
Castleton Commodities International

**The Institute of Chartered Shipbrokers
Dry Bulk & Commodities Conference
Vancouver**



20 November 2014



Introduction to Castleton Commodities International

CCI is an established global commodities merchant ...

Since 1990, CCI and its predecessor companies have created value across the commodities value chain through physical and financial trading, logistics and infrastructure development

▪ Merchant Trading

- **Approach.** Fundamental research-driven trading in physical and financial markets based on global supply/demand fundamentals and market structures
- **Recent additions.** Fuel oil, shipping, iron ore
- **Capabilities.** 20+ trading desks, 1,300+ counterparties, research program includes 16 PhDs developing analytics
- **Performance highlights.** Consistent profitability with 5-year gross Sharpe ratio of 3.9

▪ Infrastructure Investing

- **Approach.** Infrastructure investments driven by proprietary research and deal flow
- **Recent investments.** Power plants, natural gas reserves and midstream assets
- **Capabilities.** In-house engineering and operating expertise: upstream, midstream and downstream
- **Performance highlights.** Successful exit of US midstream asset portfolio for \$1.9 bn; realized 48% IRR and 3.0x MOIC

... with a wide footprint in strategic markets ...



... backed by prominent investors



From Dec 2006 – Dec 2012, the Company operated under the name LDH Energy

- Joint venture structure with two primary shareholders



In Dec 2012, the Company changed ownership and rebranded as CCI

- Permanent capital from prominent family offices:
 - Dubin, Tudor Jones, Fribourg, Barakett, Oppenheimer and others



CCI Merchant Trading Overview

The merchant trading business consists of research analysts, business developers, and proprietary traders of physical commodities and related financial instruments (futures, swaps, options)

Overview

Research Focus

- Project future demand and supply of each commodity to identify imbalances, logistics bottlenecks, regulatory constraints, and market price inefficiencies
- Merchant traders drive and impact the research process

Physical and Financial

- The Merchant leases storage and transportation capacity to conduct its physical trading business
- Profitable physical units provide in-depth understanding, timely information and liquidity for financial trading
- Constant feedback loop to examine Btu interdependence and infrastructure adequacy

Principal Focus

- Third-party relationships are primarily counterparty relationships rather than service-based client relationships

Risk Management

- A central element in CCI's activities
- Guidelines and drawdown limits for each trading desk to optimally manage the annual stop loss limit
- Credit risk management policies establish credit exposure limits with each counterparty and manage these exposures

Strategic advantage comes from CCI's focus on fundamental research, disciplined and robust approach to risk management and deep presence in the physical markets

Core Merchant Activities

Natural Gas

- CCI is a top marketer of natural gas in North America and contracts with ~300 producers and ~275 customers
- Lease storage and pipeline capacity under long-term contract

Natural Gas Liquids

- Leases roughly 6 million barrels of storage capacity
- One of the largest independent merchants of NGLs in North America

Refined Products

- Currently leases over 6 million barrels of storage capacity
- Active in U.S. Gulf Coast and mid-continent markets

Power

- Trades heat rates in the regional domestic U.S. markets as well as financial transmission rights/congestion pricing

European Gas and Power

- Trades financial instruments in U.K. and European markets in gas
- Building capability to trade U.K. and European physical gas and power markets

Crude Oil

- Primarily trades financial instruments
- Focused on mid-continent U.S. market
- Recent expansion into Canada

Coal

- Trades domestic U.S. and international physical coal and related financial instruments
- Asset in Big Sandy, West Virginia, and Slones Branch, Kentucky

Iron Ore

- Trades physical iron ore sourcing globally into China
- Team based in Shanghai

Shipping

- Ship owning / operating based out of Stamford, Singapore, Shanghai and Geneva offices
- Third-party trading linking in with in house cargoes where possible

Fuel Oil

- Trades Fuel Oil in US, Asia and Northwest Europe
- Leases storage and blending facilities in US Gulf Coast
- Focus on supply of finished fuel oil grades to end users and distributors



Capesize spot rate in context....

Year-on-year +12%

1Q14 = \$16,298

No seasonal disruption in Australia

2Q14 = \$11,902

Record iron ore exports from Australia
Brazil ramp-up early

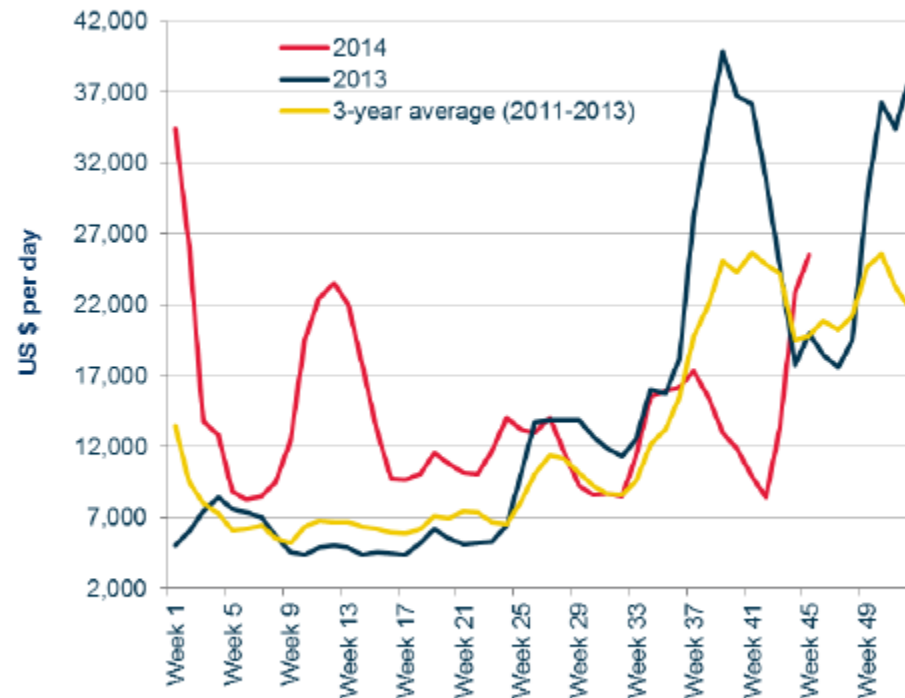
3Q14 = \$12,637

Maintenance at key iron ore export ports

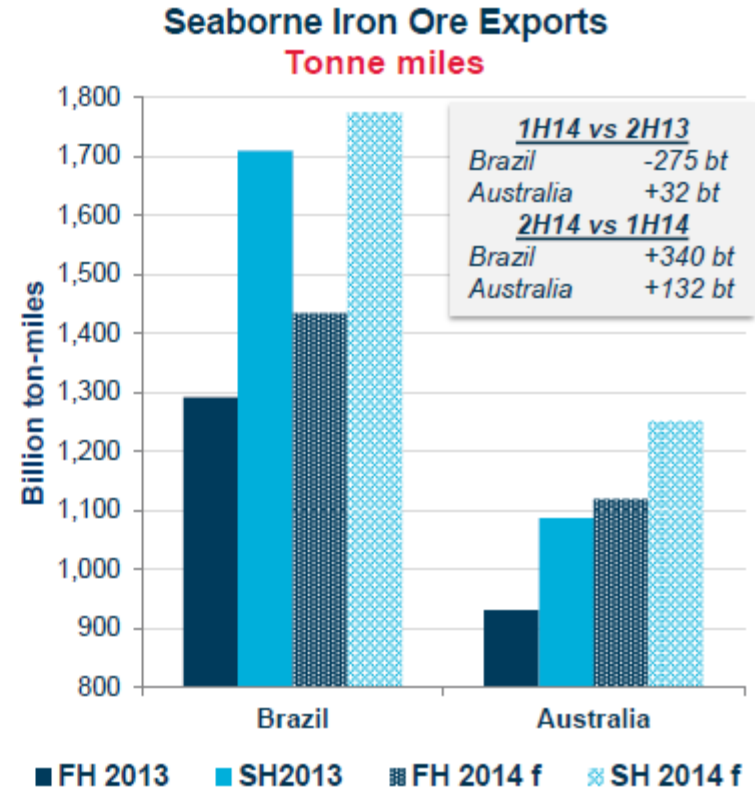
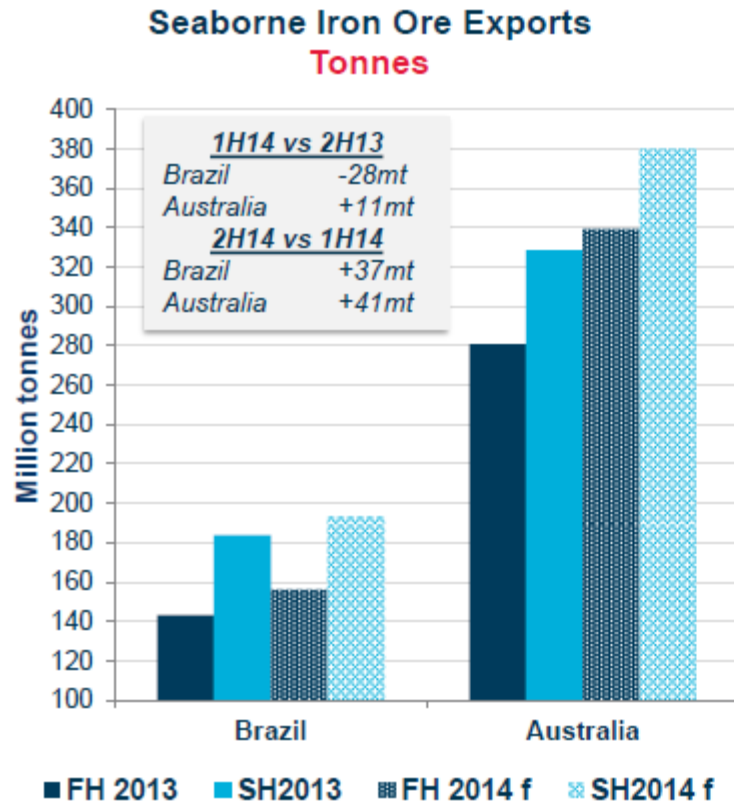
Oct14 = \$13,859

Ramp-up after maintenance, little coal support

Capesize Spot rate



Iron Ore relies on tonne mile growth



Panamax spot rate in context....

Year-on-year -13%

1Q14 = \$10,427

Final discharging of stock build ahead of Indonesian ban on raw ores

2Q14 = \$6,304

Record South American grain season, but significant improvement in port congestion

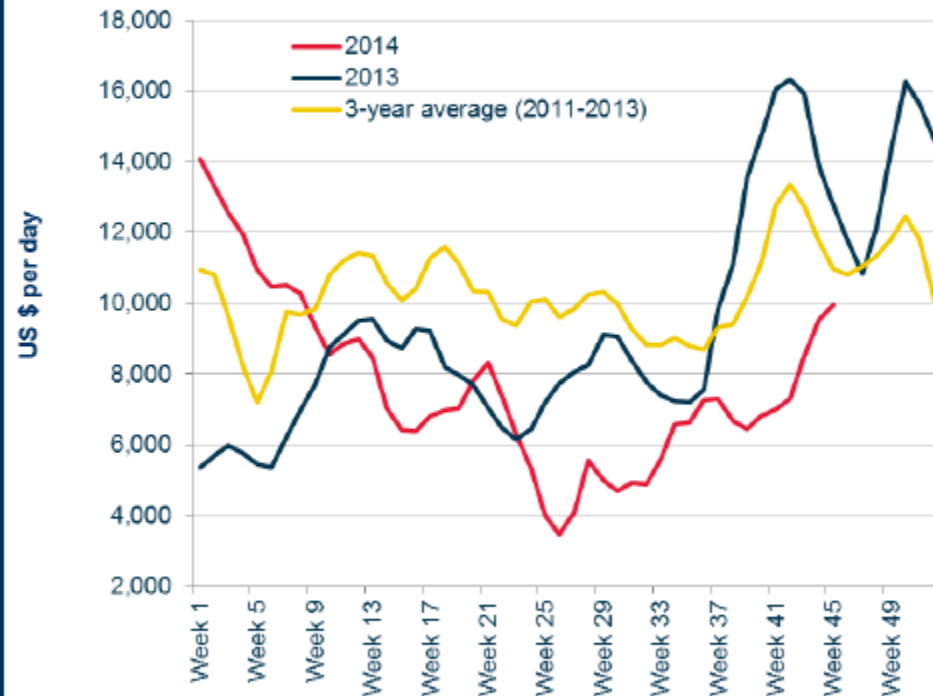
3Q14 = \$5,865

Weak economic fundamentals specifically slowdown in China. Lack in Chinese coal import growth.

Oct14 = \$8,034

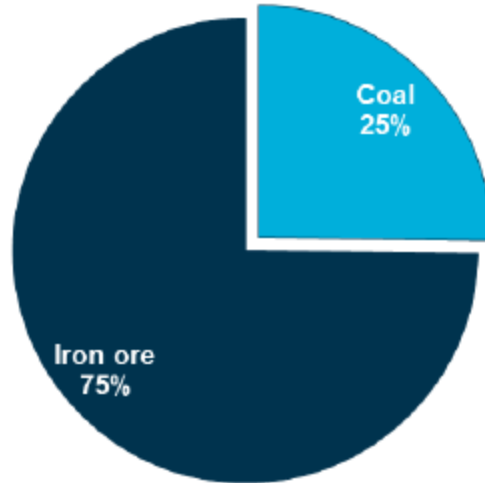
Black sea grain, India coal

Panamax Spot rate

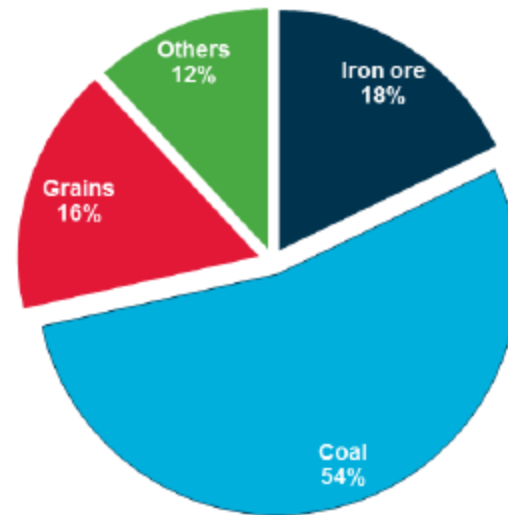


Iron Ore is key to the Capesize market, while coal is key to the panamax market

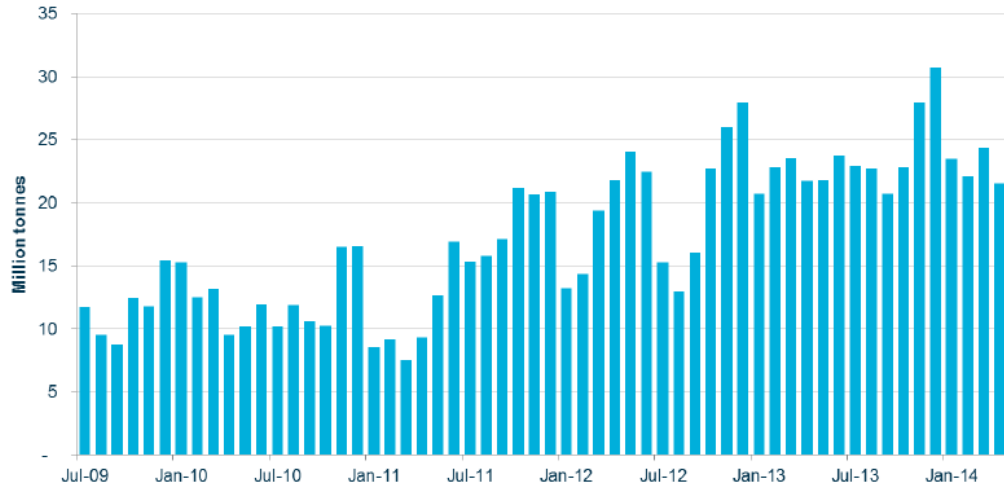
Capesize volumes by commodity



Panamax volumes by commodity

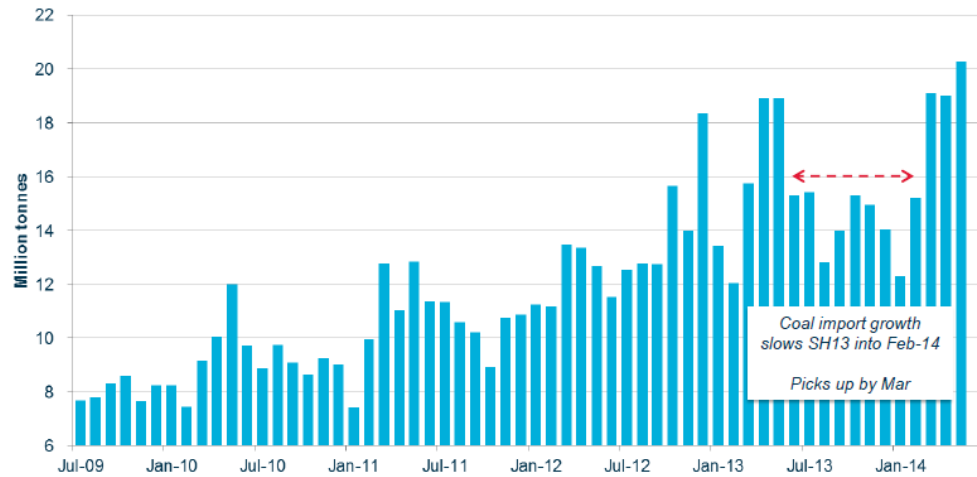


China Coal Imports (exporter derived)

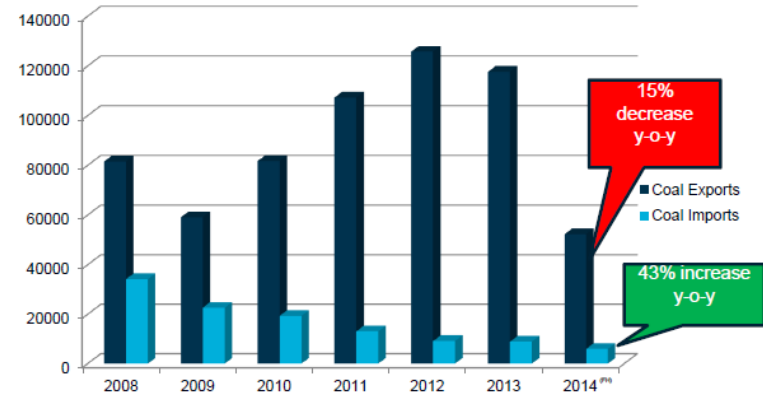


- Chinese monthly coal imports remain lackluster
- India's coal imports ramping up
- US coal story makes sombre reading

India Coal Imports (exporter derived)



US Coal Data (thousand tons)



Source: US Department of commerce

Drybulk Freight Supply / Demand Fundamental Framework

- Supply in the freight market is measured in terms of capacity of ton miles provided to the market, to capture both the size of the fleet carrying capacity measured in deadweight tonnage (DWT), which is static in the short term and dynamic in the long term (it takes on average 18 months to order and build a new vessel) as well as the speed of the fleet which determines the rate of turnover of the existing capacity
- The faster the speed of the fleet, the more times the DWT capacity can be turned in a given time frame

Freight Supply = Ton Mile Capacity (ton-miles)

= Deadweight Tonnage (DWT) x (calendar days – days in port) x

(1-fleet congestion as % of fleet) x chosen fleet SPEED (a function of market price signals) x 24hrs/day

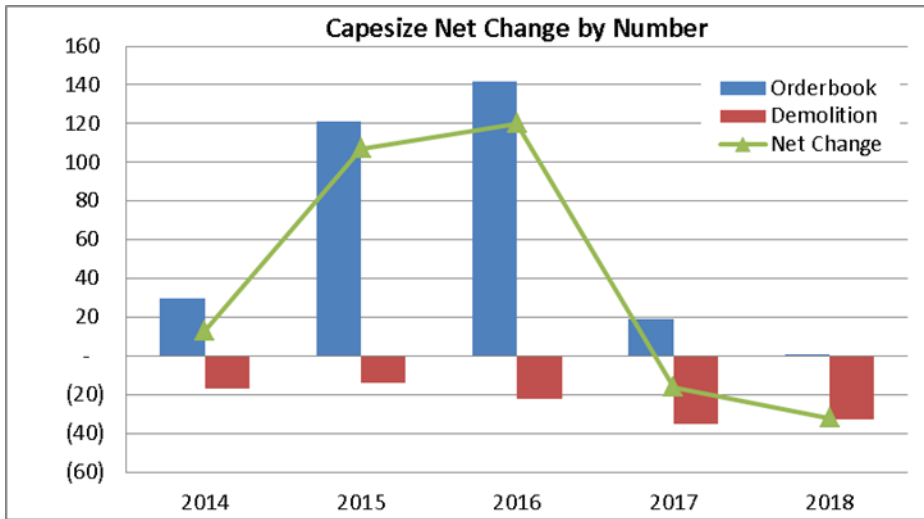
- Demand in the freight market is measured in terms of metric tons to be moved between ports and is measured in the common unit of ton miles to capture both the volumes (tons) to be transported as well as the distance (miles) the tons must travel between load and discharge ports
- The longer the distances each ton is required to travel, the more demand will absorb freight capacity

Freight Demand= Ton Mile Demand (ton miles)

= Tons of Cargo (tons) x Distance (miles)

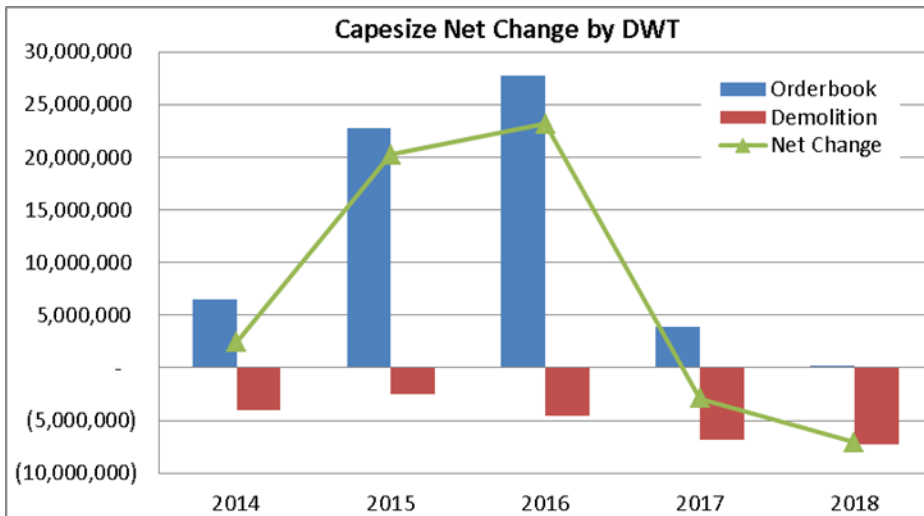
- Productivity of the Fleet must also be considered: Laden-to-Ballast ratios are determined by the opportunity for backhaul cargo instead of ballast. Laden-to-ballast ratios > 50% can generate higher returns to the ship owner, but can reduce the overall ton mile demand in the market. Productivity of the fleet is a function of commodity trade flow patterns.

Capesize



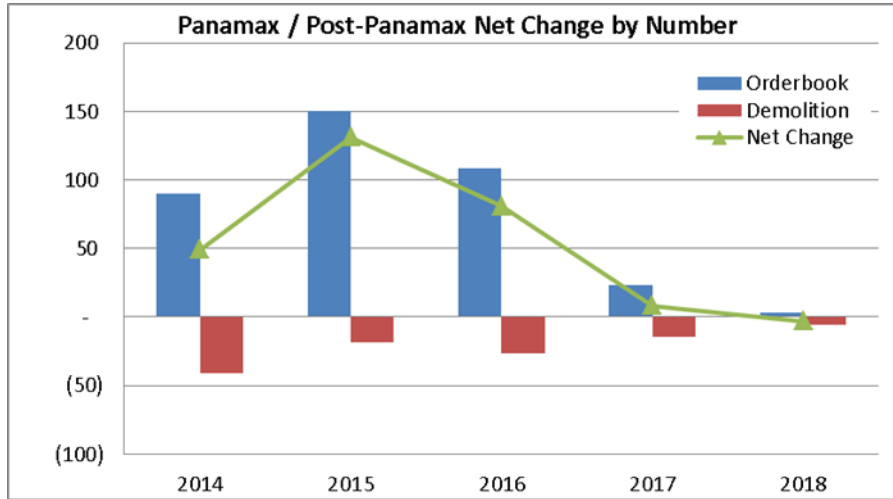
Capesize						
Number	2014	2015	2016	2017	2018	ENDING
Start Fleet	1,626	1,639	1,746	1,866	1,850	
Deliveries	30	121	142	19	1	
Scrapping	(17)	(14)	(22)	(35)	(33)	
Ending Fleet	1,639	1,746	1,866	1,850	1,818	1,818
%	0.8%	6.5%	6.9%	-0.9%	-1.7%	11.8%

Capesize						
DWT	2014	2015	2016	2017	2018	ENDING
Start Fleet	305,288,213	307,757,524	328,016,936	351,175,644	348,247,003	
Deliveries	6,524,461	22,798,944	27,739,116	3,946,628	206,500	
Scrapping	(4,055,150)	(2,539,532)	(4,580,408)	(6,875,269)	(7,300,704)	
Ending Fleet	307,757,524	328,016,936	351,175,644	348,247,003	341,152,799	341,152,799
%	0.8%	6.6%	7.1%	-0.8%	-2.0%	11.7%

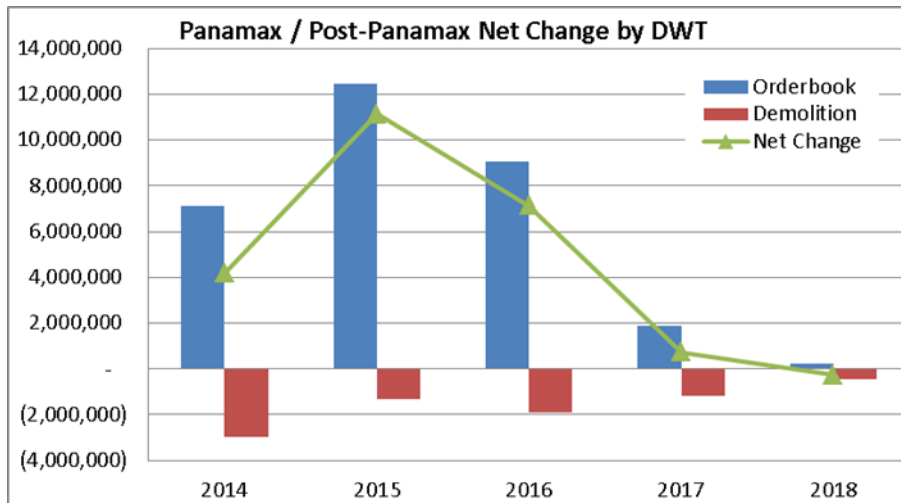


Dry Bulk Vessel Segment	Capesize
Average Age	7.6
% of Total Fleet DWT > 20 Years	40.6%
4 Year Scrapping Eligibility	18.2%
Average Age Scrapped	7.4%
Vessel Segment Orderbook %	24.5
Peak Deliveries	20.0%
Orderbook Cancellation	22.8m DWT in 2016
	17.4%

Panamax

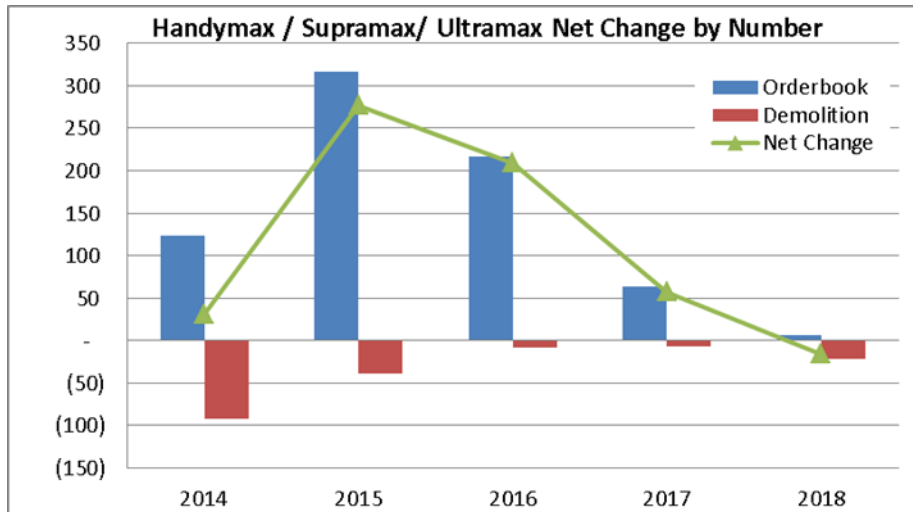


Panamax						
Number	2014	2015	2016	2017	2018	ENDING
Start Fleet	2,415	2,464	2,595	2,676	2,684	
Deliveries	90	150	108	23	3	
Scrapping	(41)	(19)	(27)	(15)	(6)	
Ending Fleet	2,464	2,595	2,676	2,684	2,681	2,681
%	2.0%	5.3%	3.1%	0.3%	-0.1%	11.0%
DWT	2014	2015	2016	2017	2018	ENDING
Start Fleet	191,396,487	195,567,158	206,688,525	213,823,236	214,561,054	
Deliveries	7,133,081	12,433,743	9,049,773	1,893,883	208,854	
Scrapping	(2,962,410)	(1,312,376)	(1,915,062)	(1,156,065)	(467,232)	
Ending Fleet	195,567,158	206,688,525	213,823,236	214,561,054	214,302,676	214,302,676
%	2.2%	5.7%	3.5%	0.3%	-0.1%	12.0%

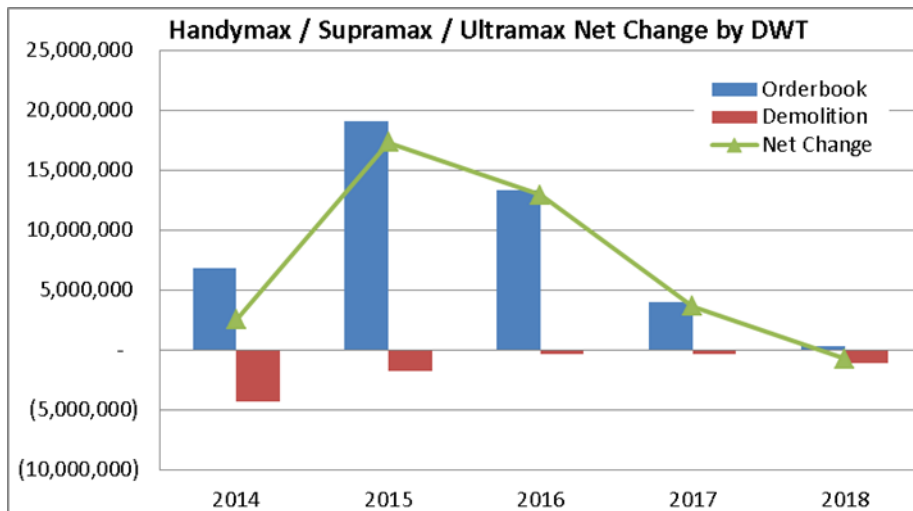


Dry Bulk Vessel Segment	Panamax
Average Age	8.3
% of Total Fleet DWT	25.5%
> 20 Years	18.3%
4 Year Scrapping Eligibility	4.5%
Average Age Scrapped	26
Vessel Segment Orderbook %	18.9%
Peak Deliveries	12.4m DWT in 2015
Orderbook Cancellation	15.1%

Handymax / Supramax / Ultramax

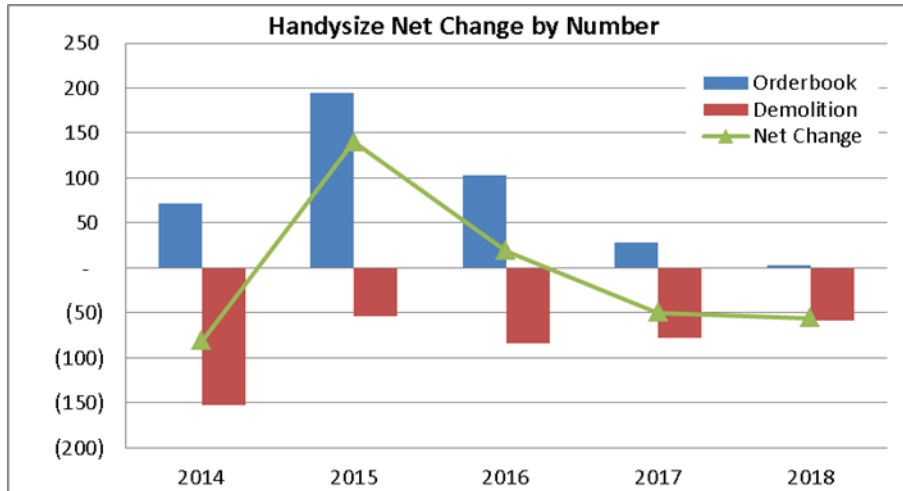


Supramax						
Number	2014	2015	2016	2017	2018	ENDING
Start Fleet	3,122	3,153	3,430	3,639	3,696	
Deliveries	123	316	217	64	6	
Scrapping	(92)	(39)	(8)	(7)	(22)	
Ending Fleet	3,153	3,430	3,639	3,696	3,680	3,680
%	1.0%	8.8%	6.1%	1.6%	-0.4%	17.9%
DWT	2014	2015	2016	2017	2018	ENDING
Start Fleet	166,023,149	168,526,177	185,804,676	198,715,321	202,328,020	
Deliveries	6,792,452	19,056,036	13,275,621	3,949,594	327,175	
Scrapping	(4,289,424)	(1,777,537)	(364,976)	(336,895)	(1,067,347)	
Ending Fleet	168,526,177	185,804,676	198,715,321	202,328,020	201,587,848	201,587,848
%	1.5%	10.3%	6.9%	1.8%	-0.4%	21.4%

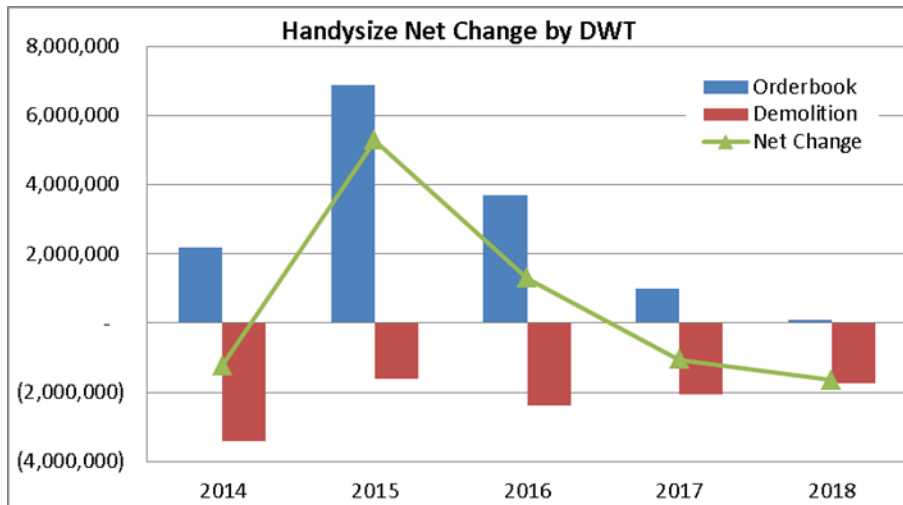


Dry Bulk Vessel Segment	Supramax
Average Age	8.4
% of Total Fleet DWT	22.0%
> 20 Years	17.0%
4 Year Scrapping Eligibility	5.3%
Average Age Scrapped	29
Vessel Segment Orderbook %	30.0%
Peak Deliveries	19m DWT in 2015
Orderbook Cancellation	12.8%

Handysize

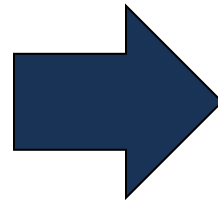


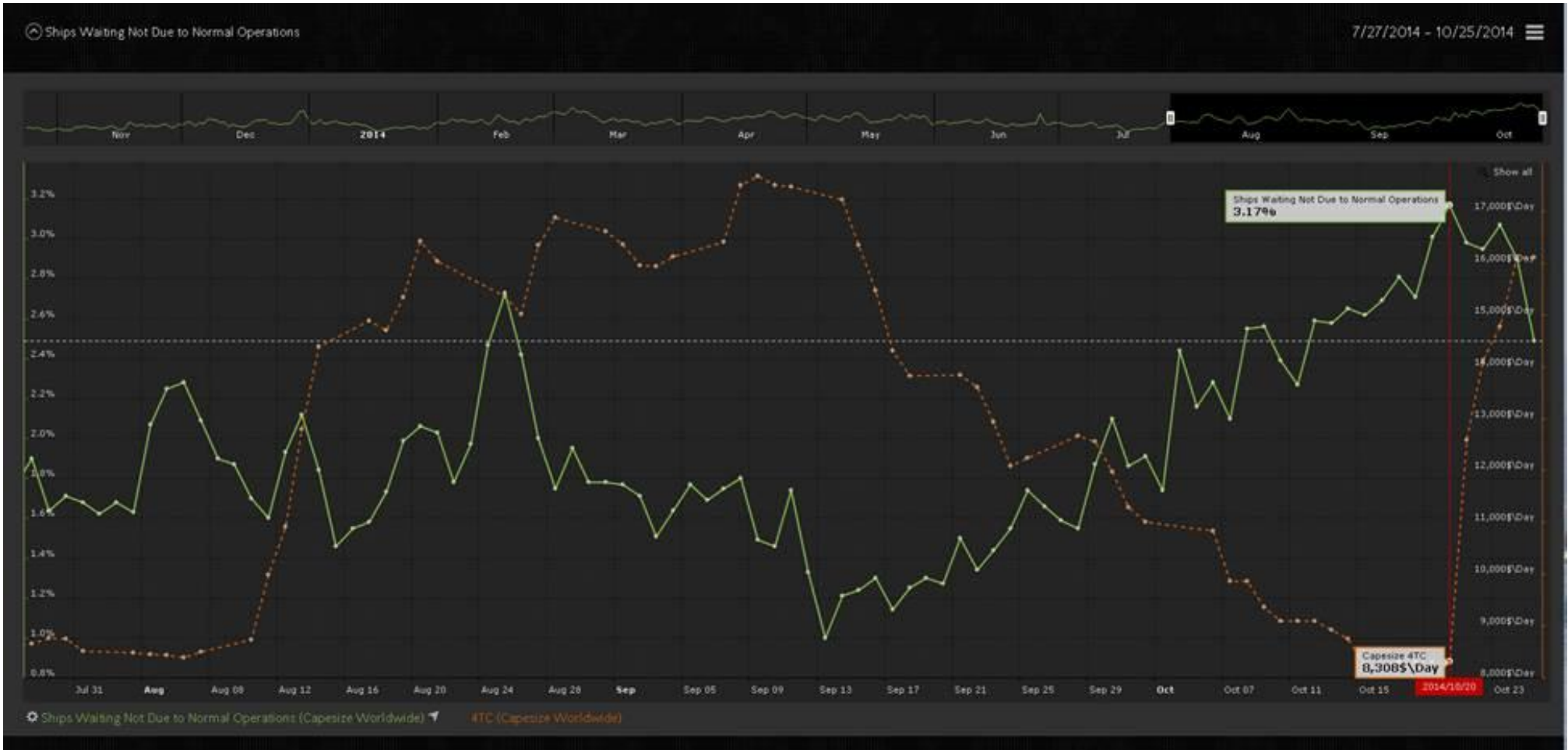
Handysize						
Number	2014	2015	2016	2017	2018	ENDING
Start Fleet	3,122	3,041	3,181	3,200	3,150	
Deliveries	72	194	103	28	3	
Scrapping	(153)	(54)	(84)	(78)	(59)	
Ending Fleet	3,041	3,181	3,200	3,150	3,094	3,094
%	-2.6%	4.6%	0.6%	-1.6%	-1.8%	-0.9%
DWT	2014	2015	2016	2017	2018	ENDING
Start Fleet	88,752,049	87,515,061	92,796,116	94,084,735	93,018,690	
Deliveries	2,167,932	6,889,040	3,686,678	985,041	88,886	
Scrapping	(3,404,920)	(1,607,985)	(2,398,059)	(2,051,086)	(1,749,168)	
Ending Fleet	87,515,061	92,796,116	94,084,735	93,018,690	91,358,408	91,358,408
%	-1.4%	6.0%	1.4%	-1.1%	-1.8%	2.9%



Dry Bulk Vessel Segment	Handysize
Average Age	11.2
% of Total Fleet DWT > 20 Years	11.8%
4 Year Scrapping Eligibility	30.0%
Average Age Scrapped	13.0%
Vessel Segment Orderbook %	31.6
Peak Deliveries	20.0%
Orderbook Cancellation	7m DWT in 2015
	19.0%

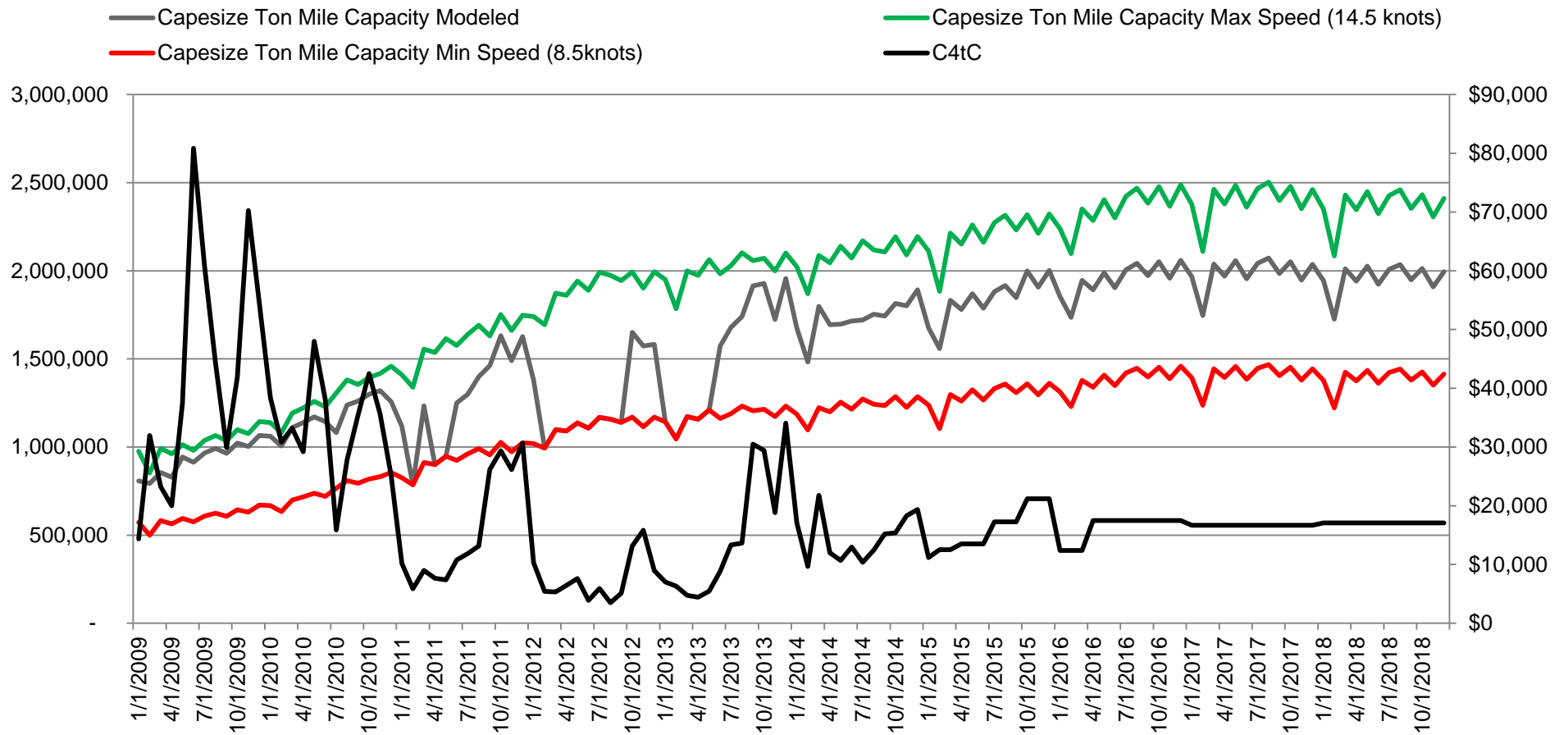
Impact of speed and new eco designs on Supply





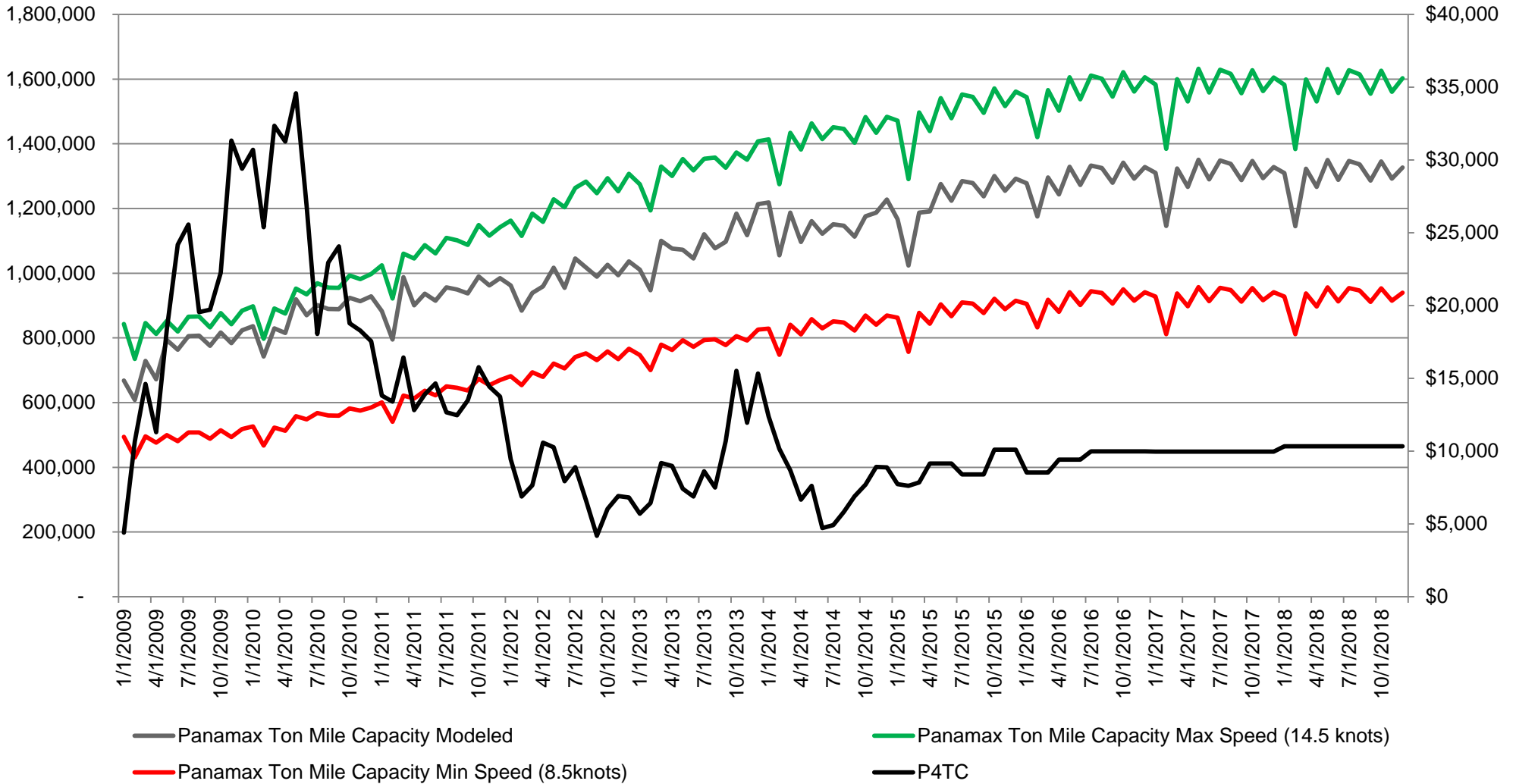
Capesize Supply Forecast

- As a result of the optimization function, ton-mile supply capacity can swing +/- 40% based on the range of fleet speed (8.5 – 14.5 knots)
- The market is therefore easily adaptable to change in freight rates, thus supply can increase/decrease in an instant.
- Therefore the real turning point in the market is when fleet is at full speed and therefore supply becomes inelastic.



Panamax ton mile capacity forecast

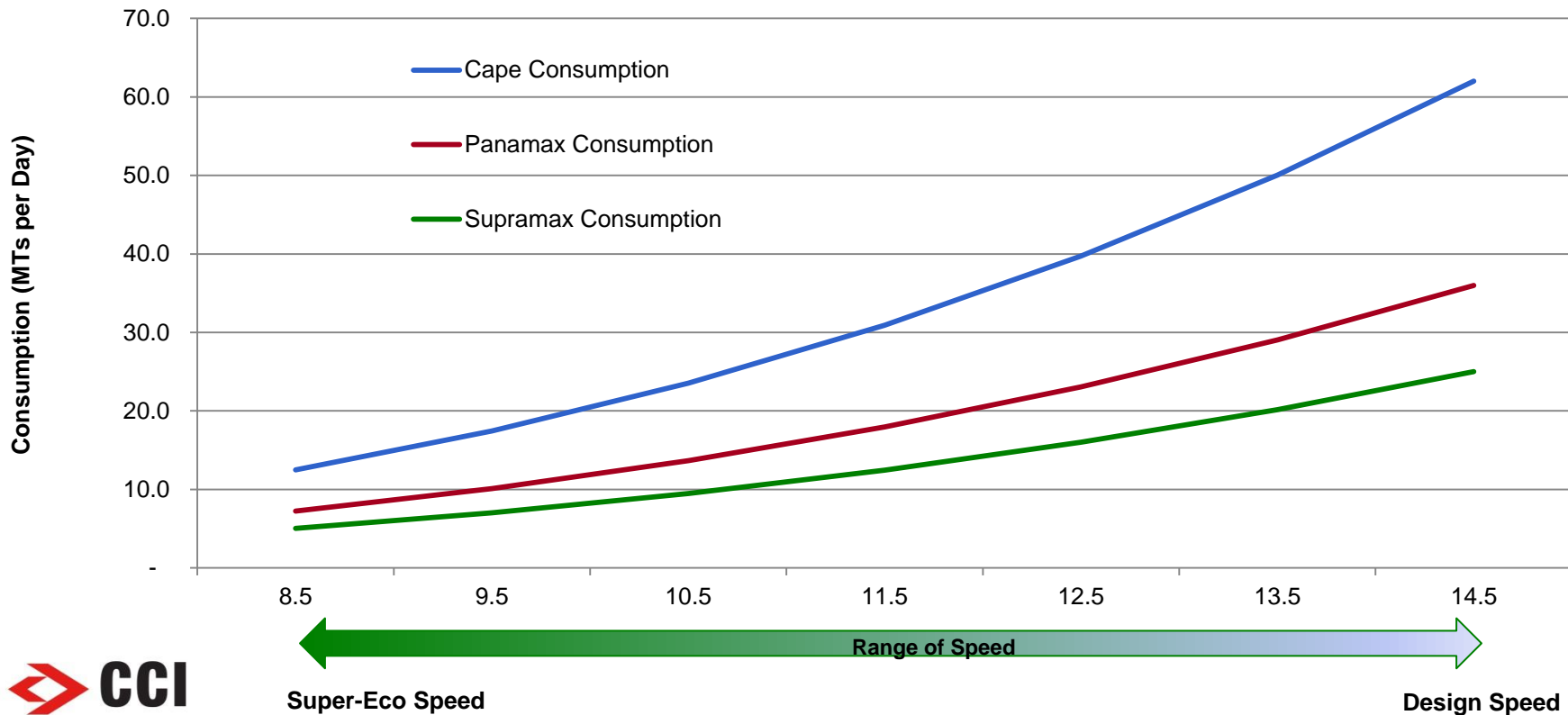
Ton-mile supply capacity can swing +/- 40% based on the range of theoretical range of fleet speed (8.5 – 14.5 knots)



The Cube Rule : Fundamental Driver of Voyage Costs

- A ship’s fuel consumption comprises 50-75% of the voyage revenue depending on the price of bunker fuel relative to the price of freight
- Drybulk vessels have a design speed of 14.5 knots while operating the vessel at lower speeds will reduce fuel consumption due to decreased water resistance
- The degree to which fuel can be saved can be expressed by the “Cube Rule” where fuel savings will be approximately proportional to the cube of the proportions reduction in speed:

$$Fuel\ Consumption_{Actual} = Fuel\ Consumption_{Design} \left(\frac{Speed_{Actual}}{Speed_{Design}} \right)^3$$



Shipowners' Optimization Decision

Capesize: Optimal Speed vs TC Rate

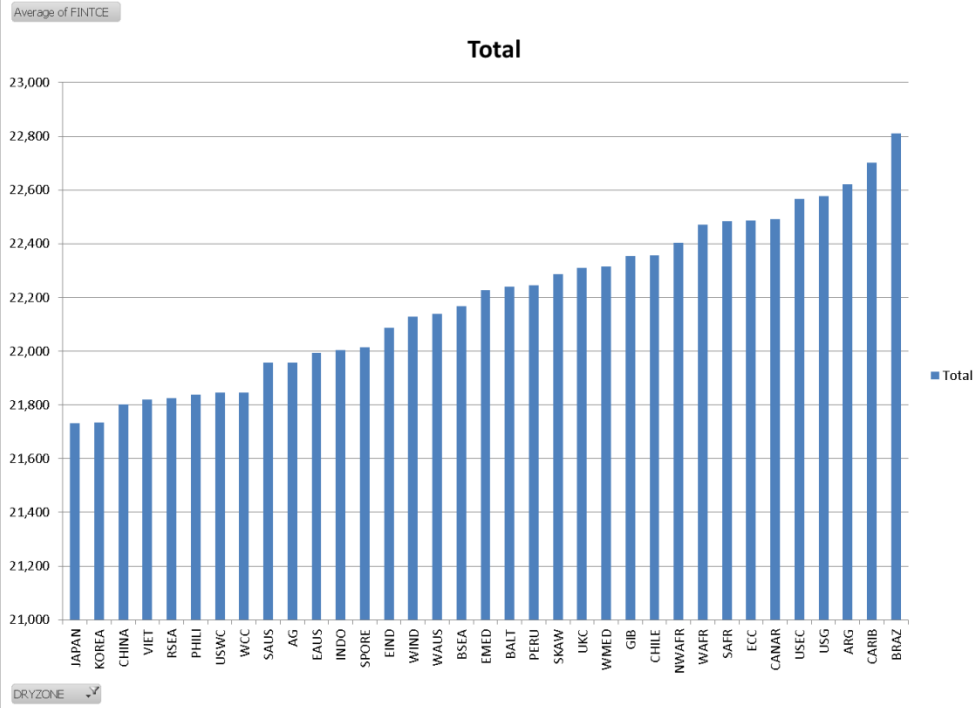
TC rate	Bunkers - \$100/MT	Current Bunkers	Bunkers + \$100/MT
\$2,000	8.00	8.00	8.00
\$4,000	8.00	8.00	8.00
\$6,000	11.50	8.00	8.00
\$8,000	11.50	11.50	11.50
\$10,000	12.00	11.50	11.50
\$12,000	12.00	12.00	11.50
\$14,000	12.00	12.00	12.00
\$16,000	12.50	12.00	12.00
\$18,000	12.50	12.50	12.00
\$20,000	12.50	12.50	12.00
\$22,000	13.00	12.50	12.50
\$24,000	13.50	12.50	12.50
\$26,000	13.50	13.00	12.50
\$28,000	13.50	13.50	12.50
\$30,000	13.50	13.50	12.50
\$32,000	13.50	13.50	13.50
\$34,000	13.50	13.50	13.50
\$36,000	13.50	13.50	13.50
\$38,000	13.50	13.50	13.50
\$40,000	13.50	13.50	13.50
\$42,000	13.50	13.50	13.50
\$44,000	13.50	13.50	13.50
\$46,000	13.50	13.50	13.50
\$48,000	14.00	13.50	13.50
\$50,000	14.00	13.50	13.50

Panamax: Optimal Speed vs TC Rate

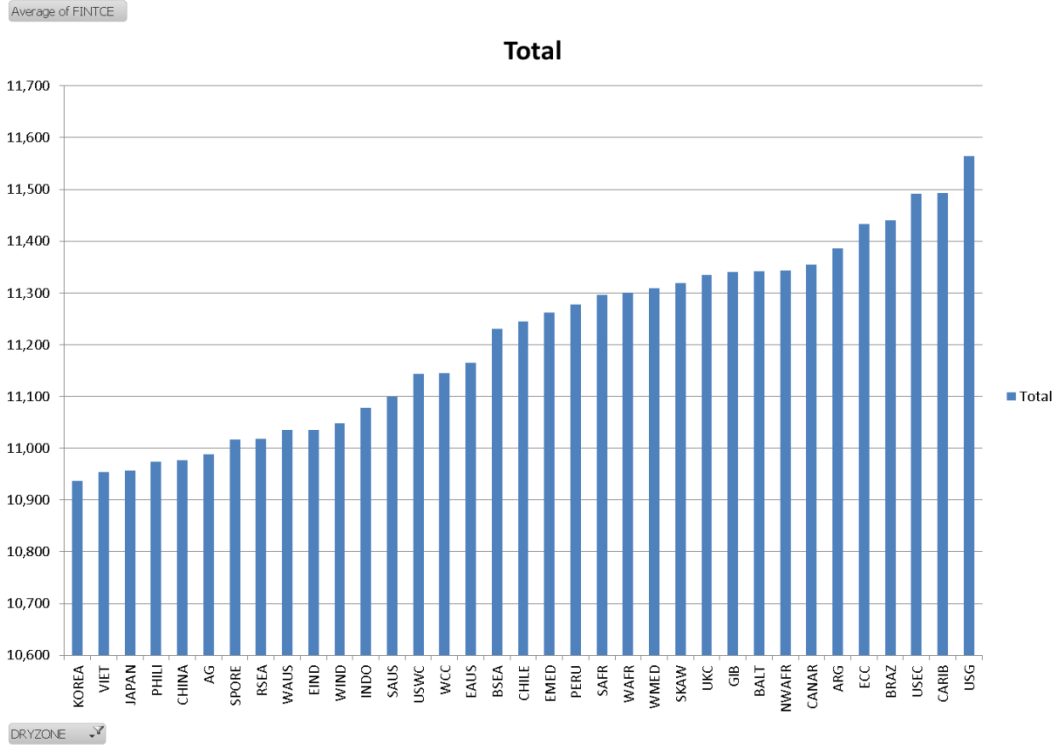
TC rate	Bunkers - \$100/MT	Current Bunkers	Bunkers + \$100/MT
\$2,000	8.000	8.000	8.000
\$4,000	11.500	11.500	8.000
\$6,000	12.000	11.500	11.500
\$8,000	12.000	12.000	12.000
\$10,000	12.500	12.000	12.000
\$12,000	12.500	12.500	12.000
\$14,000	13.500	12.500	12.500
\$16,000	13.500	13.500	12.500
\$18,000	13.500	13.500	13.000
\$20,000	13.500	13.500	13.500
\$22,000	13.500	13.500	13.500
\$24,000	13.500	13.500	13.500
\$26,000	13.500	13.500	13.500
\$28,000	13.500	13.500	13.500
\$30,000	14.000	13.500	13.500
\$32,000	14.500	13.500	13.500
\$34,000	14.500	14.000	13.500
\$36,000	15.000	14.000	13.500
\$38,000	15.000	14.500	13.500
\$40,000	15.000	14.500	14.000
\$42,000	15.000	15.000	14.000
\$44,000	15.000	15.000	14.500
\$46,000	15.000	15.000	14.500
\$48,000	15.000	15.000	14.500
\$50,000	15.000	15.000	15.000



Capesize optimisation decision



Panamax



Thank You



<http://seamenschurch.org/>