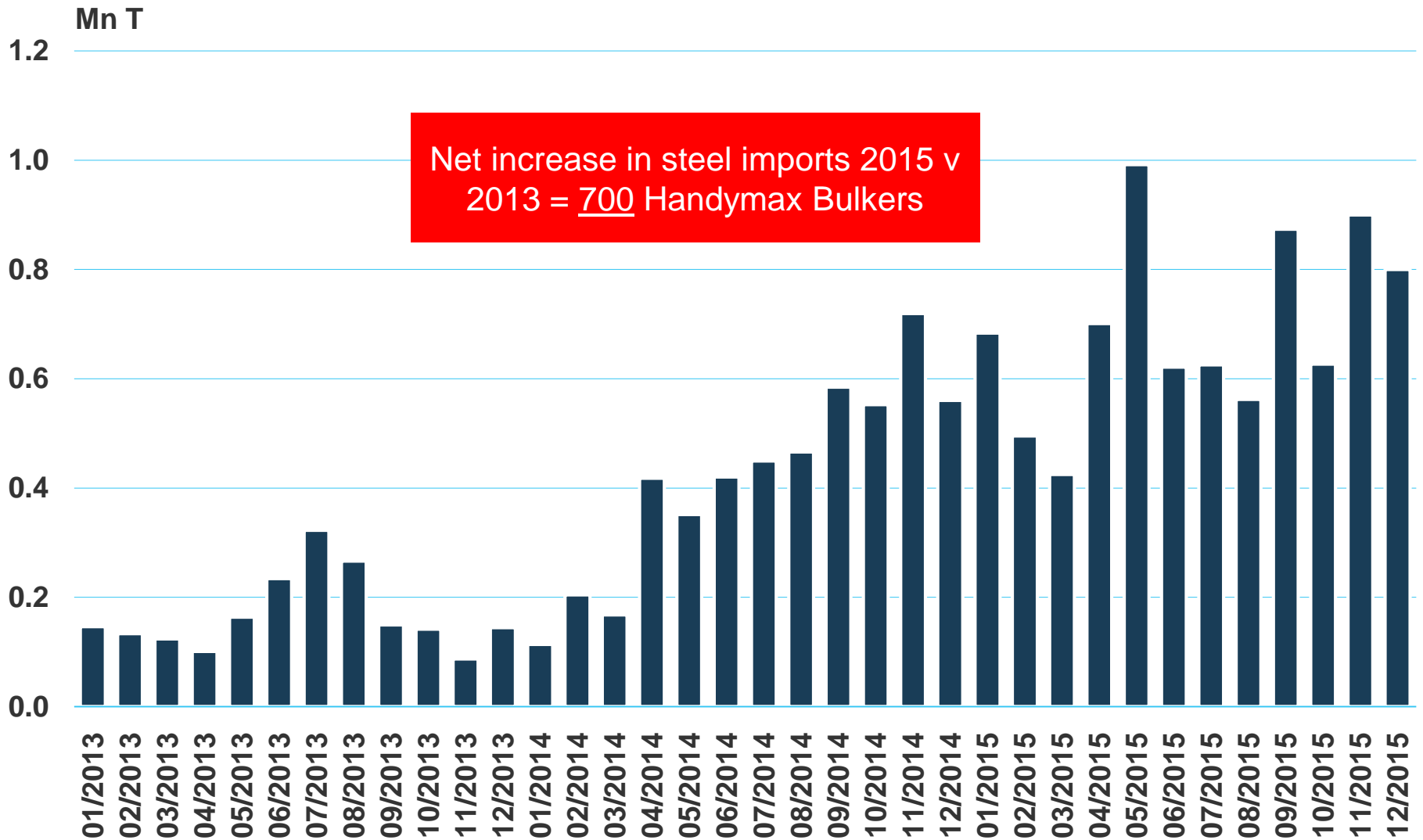


20 Year Old Price - % Above Scrap



Scrap Price - Drivers



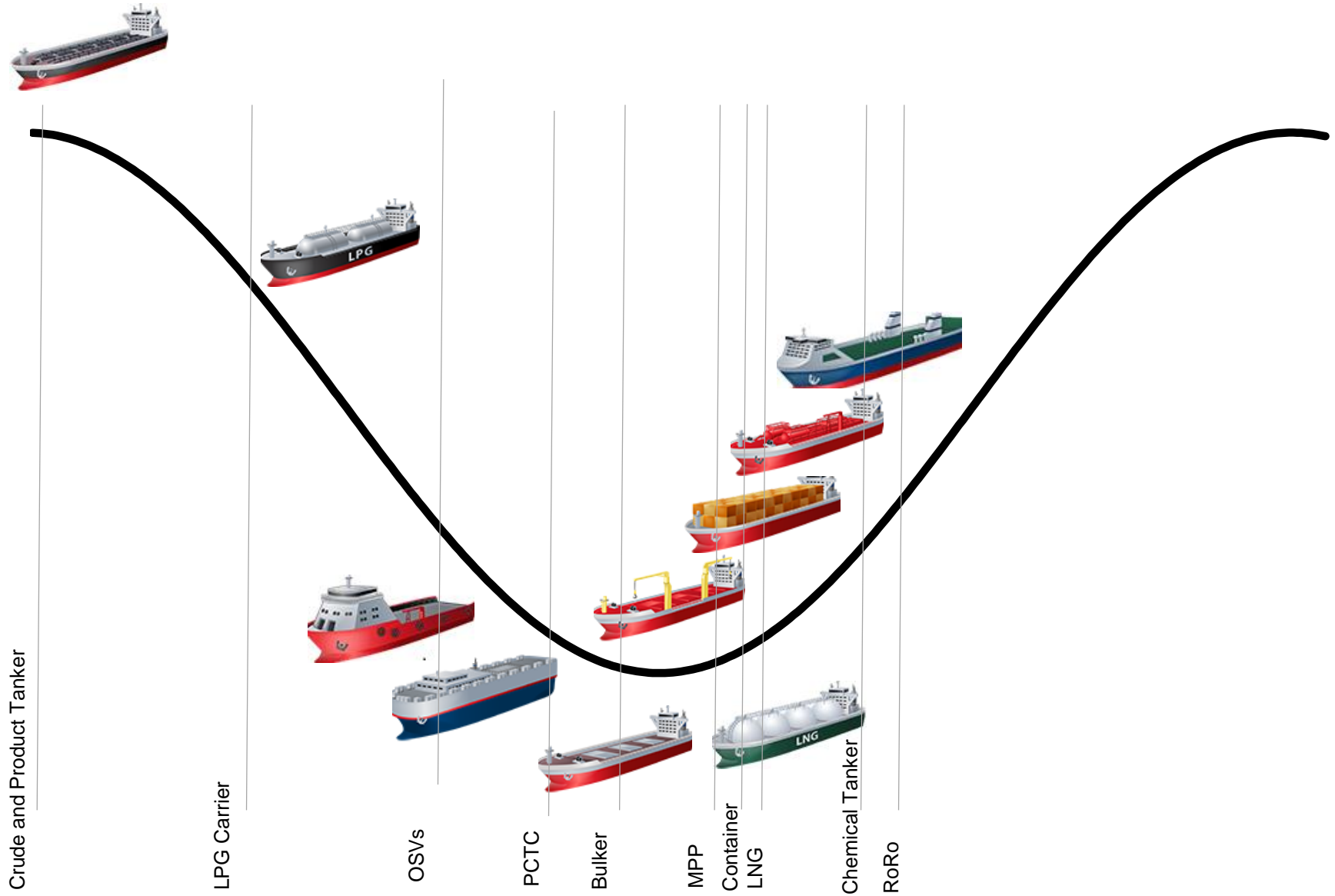


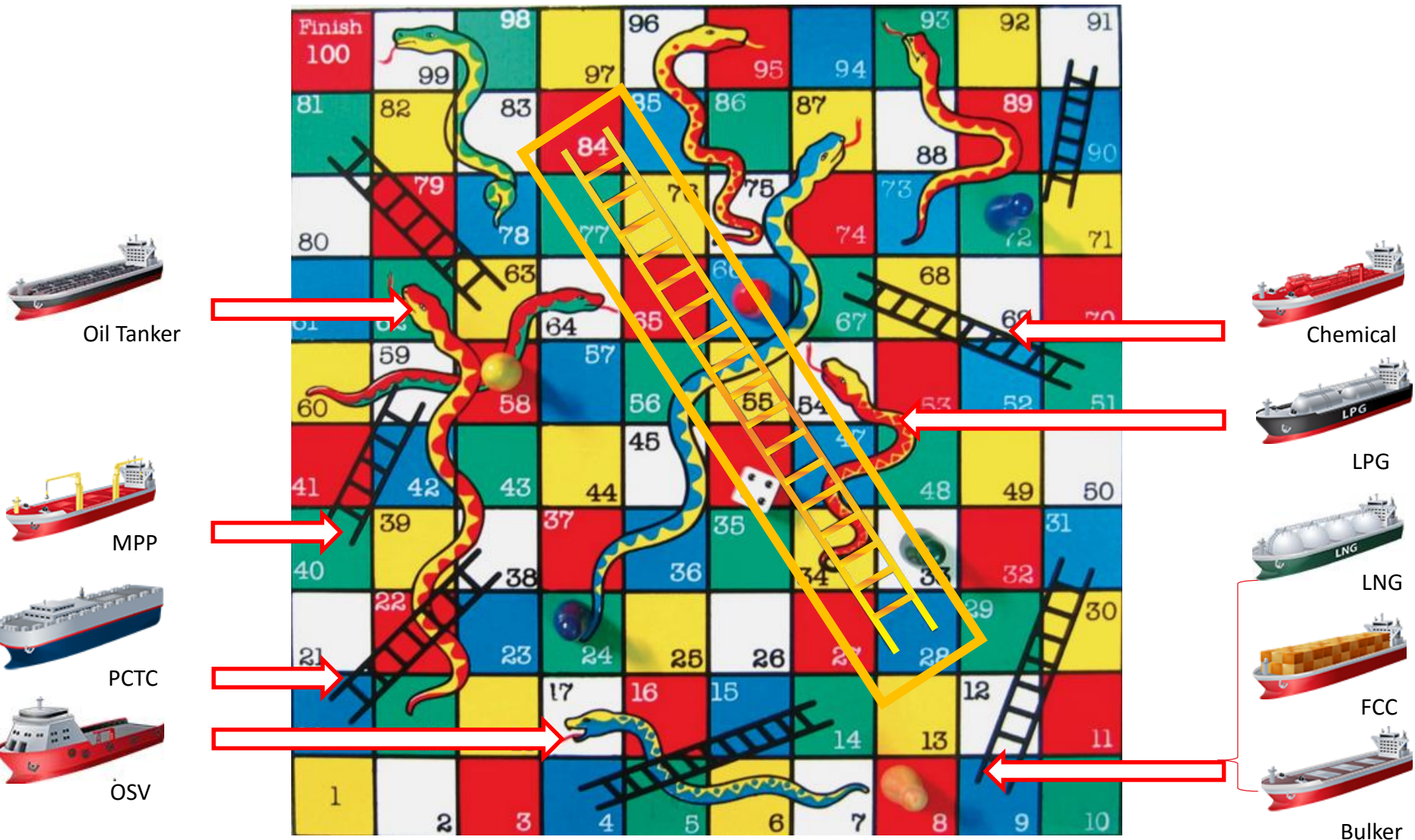
Price Developments

Earnings



Where on the Earnings Cycle Are We?



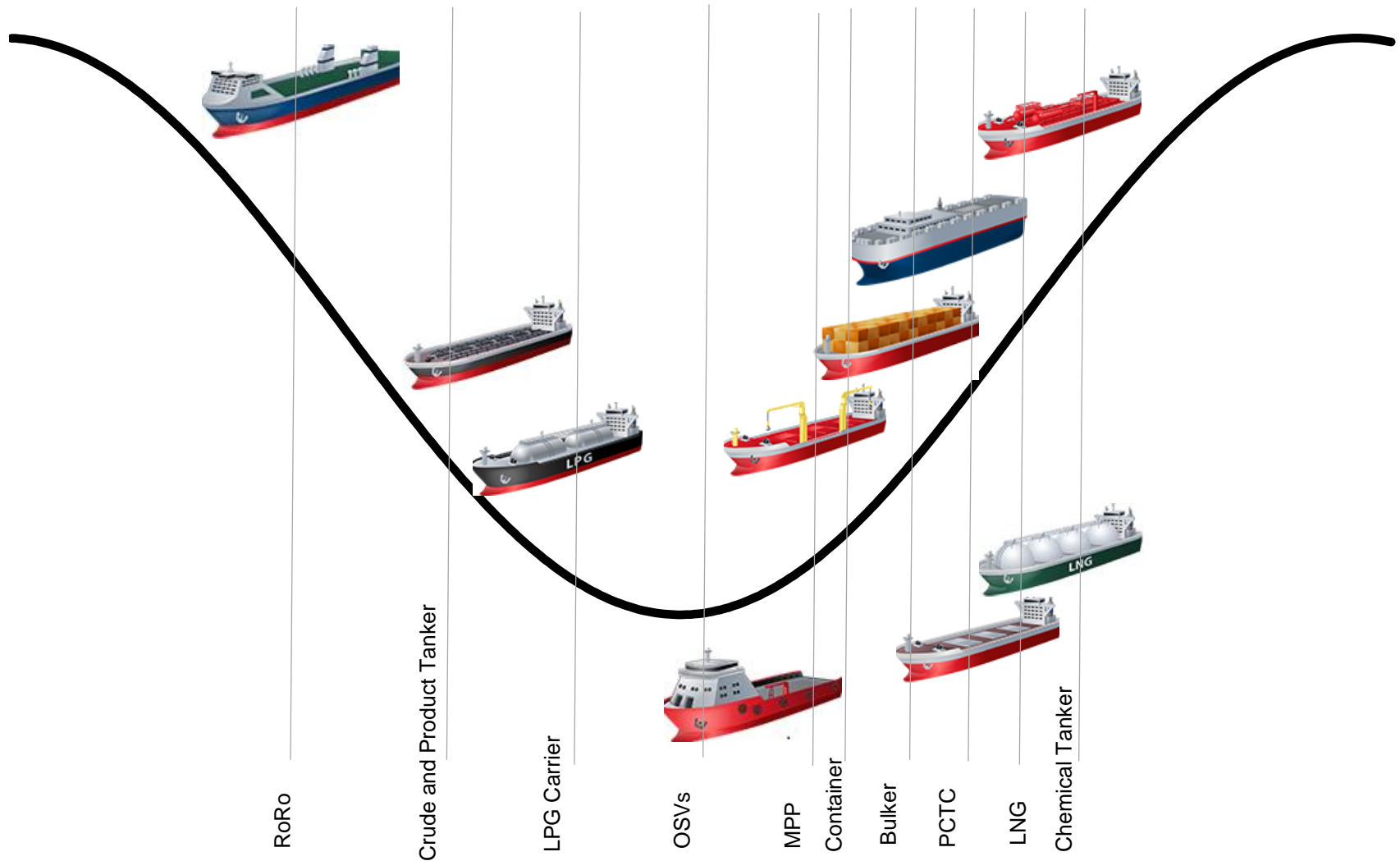


The board game board consists of 100 numbered squares (1-100) arranged in a 10x10 grid. The board is divided into colored sections: red, yellow, green, blue, and white. A large yellow ladder is drawn across the board, connecting squares 10 to 99. Several snakes are also drawn across the board, connecting higher-numbered squares to lower-numbered ones. Red arrows point from ship icons to specific squares on the board:

- Oil Tanker** (square 82)
- Chemical** (square 89)
- MPP** (square 39)
- LPG** (square 55)
- LNG** (square 32)
- PCTC** (square 23)
- FCC** (square 13)
- OSV** (square 17)
- Bulker** (square 11)

... and where are we heading?

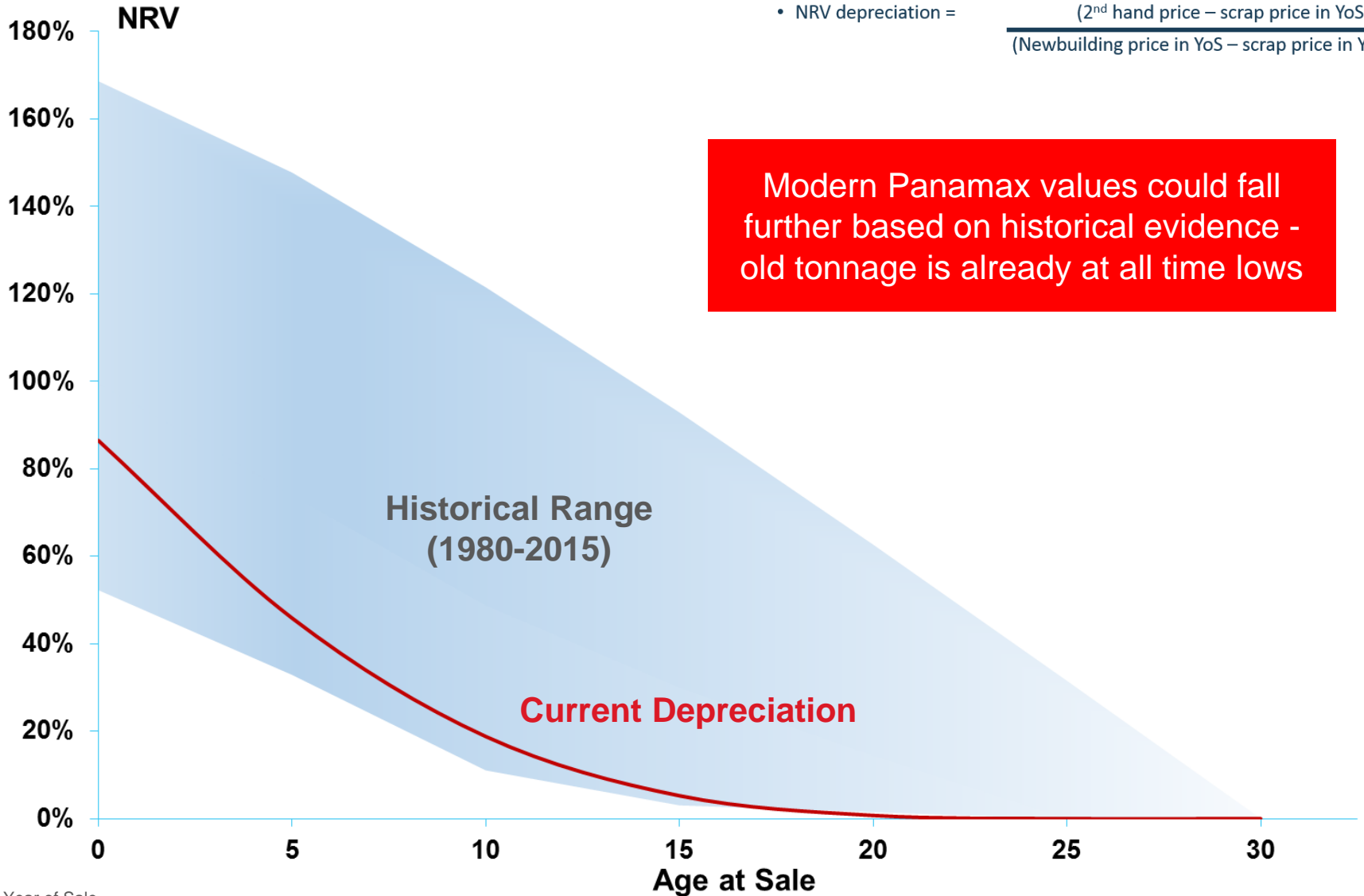
(2-3 year outlook)



Price Developments

Secondhand Prices

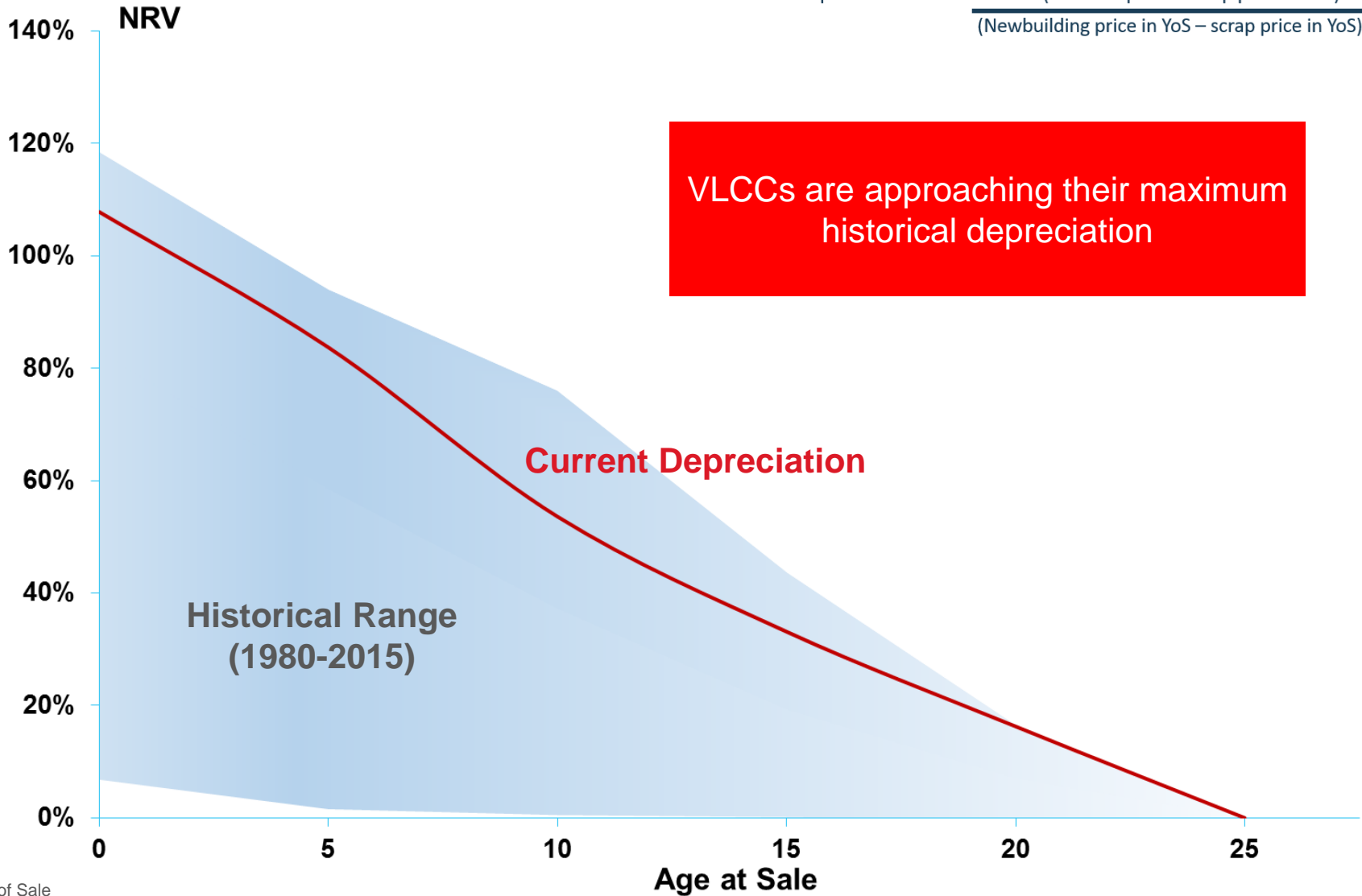




Modern Panamax values could fall further based on historical evidence - old tonnage is already at all time lows

Net Replacement Value – VLCC Tanker

- NRV depreciation =
$$\frac{(2^{\text{nd}} \text{ hand price} - \text{scrap price in YoS})}{(\text{Newbuilding price in YoS} - \text{scrap price in YoS})}$$



YoS = Year of Sale

- MSI Forecast Marine eValuator (FMV) is the first **web-based** tool to provide **forecast and historical price data** covering virtually all of the deepsea shipping fleet.
- Data includes **forecasts of newbuilding, second-hand prices, 1 year timecharter rates and operating costs** for specific vessels.
- MSI FMV draws on MSI's **proven, proprietary models** and a consistent cross-sectional view across all principal shipping sectors. It puts asset values in the context of the near term market to enable reliable benchmarking with outputs based on annual averages.
- Coverage:



Crude Oil Tanker



Chemical Tanker



Multi Purpose



Product Oil Tanker



LPG Carrier



Containership



Dry Bulk Carrier



LNG Carrier



PCC/PCTC

Add New Vessel

- Dry Bulk Carrier
- Oil Tanker
- Containership
- Chemical Tanker
- LNG Tanker
- LPG Carrier
- Car/Truck Carrier
- Multi-Purpose
- Other Sectors

My Vessels

Vessel Forecast Data

Vessel Details

Vessel Name: MM London 2016 Country of Build: South Korea
 Sector: Oil Tanker Yard Tier: Tier 1
 Size (Dwt): 310000 Tank: Crude
 Year of Build: 2010 Efficiency: 0
 Ice Class: None

Forecast Details

Downloaded: 18 Jan 2016
 MSI Base Case: 2015 Q3
 Downloaded By:
 Downloaded For: MSI

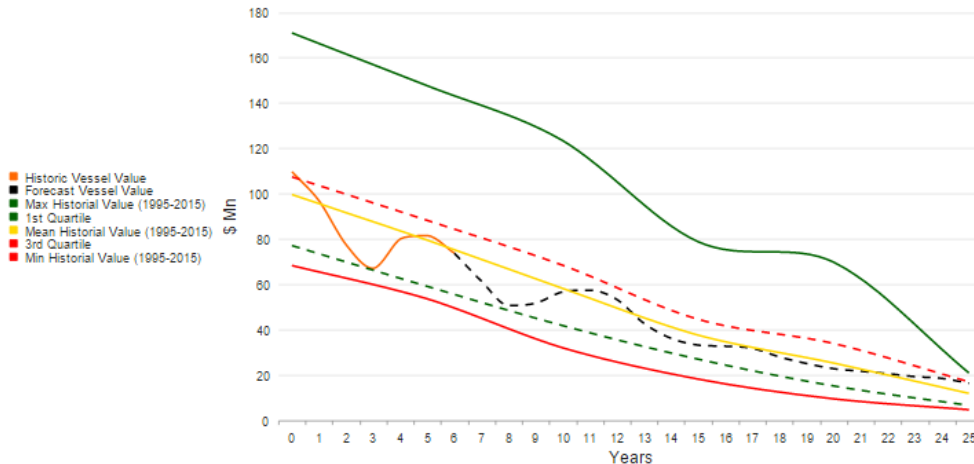
Quarterly Forecast

	2015 Q4	2016 Q1	2016 Q2	2016 Q3
Fair Market Value (\$ Mn)	80.5	77.1	74.8	71.7
1 Yr T/C (\$ k/day)	53.3	54.2	50.4	45.0

Annual Forecast

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Newbuilding Contract Price (\$ Mn)	102.1	94.9	90.7	99.8	96.6	90.9	85.0	84.3	88.6	100.7	108.6	110	
Age (years)		1	2	3	4	5	6	7	8	9	10	11	12
Fair Market Value (\$ Mn)	96.9	77.5	67.0	80.0	81.5	73.7	61.4	50.7	51.7	56.7	57.4	53.	
1 Yr T/C (\$ k/day)	23.6	20.0	19.3	26.8	47.5	49.4	38.5	30.9	34.8	37.5	40.5	40.	
Operating Costs (\$ k/day)	9.9	9.8	9.8	10.0	10.0	10.3	10.5	10.7	11.1	11.6	12.0	12.	

Price Development Chart



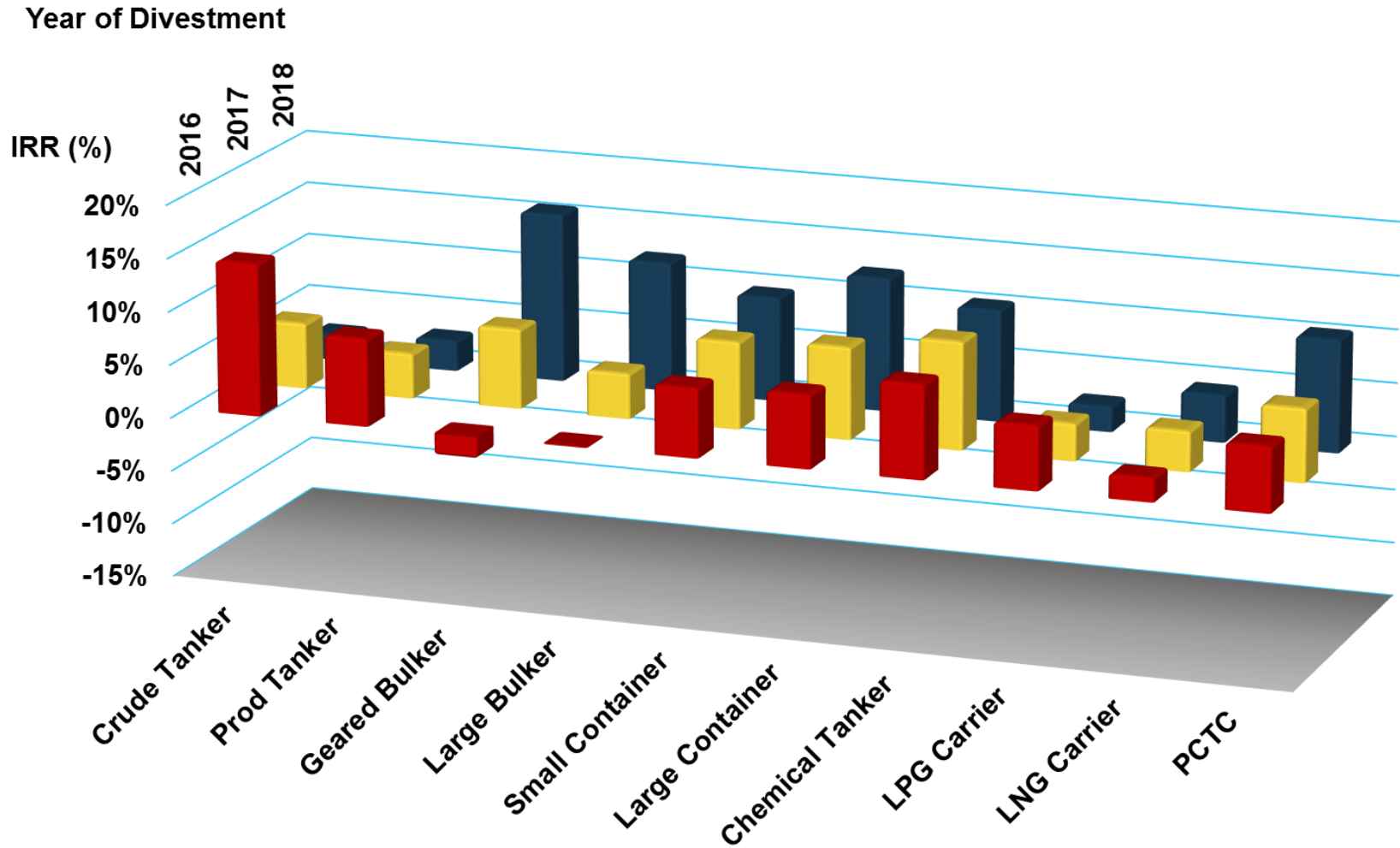
Quarterly Fair Market Value & 1 Year Time Charter Rate (1Q history, current Q, 2Q forecast)

Annual average:

- Newbuilding contract price
- Fair Market Value
- 1 Year Time Charter Rate
- Operating Cost

5 years history and 15 years forecast

Price Development Chart detailing forecast price development in relation to historical metrics



- Current secondhand prices only make sense if all drivers are viewed together
- Many shipyards will be underemployed in 2017, especially those yards bulkers focus
- There will be further yard capacity closures, this will help support newbuilding prices in the medium term
- Costs and exchange rates will help determine what yards survive
- Scrap prices will not recover whilst ISC imports cheap Chinese steel
- Shipping remains cyclical and what goes down must go up (eventually!)
- Bulker and Tanker depreciations are currently at historical extremes
- MSI's Forecast Marine eValuator (FMV) online product can show the attractiveness of a specific vessel, in terms of both value and cash flow projections



Thank you

For over 30 years, MSI has developed integrated relationships with a diverse client base of financial institutions, ship owners, shipyards, brokers, investors, insurers and equipment and service providers.

MSI's expertise covers a broad range of shipping sectors, providing clients with a combination of sector reports, forecasting models, vessel valuations and bespoke consultancy services.

MSI is staffed by economists and scientists offering a structured quantitative perspective to shipping analysis combined with a wide range of industry experience.

MSI balances analytical power with service flexibility, offering a comprehensive support structure and a sound foundation on which to build investment strategies and monitor/assess exposure to market risks.

While this document has been prepared, and is presented, in good faith, Maritime Strategies International assumes no responsibility for errors of fact, opinion or market changes, and cannot be held responsible for any losses incurred or action arising as a result of information contained in this document.

The copyright and other intellectual property rights in data, information or advice contained in this document are and will at all times remain the property of Maritime Strategies International.



Maritime Strategies International Ltd

6 Baden Place
Crosby Row
London SE1 1YW
United Kingdom

Tel: +44 (0)207 940 0070

Fax: +44 (0)207 940 0071

Email: info@msiltd.com
www.msiltd.com