Dry bulk panel

Capital Link New York

9 October 2018

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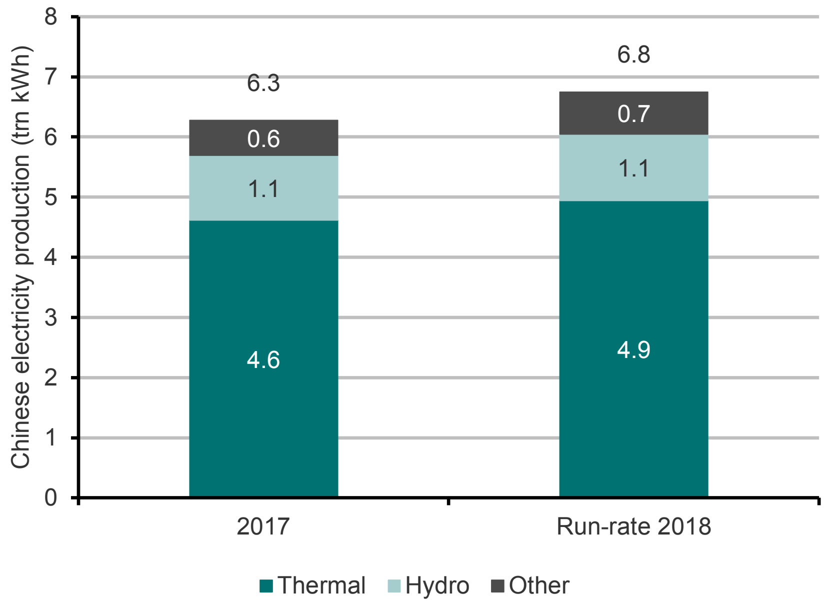
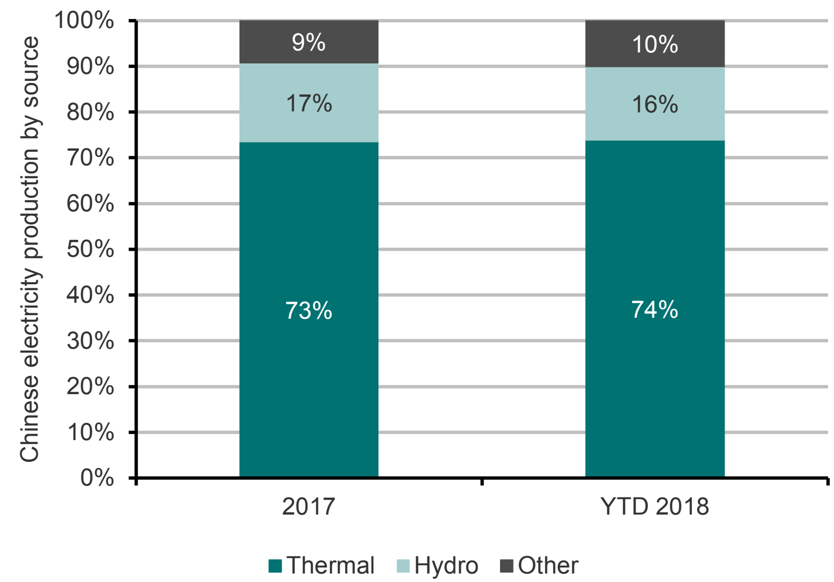
Solid growth in Chinese electricity production of 7.5% YTD driving energy demand

Run-rate growth of 7.5% YTD indicates 6.8trn kWh electricity production for 2018…



… with Thermal generation having to step up to the plate when alternative sources don't make up the difference



Source: Bloomberg

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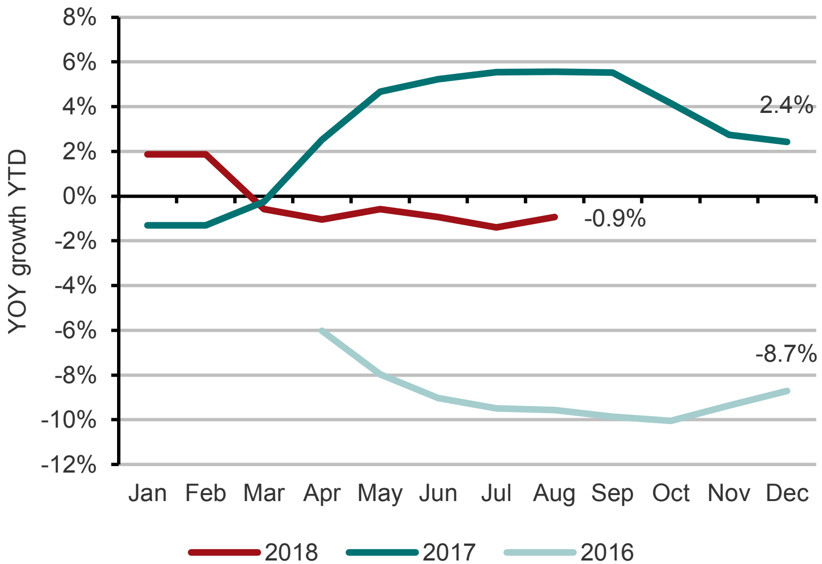
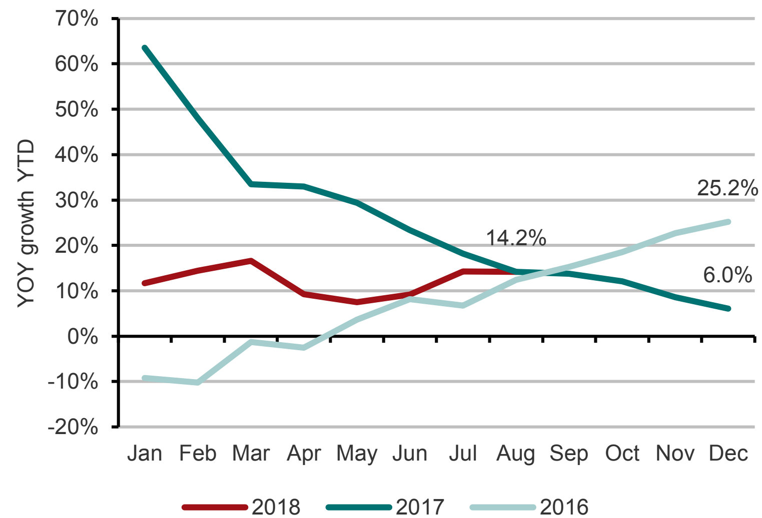
Chinese coal production continues to decline leaving imports as an alternative

Domestic coal production is still in decline YTD, indicating the rational 'substitution story' from our September 2017 sector report could be materialising



…hence, Chinese coal imports are up by 14.2% YTD to fuel excess electricity demand not covered by other energy sources



→ More than 90% of Chinese demand is covered by domestic production which means small changes to domestic production = large change to imports

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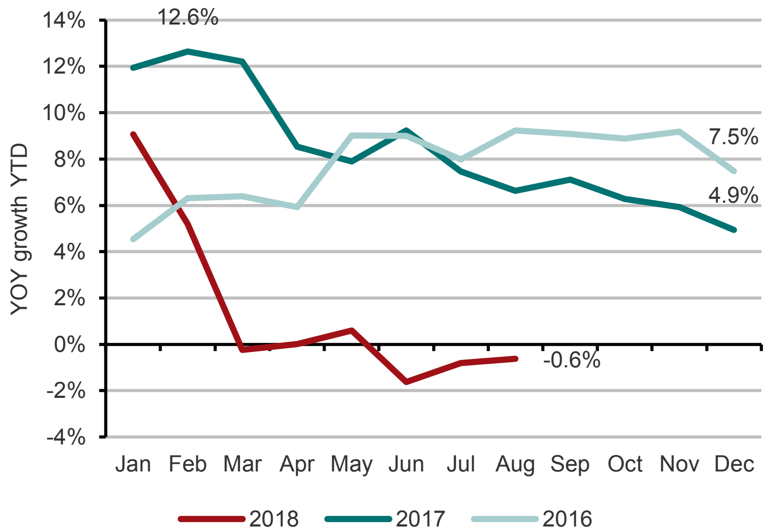
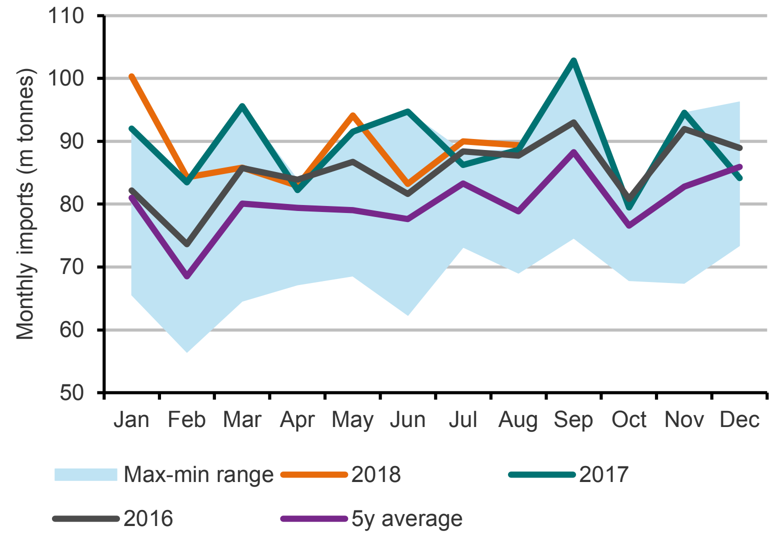
YTD Chinese iron ore imports YOY have been weak…

China iron ore import volumes are in negative YOY as of August…



… due to March and June underperforming last year



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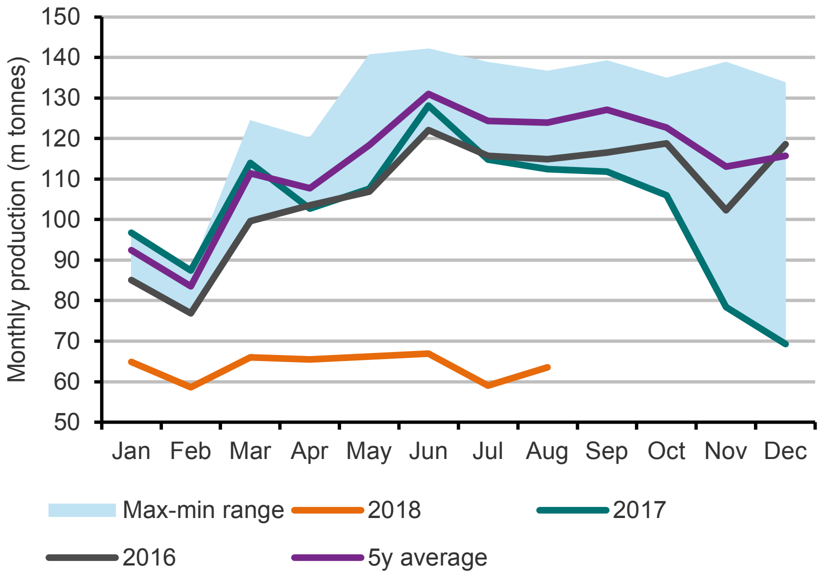
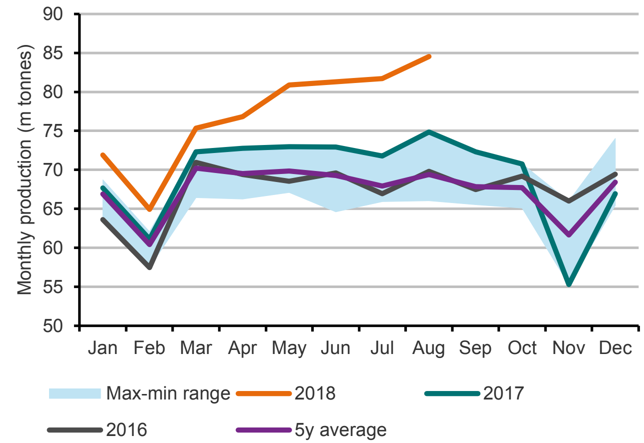
… despite Chinese iron ore production down 40% YOY and strong steel production growth

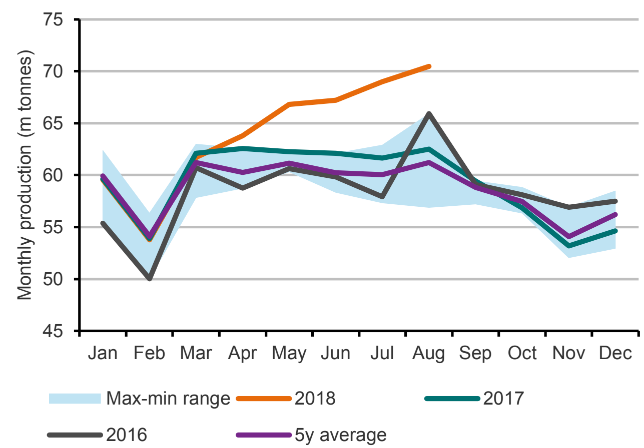
YTD China domestic iron ore production is down 40% YOY, leading to favourable switching to high-quality imports as highlighted in our September 2017 sector report…



…while at the same time YTD Chinese steel production growth of 9.0% YOY is showing positive growth, underpinning demand for iron ore



Chinese pig iron production growth since April



→ Initial steel production growth fuelled by scrap recycling, while pig iron production has accelerated since April (now up 5.3% YTD)

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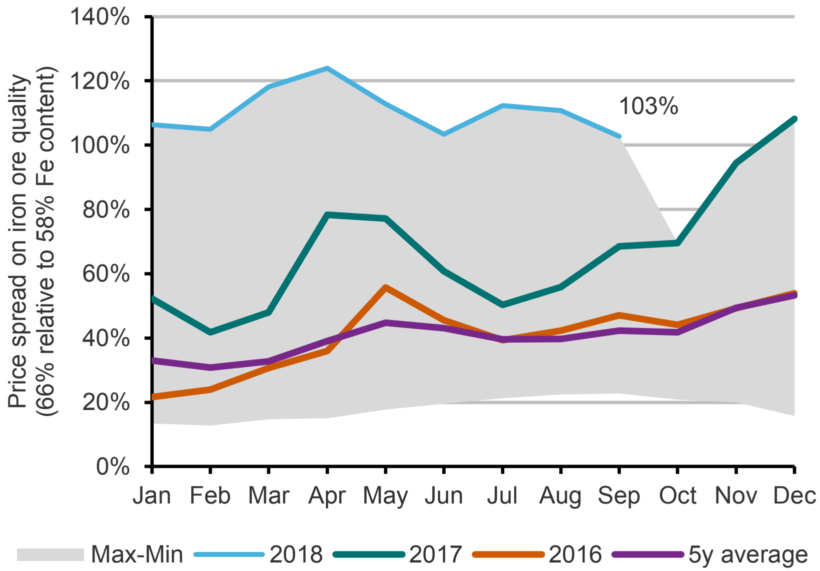
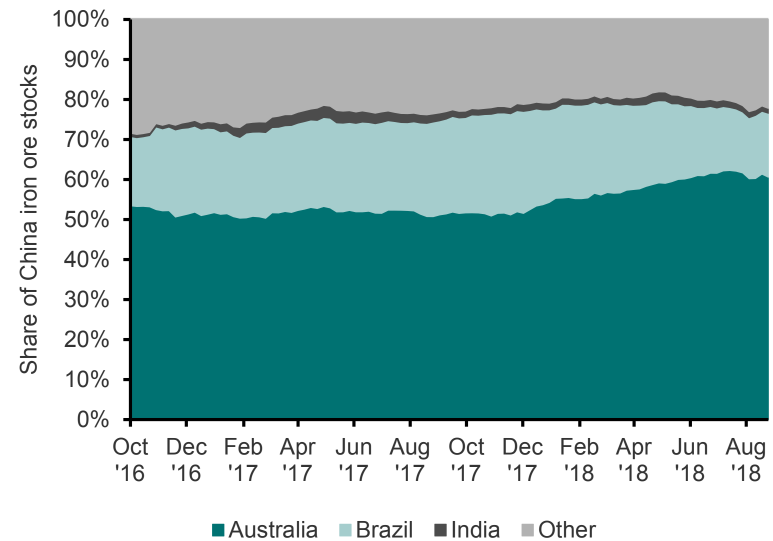
Flight to quality iron ore supports strong Brazilian exports in H2

Flight-to-quality iron ore price spreads are still high, which is a positive for long-haul iron ore demand…



…and supported by China reducing its Brazilian iron ore inventories Australia's share is increasing



→ Brazilian sourced stocks were 24% of total last year and down to 15% recently, underpinning the quality story playing out and still demand for 'the good stuff' from far away

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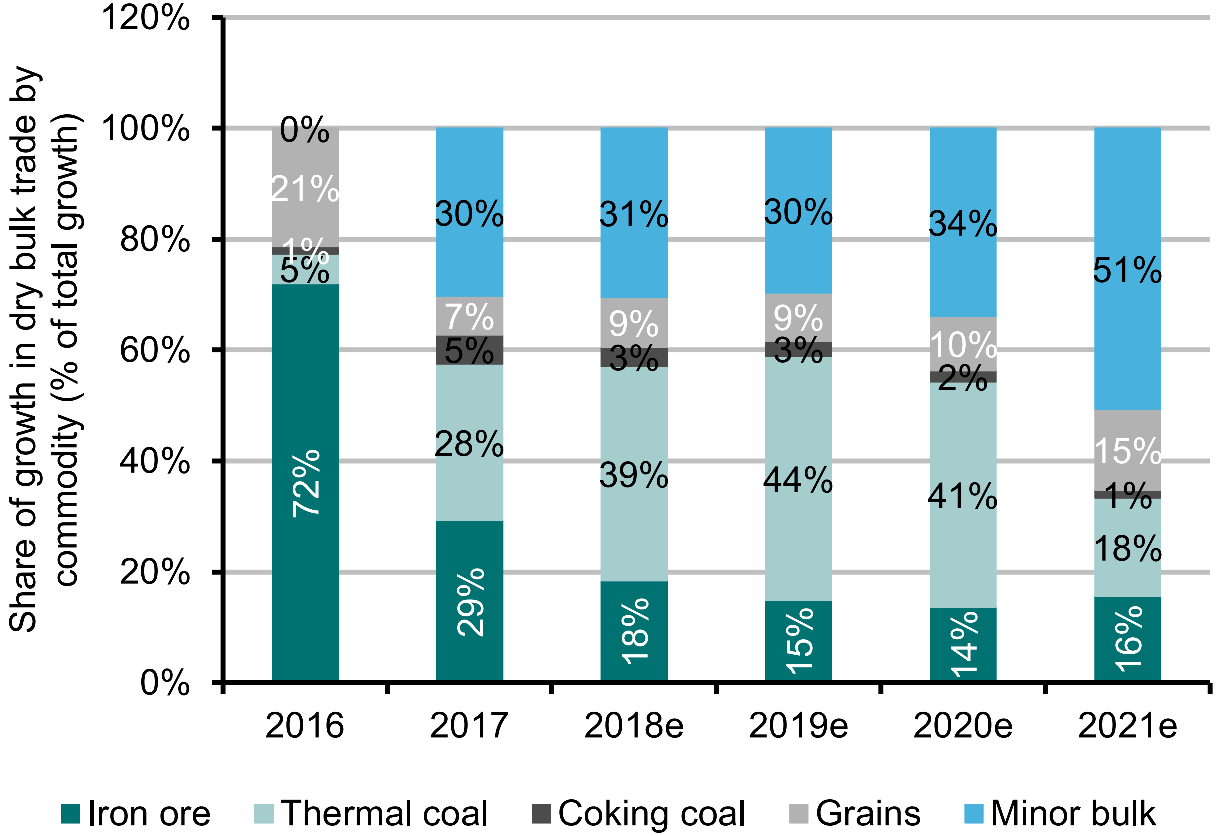
Iron ore trade as a share of growth in dry bulk trade of 18% in 2018 (72% in 2016), while coal from 7% in 2016 to 34% in 2017, and we forecast 42% for 2018

Share of growth in dry bulk trade by main commodity



Source: DNB Markets (forecasts), Clarksons (historical figures)

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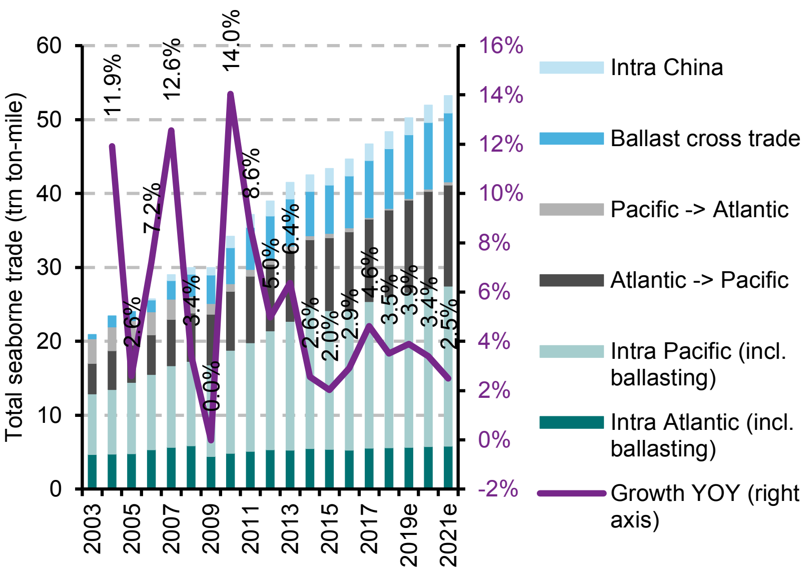
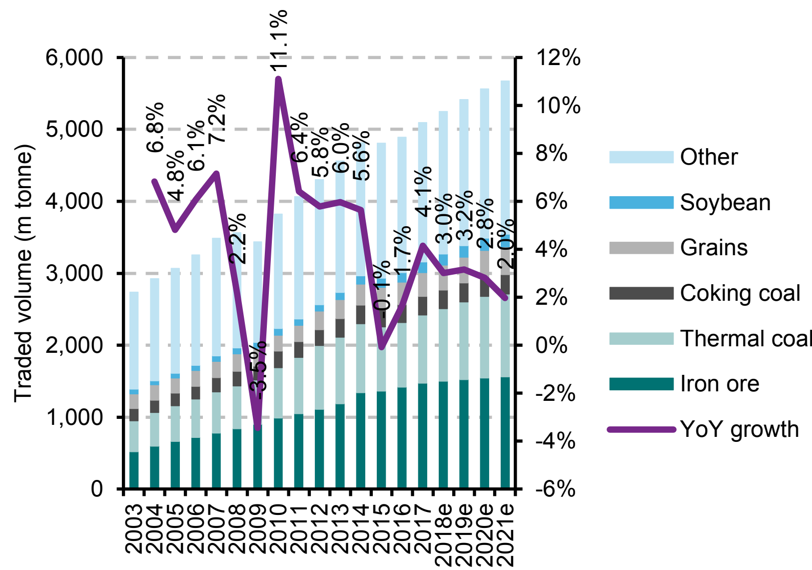
2018–2021e average tonne-mile demand growth of 3.3% above volumes of 2.8%

DNB Markets' dry bulk tonne-mile demand forecasts



DNB Markets' trade forecasts by commodity



- We expect dry bulk **tonne-mile** demand to grow by 3.5% in 2018, down from 4.6% in 2017), 3.9% in 2019, 3.4% in 2020 and 2.5% in 2021
- We expect **volumes** to grow by 3.0% in 2018, 3.2% in 2019, 2.8% in 2020 and 2.0% in 2021.

Source: DNB Markets (forecasts), Clarksons (historical figures)

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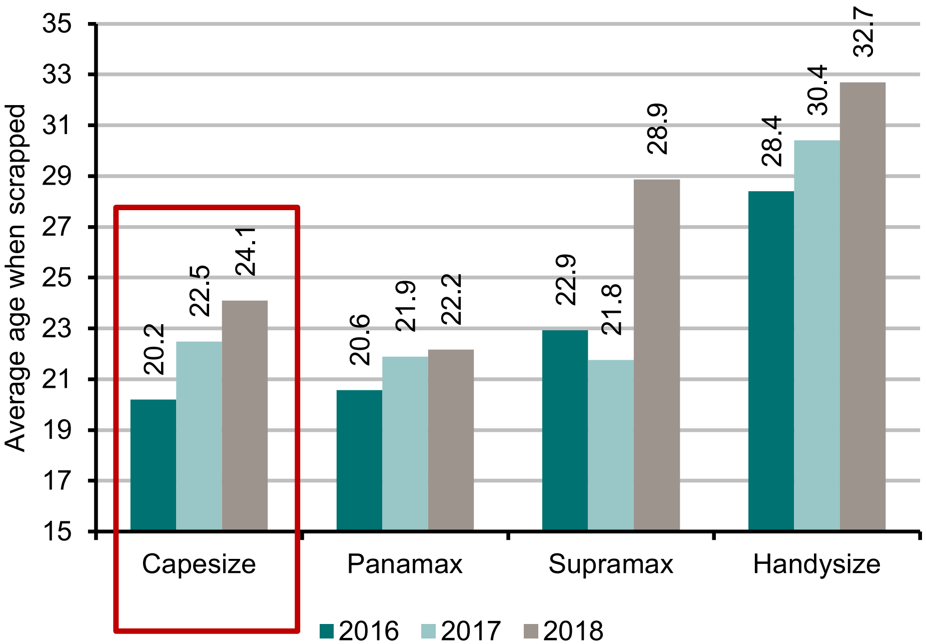
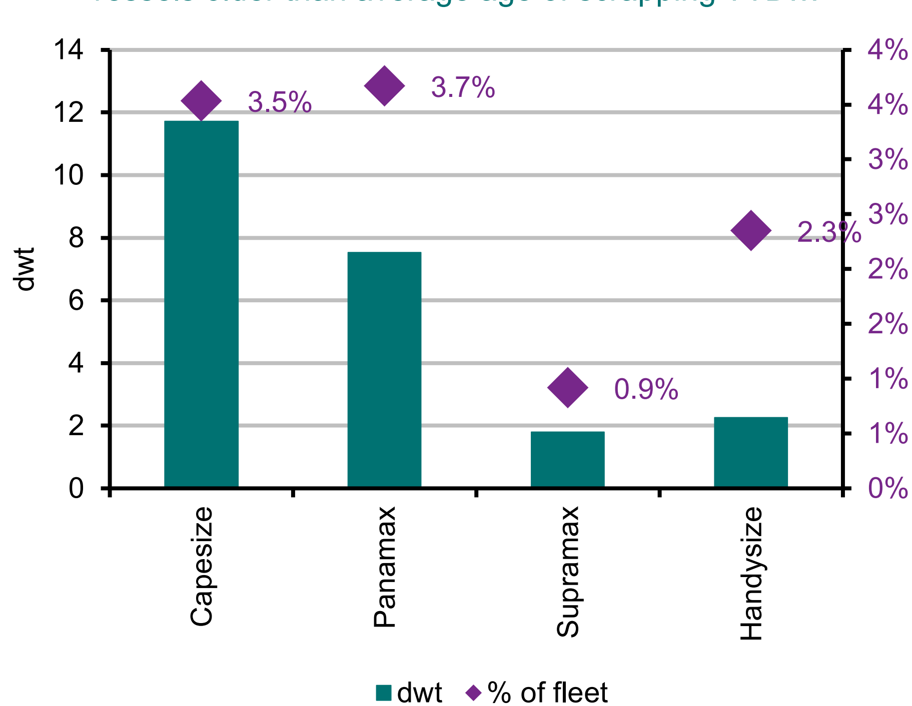
We have modest scrapping assumptions, as 73% of the Capesize fleet was built in the past 10 years and another 11% remains on order.

The average scrap age is also increasing across all vessel classes



And there is not much scrapping potential either, based on vessels older than average age of scrapping YTD…



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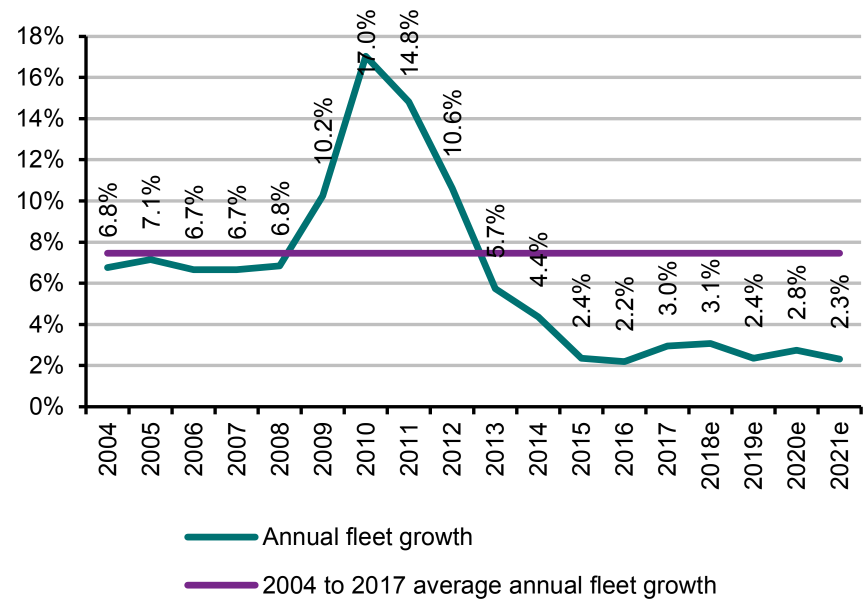
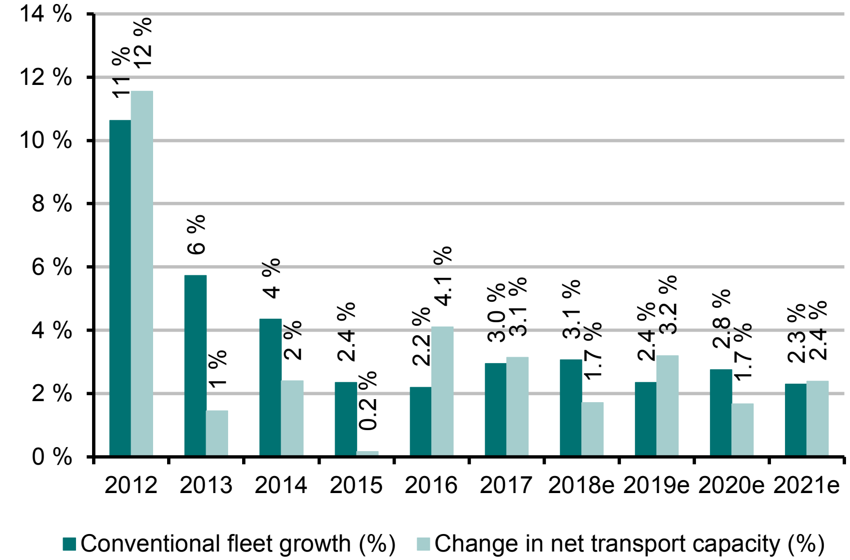
2018–2021e average fleet growth of 2.6% vs. effective fleet growth of 2.2%

Fleet growth, including forecasts



Fleet growth versus change in net transport capacity



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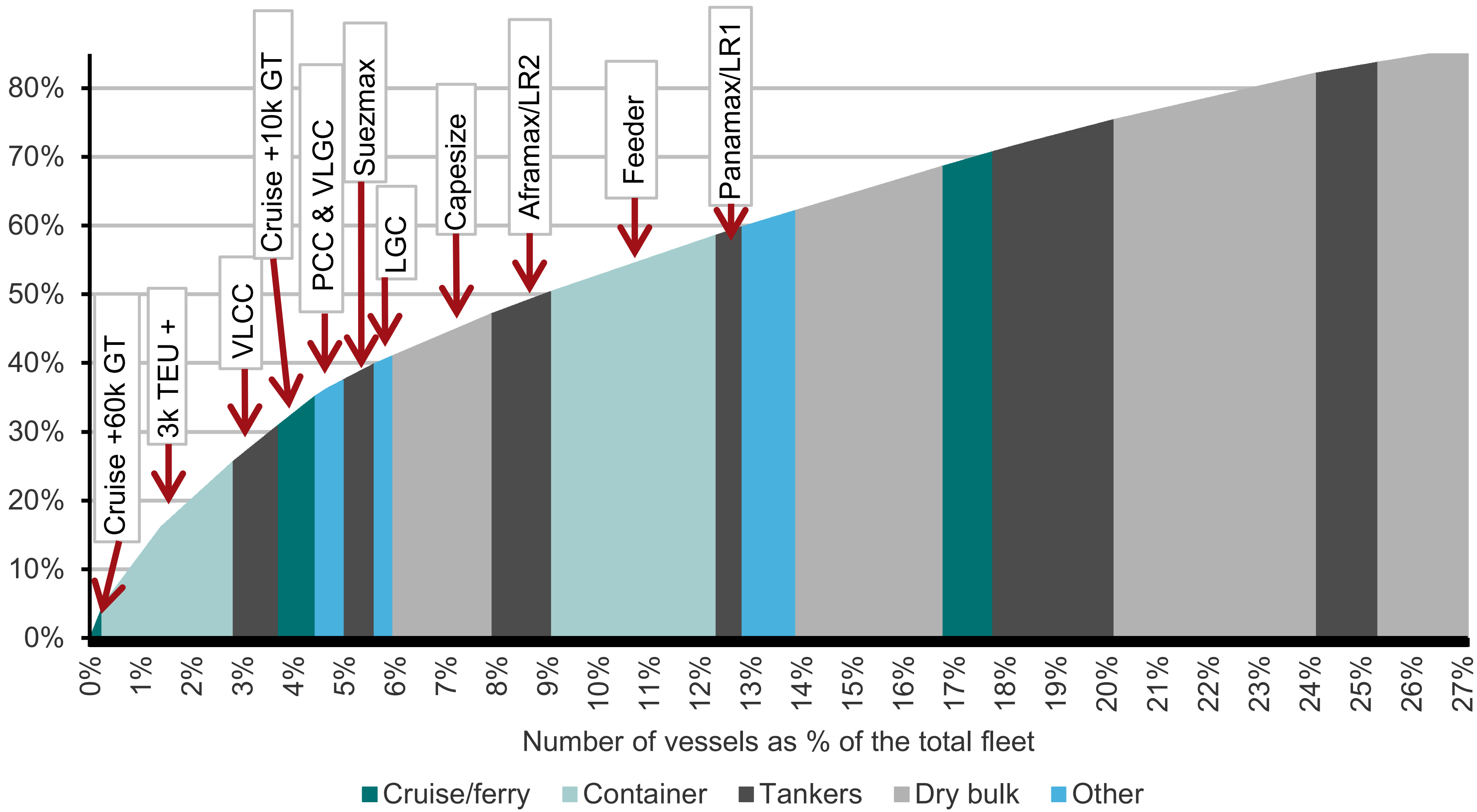
DNB Markets' estimate of cumulative share of total marine fuel consumption by vessel type in order of average fuel consumption



Source: Clarksons, IEA and IMO (underlying data), DNB Markets (further calculations)

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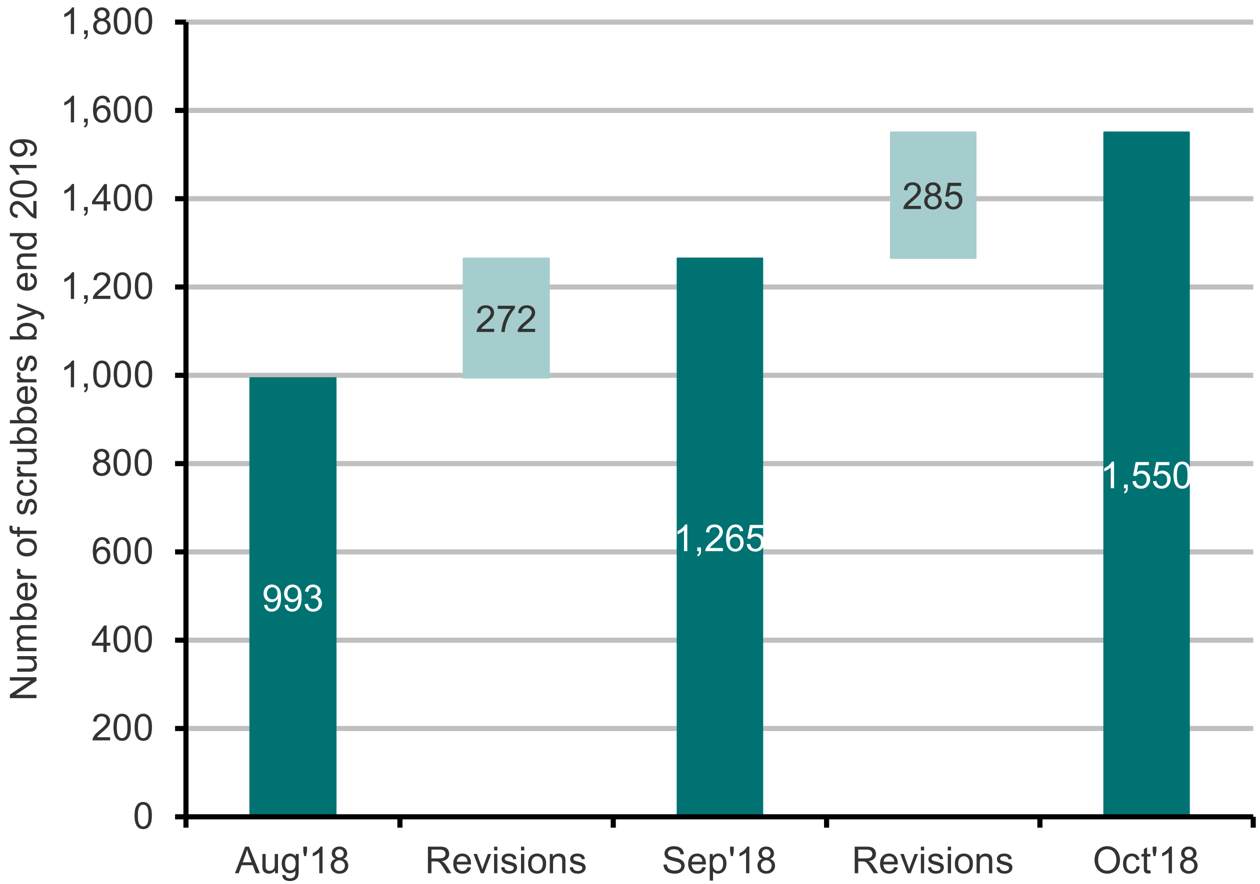
DNV’s revisions to total scrubber by end-2019



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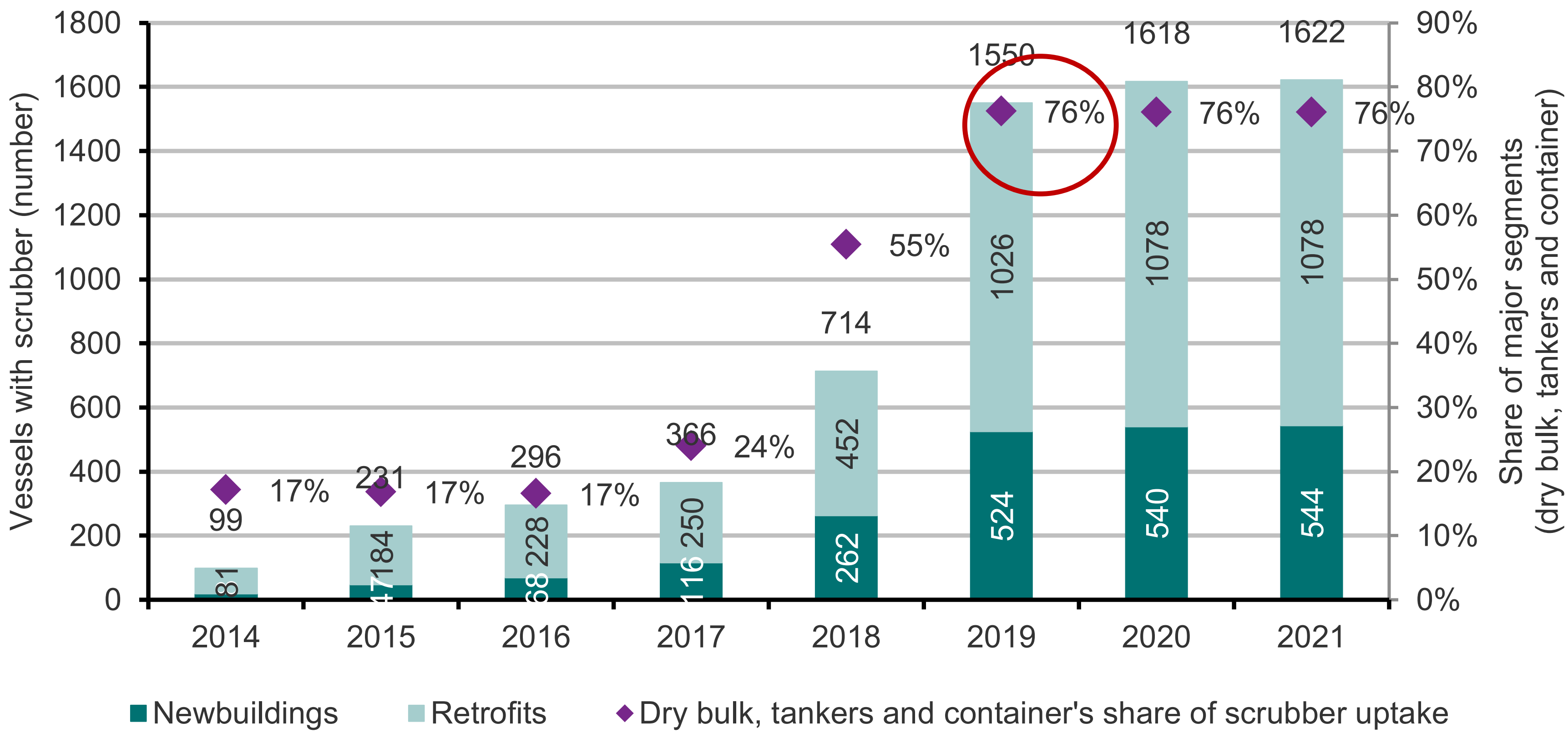
Of all confirmed scrubber orders, 76% will be installed on the three major shipping segments dry bulk, tankers and container by 2019 according to DNV



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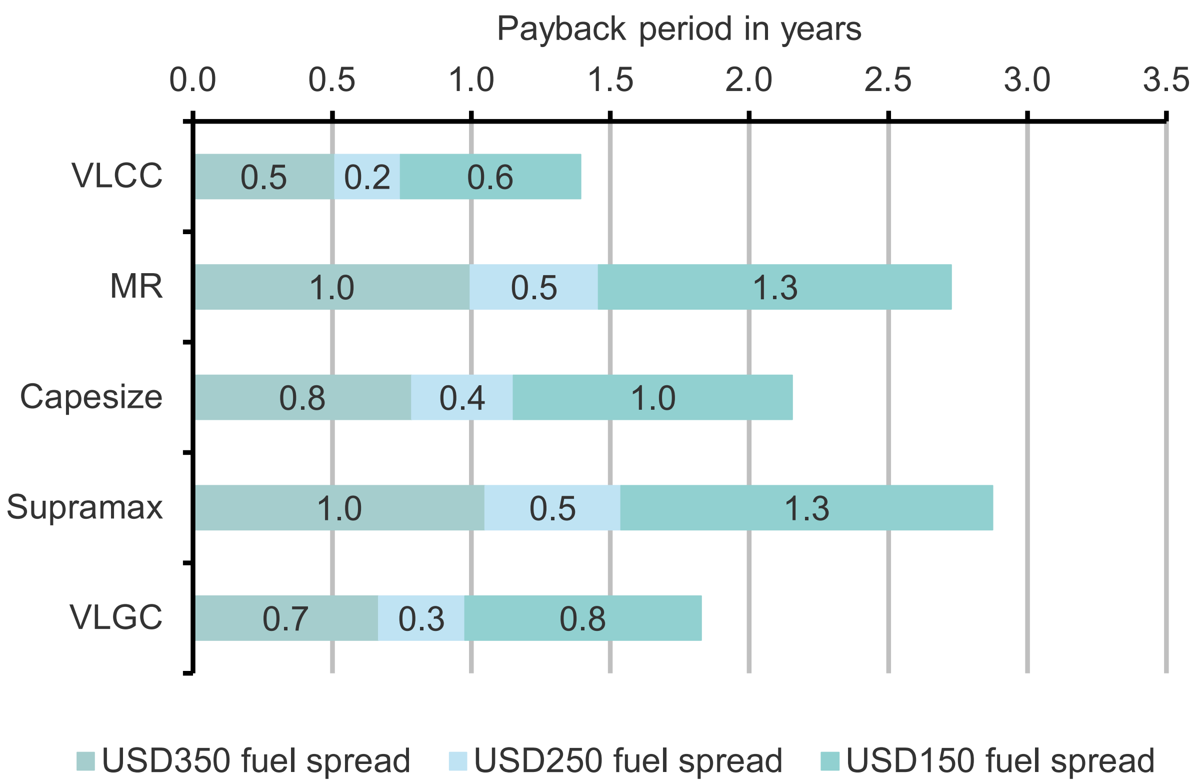
Scrubber economics still looking good as an investment

Even a Supramax bulker would have 1.5 years payback at a USD250/tonne fuel price spread

Payback period for scrubber investment in main bulk shipping segments (years)



Fuel price spread HFO-MGO (USD/tonne)

350	**250**	**150**
0.5	0.7	1.4
1.0	1.5	2.7
0.8	1.2	2.2
1.0	1.5	2.9
0.7	1.0	1.8

Source: DNB Markets

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Scrubber fan or not, the investment choice is there…

For the scrubberphiles:

Dry bulk:

- Safe Bulkers (BUY, TP USD3.80) – 48% uptake
- Star Bulk (unrated) – 100% uptake

Tankers:

- DHT Holdings (BUY, TP USD6.30) – 48% uptake
- Hunter Group (BUY, TP NOK5.30) – 100% uptake

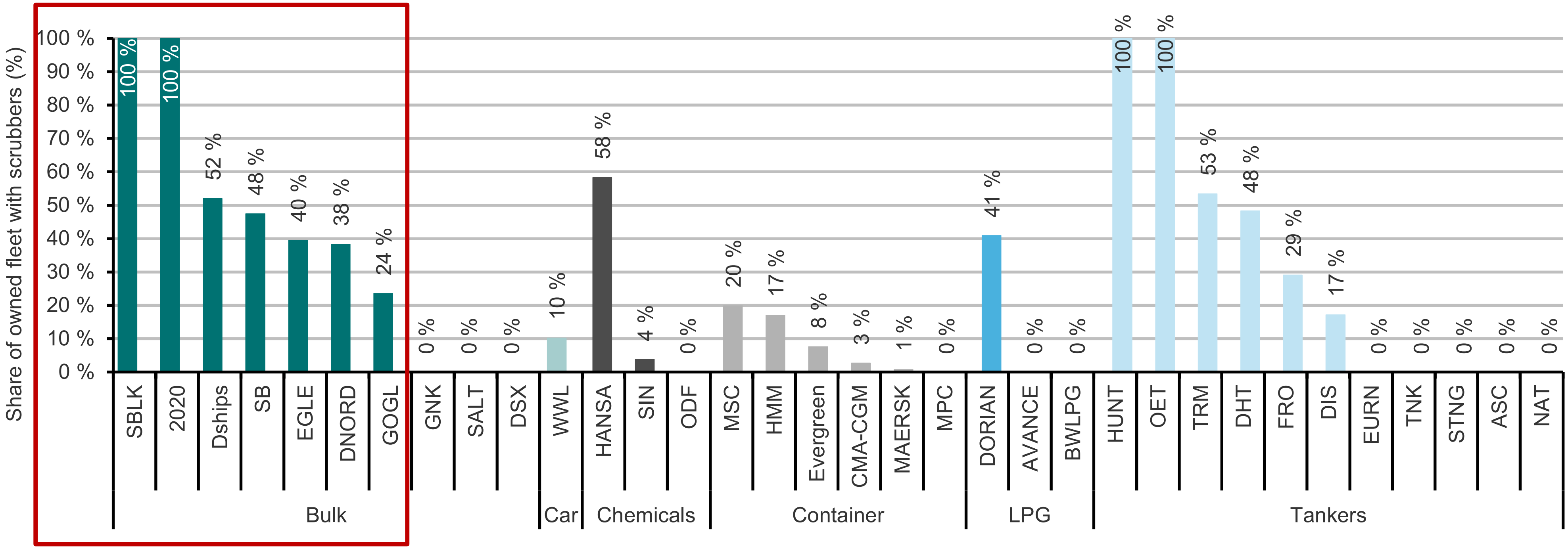
For the scrubber sceptics:

Dry bulk:

- Genco Shipping (BUY, TP USD19.7) – 0% uptake
- Scorpio Bulkers (unrated) – 0% uptake

Tankers:

- Euronav (BUY, TP USD12.8) – 0% uptake
- Scorpio Tankers (BUY, TP USD4.00) – 0% uptake



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Scrubber ships should speed up, while others should slow

DNB Markets' speed optimisation model for a laden Capesize vessel (knots)

Our 2020 Capesize rate forecast is USD27.1k/day

OPTIMAL SPEED LADEN

TC rates [$/day]

Bunker price	12500	15000	17500	20000	22500	25000	27500	30000	32500	35000	37500
100	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3
150	14.0	14.4	14.8	15.2	15.3	15.3	15.3	15.3	15.3	15.3	15.3
200	13.1	13.6	13.9	14.3	14.6	14.9	15.2	15.3	15.3	15.3	15.3
250	12.5	12.9	13.3	13.6	13.9	14.2	14.5	14.7	15.0	15.2	15.3
300	12.1	12.5	12.8	13.1	13.4	13.7	13.9	14.2	14.4	14.6	14.8
350	11.7	12.1	12.4	12.7	13.0	13.2	13.5	13.7	13.9	14.1	14.3
400	11.4	11.7	12.1	12.4	12.6	12.9	13.1	13.3	13.5	13.7	13.9
450	11.1	11.5	11.8	12.1	12.3	12.6	12.8	13.0	13.2	13.4	13.6
500	10.9	11.2	11.5	11.8	12.0	12.3	12.5	12.7	12.9	13.1	13.3
550	10.7	11.0	11.3	11.6	11.8	12.0	12.3	12.5	12.7	12.8	13.0
600	10.5	10.8	11.1	11.4	11.6	11.8	12.0	12.2	12.4	12.6	12.8
650	10.3	10.6	10.9	11.2	11.4	11.6	11.8	12.0	12.2	12.4	12.6
700	10.1	10.5	10.7	11.0	11.2	11.5	11.7	11.9	12.0	12.2	12.4
750	10.0	10.3	10.6	10.8	11.1	11.3	11.5	11.7	11.9	12.0	12.2

Intuitively → fuel at USD550/tonne = 4% lower speeds = 2.9% drop in effective supply

35% scrubber uptake and HFO at USD350/tonne would increase speed for scrubber ships

→ Average Capesize speeds would drop just 0.8% = 0.5% drop in effective supply

→ If HFO costs USD250/tonne average speeds would in fact **increase** by 2.0% = 1.4% increase in supply

Source: DNB Markets

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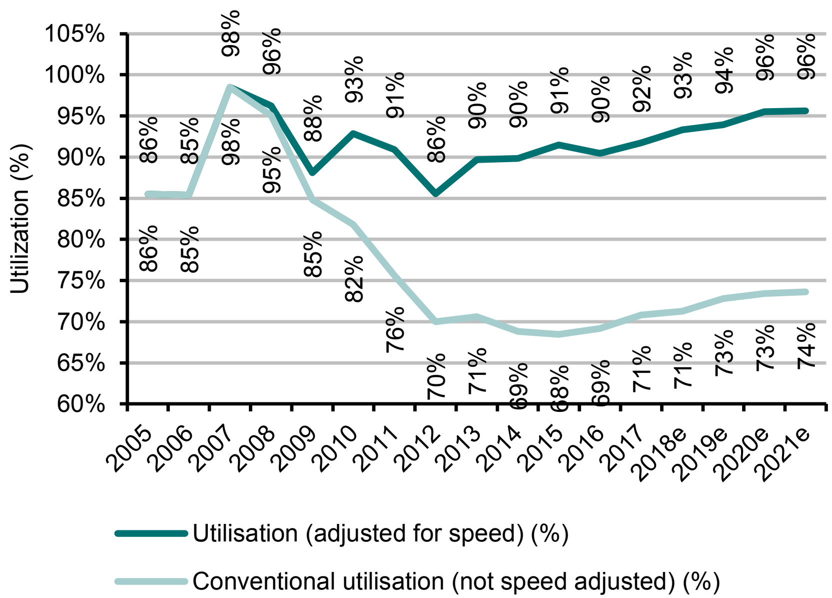
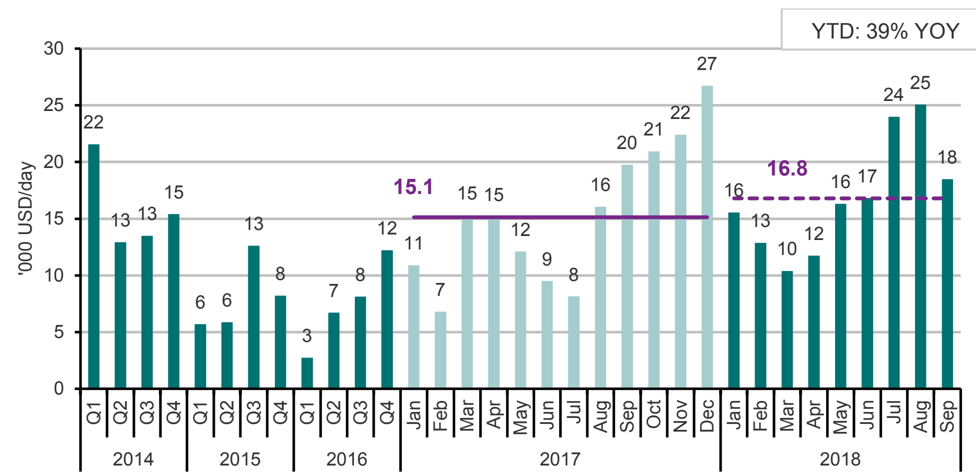
A gradual, but continued slow increase in vessel utilization

We forecast a gradual, but continued slow increase in utilization due to shadow capacity from slowsteam



Capesize rates YTD of USD16.8k/day which compares to our September 2017 forecast of USD17k, which we have now lifted to USD19k



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