Dry bulk market
Quarterly Outlook | March 2019
If ships or paper for Q4 2018 were traded as per IHS Markit signals (Buy/Sell), it would have generated $300,000 USD over just two months (Oct 1 – Nov 30).

Capesize 4Q 2018, IHS Markit Forecast vs FFA

- **P/L against FFA (settlement at end 4Q 2018)**
- **4Q 2019 Cape FFA**
- **4Q 2019 Cape IHS Markit forecast**

- **Buy, TC in**
- **Sell, TC out**

- **Profit**
- **Loss**

Average profits USD 300,000

Limited liquidity in FFA market

Source: IHS Markit, Baltic Exchange

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IHS Markit Forecast models have shown strong sell signals for FFA Feb 2019 before the derivative fell significantly and turned bearish than our prediction.

Note: profit and loss as of 31st Jan 2019
Source: IHS Markit, Baltic Exchange

#### Panamax 4TC average Feb 2019, IHS Markit vs FFA

- **Profit**: USD 100,000
- **Loss**: USD -100,000

Note: profit and loss as of 31st Jan 2019
Source: IHS Markit, Baltic Exchange

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IHS Markit’s dry bulk freight forecast models on 31st December 2018 showed strong sell signals for FFA first quarter 2019 contracts.
In 2018, Capesize freight rates have improved and stayed profitable for a period, while smaller sizes have continued to earn below break-even point.
At the start of 2019, the Capesize market maintained its stable trend, while the Panamax spot market plunged and broke the long term resistance line.
Has the dry bulk market returned to the 80s and 90s?

**Baltic Dry Index historical trend**

BDI, a composite of the Capesize 40%, Panamax 30% and Supramax 30% Time charter averages

BDI was first published on 4 January 1985 at 1,000 points.

33-year average about at 1,890 points since January 1985.
8-year average about 1,083 points since January 2011.

On 20 May 2008 it reached the highest at 11,793 points.
On 10 February 2016 it reached the lowest at 290 points.

Source: IHS Markit, Baltic Exchange
Freight and commodity prices

IHS Markit freight rate price index vs IHS Markit material price index

IHS Markit Freight Rate Price Index

IHS Markit Materials Price Index - Dollar Based

Freight vs major commodities

IHS Markit Freight Rate Price Index

IHS Markit Ferrous Price Index

IHS Markit Oil Price Index

IHS Markit Nonferrous Metals Price Index

Source: IHS Markit © 2019 IHS Markit
Dry bulk market summary

- **Steel/Iron ore:** Steel prices are currently in free fall, reflecting iron ore and coal prices. Prices slid due to a steel demand drop and excess production. Steelmakers have therefore cut costs by switching to lower grade iron ore in an attempt to avoid high premiums on 65% Fe fines and direct charge material. Premiums for 65% Fe fines have now fallen from 40% in September to 22%
  - Total Chinese Iron ore import volumes were 1,064 million tonnes in 2018, down 1% from last year as steel production was mainly increased from electric arc furnace which use steel scrap rather than iron ore and coking coal

- **Coal:** China’s efforts to keep 2018 imports flat to 2017 levels, culminating in the introduction of import restrictions at ports throughout the last six weeks of the year, brought a heavy decline in December. Uncertainties regarding when Chinese policy on coal cargoes would be changed are weighing heavily on sentiment and resulting in Chinese-exposed traders largely withdrawing from coal transactions
  - Total China coal import volumes were 281.5 million tonnes in 2018, up 3.4% from last year, while China produced 3.55 bnt of raw coal last year, up 5% from 3.34 bnt in 2017

- **Grain:** Chinese buyers ordered a few soybean shipments in the current trade war truce, but considering the expected record soybean harvest in Brazil, US exports are expected to continue to be displaced by Brazilian exports. US exports moved heavily to alternative markets such as Europe
  - Total China soybean imports were down 7.8% in 2018, with US volume down 49% from last year

- **Other:** Guinea bauxite exports are expected to continue growing

- **Fleet:** Recent demolitions and deliveries dropped average fleet age, so potential for demolition capacity is small. The order book remains under control prompting the opinion that expected IMO 2020 disruptions will further tighten tonnage supply and favourably influence freight rates for dry bulk owners
  - Owners of older inefficient tonnage face some tough choices in the market, to scrap or to comply with or without investing in scrubbers. Ultimately freight earnings, future sentiment and asset prices are going to play the biggest role
  - Based on last year’s slippage of 23%, the dry bulk fleet growth is expected to be 3.5% in 2019 compared to 2.9% in 2018
Macroeconomic trends and risks – World

- The period of above-trend economic growth is ending
- Financial conditions are tightening and volatility is increasing
- The combined effects of policy uncertainty and the surge in financial volatility are hurting business sentiment and investment
- World real GDP growth is projected to diminish from 3.2% this year to 3.0% in 2019 and 2.8% in 2020
- Softening global demand growth, tightening credit conditions, and US dollar strength are putting downward pressure on commodity prices
- The risks of policy shocks have risen, but probably not enough to trigger a global recession in 2019. These include rising debt levels, US-initiated trade conflicts, Brexit, and heightened political uncertainty in many parts of the world
- In the United States, fiscal stimulus will continue to fuel growth in 2019, but inflationary pressures and policy tightening will restrain growth in 2020–21
- China's growth will be slowed by US tariffs, deleveraging, and excess capacity. Government stimulus will provide some offsetting support
- Europe's growth will be restrained by weakening global trade dynamics and political uncertainties, including the United Kingdom's Brexit path
- Emerging markets that depend heavily on external finance, such as Turkey, Argentina, and South Africa, are vulnerable
Macroeconomic trends and risks – China and India

China

- Real GDP growth slowed to 6.4% y/y in the fourth quarter, its weakest pace since the second quarter of 2009. For the year 2018, the economy grew 6.6%
- Growth in industrial production recovered to 5.8% y/y in the fourth quarter with the relaxation of pollution curbs. However, services output growth eased to 7.4% y/y. In 2018, services accounted for 60% of real GDP growth
- The latest US import tariffs on USD200 billion of Chinese goods are assumed to remain at 10% indefinitely. Both exports and imports of goods registered y/y declines in December, pointing to further economic weakness in 2019
- Efforts to reduce leverage in the economy through tighter financial supervision and regulation have slowed real-estate investment growth
- The government is shifting its policy balance toward growth support. Beijing has announced personal income tax cuts, export tax rebates on selected products (mostly intermediate goods), and a reduction in banks' reserve requirement ratio. Corporate tax cuts are expected in 2019

India

- Real GDP grew 7.1% y/y in the September quarter; gains were broadly based
- A loss of momentum in private consumption is a key risk. The re-emergence of food price deflation signals continued weakness in rural demand - even as the government boosts support to farmers ahead of general elections due in May
- Consumer price inflation slowed to 2.2% y/y in December as food and beverage prices declined for a third consecutive month. While a pickup in inflation is expected in the coming months, it should remain relatively benign
- Mild inflation and weakening industrial production growth may prompt the Reserve Bank of India (RBI) to abandon its tightening bias and hold its policy rate at 6.5%. New RBI governor Shaktikanta Das is more focused on supporting economic growth
- India is expected to overtake the United Kingdom to become the world's fifth-largest economy in 2019
Global output growth and trade will continue to slow

Global real GDP, industrial production, and real exports

Source: IHS Markit © 2019 IHS Markit
# Real GDP growth in major economies

<table>
<thead>
<tr>
<th>Real GDP</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>3.3</td>
<td>3.2</td>
<td>2.9</td>
</tr>
<tr>
<td>United States</td>
<td>2.2</td>
<td>2.9</td>
<td>2.5</td>
</tr>
<tr>
<td>Canada</td>
<td>3.0</td>
<td>2.1</td>
<td>2.0</td>
</tr>
<tr>
<td>Eurozone</td>
<td>2.5</td>
<td>1.9</td>
<td>1.4</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1.8</td>
<td>1.3</td>
<td>1.1</td>
</tr>
<tr>
<td>China</td>
<td>6.9</td>
<td>6.6</td>
<td>6.3</td>
</tr>
<tr>
<td>Japan</td>
<td>1.9</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>India*</td>
<td>6.7</td>
<td>7.2</td>
<td>7.0</td>
</tr>
<tr>
<td>Brazil</td>
<td>1.1</td>
<td>1.4</td>
<td>1.8</td>
</tr>
<tr>
<td>Russia</td>
<td>1.5</td>
<td>1.6</td>
<td>1.3</td>
</tr>
</tbody>
</table>

Source: IHS Markit © 2019 IHS Markit
IHS Markit manufacturing PMIs signal deceleration and emerging-market currencies have depreciated in 2018

Purchasing managers’ indexes (PMI's)

Exchange rates indexes

Source: IHS Markit © 2019 IHS Markit

© 2019 IHS Markit
Vale dam disaster impact summary

- Vale’s output was expected to fall by at least 10% after the collapse of its dam in Brumadinho, Minas Gerais
- Iron ore price spiked while the spread of different grades of iron ore have not diverged much
- Capesize freight fell significantly in the short-term, however the trade pattern change could have a bigger downside risk on shipping demand
- As it happened in the low season with several other weather disruptions and holidays, the dam disaster impact on freight was heightened. With the uncertainty caused, there could be an FFA overreaction to supply interruptions caused by Vale’s temporary mine suspension
- However, the impact of the cut in iron ore production will be felt most by spot Capesize vessels using southern Brazil ports. Actually, Capesize shipments in southern Brazil ports started to decrease after the dam accident, while VLOCs lifting still increased in northern Brazil ports. Therefore, even if more iron ore cargo produced from northern Brazil (Vale indicates to make up the shortfall by expanding production in northern system), its positive impact on spot demand will be limited or controlled
- More importantly, even after the dam accident, the spread of different grades of iron ore have not diverged much due to a recent low steel margin. Surging ore prices could put more pressure on steel margins, that may limit China’s buying appetite for Brazil’s high grade ore. Eventually, Chinese iron ore buyers could switch to lower grade ore from port stocks or domestic sources, which could be a much greater downside risk on seaborne trade demand
Vale dam disaster overview

- On 25 January 2019, tailings Dam I at Vale’s Córrego do Feijão mine, in Minas Gerais, Brazil, ruptured, releasing millions of metric tons of iron ore tailings. (Tailings are the output of the wet beneficiation process, comprising of very fine particles of iron ore and impurities, in a suspension of water.) Tragically, the outflow impacted key administrative and production areas of the mine operation, leaving more than 100 staff and residents dead, with more than 200 still missing.

- Vale, based in Brazil, is the largest iron ore miner in the world, producing 33%, or 390 million metric tons (Mt), of iron ore for the seaborne market on an annual basis. Its operations comprise three systems: Northern, Southern, and South-Eastern. The Córrego do Feijão mine produced around 8.2 million metric tons per annum (Mtpa) of iron ore in the Parapoeba complex (26 Mtpa) of the Southern System (89 Mtpa).

- Since the accident, Vale has announced plans to decommission all of its 19 “upstream-type” tailings dams and has presented its decision to do so to the Brazilian authorities. This decision will result in a temporary production cut of around 10%, or 40 Mtpa of total output. Vale indicates it will be able to make up the majority of this shortfall by expanding production at other facilities in systems with dry-processing, which do not produce wet tailings, as well as drawing on around 30 Mt of inventories at blending facilities in Brazil, China, and Malaysia. In the very short term, however, we do not expect Vale will be able to react fast enough to completely replace lost tons. Additionally, Vale’s flagship S11D mine is still ramping up to its nameplate 90 Mtpa capacity and is therefore unlikely to be able to speed up.

- Within this 40 Mtpa figure is included high-value pellet feed for 11 Mtpa of iron ore pellet, roughly 18% of Vale’s pellet production, as Vale idles the Fabrica and Vargem Grande pelletizing plants, which also supply Brazilian steel mills. As Vale is now using 100% of total pelletizing capacity, this will be a 11 Mtpa net loss, which is equivalent to around 10% of total seaborne pellet supply. With pellet premiums trading at around USD55/metric ton over benchmark prices, this will be a significant loss of revenue for Vale, despite the fact that this loss of supply will boost premiums in 2019.

- Also, a court ruling in Brazil has recently suspended operations at the Brucutu mine with 30 million ton of capacity. Vale has argued the court ruling is unjust and is fighting to resume operations at this facility as soon as possible. If Vale is unsuccessful in its appeal, other producers will be hard-pressed to make up the shortfall.
Freight fell and iron ore prices spiked, while the spread of different grades of iron ore have not diverged.
Northern Brazil ports share in iron ore exports has been increased, while the incremental is mostly covered by VLOCs.
Steel and steel resource prices are under pressure

- Chinese and Asian steel prices are falling as demand is disappointing and production cuts are not as deep as last year. Therefore, steel mills and traders are trying to buy on spot until prices bottom-out.
- Chinese prices are almost in freefall. Demand is basically flat. Winter production cuts were minimal as Beijing relaxed pollution controls. Tepid demand and excess production combine for very weak prices. We had expected prices to fall through the second quarter of 2019, but the rate of decline has accelerated. Prices may bottom out in the first quarter of 2019, and certainly by the second.
- Lead indicators are turning downwards. The IHS Markit steel-users PMI for new orders is below 50 in Europe and China, and trending downwards.
- Uncertainties regarding when Chinese policy on coal cargoes would be changed are weighing heavily on sentiment and resulting in Chinese-exposed traders largely withdrawing from coking coal transactions. However, as import control eased, trading conditions should improve.
Iron ore premiums for 65% Fe fines in China picked in third quarter last year declined significantly afterwards due to lower steel margins

- Less-stringent-than-expected pollution controls have helped to bring steel prices lower since September especially given the rampaging crude steel output from China this year. This oversupply, combined with trade war concerns and a Chinese economic consolidation has hit demand taking margins on HRC negative and rebar to around $5/ton

- Steelmakers have therefore cut costs by switching to lower grade iron ore in an attempt to avoid high premiums on 65% Fe fines and direct charge material. Premiums for 65% Fe fines have now fallen from 40% in September to 22% and discounts for low grade, 58% Fe fines have shrunk to 12%, from 18% over the same period. Historically, we see a restocking surge towards the year-end into January, which is likely to see some demand strength

- The Chinese iron ore port-stocks are heavily weighted towards lower grade ores, such as those with 58% Fe content. When steel mills are more interested in receiving higher Fe-content ores these port-stocks need to be discounted to attract buyers, and so would further increase high quality iron ore import volumes and the differential between low and high-grade material. On the other hand, when the steel margin decreases and steel mills become unprofitable, the port stocks will be an attractive option for those mills, and so would decrease overseas import demands
China’s iron ore imports down 1% in 2018

- Total Chinese Iron ore import volumes were 1,064 million tonnes in 2018, down 1% from last year as steel production was mainly increased from electric arc furnace which use steel scrap rather than iron ore and coking coal.

- However, shipping demand increased as long-distance Brazilian ore shipments increased market share in Chinese market as Chinese steel mills are increasingly focus on securing high-grade iron ores, both to increase profitability and to comply with environmental regulations. High-grade iron ores offer higher productivity and typically lower silica and alumina, which form the main environmental pollutants.

**Chinese import of Iron ore, 2016-2018 (mt)**

<table>
<thead>
<tr>
<th>Exporters</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Y-o-Y(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>640.14</td>
<td>668.67</td>
<td>679.96</td>
<td>2%</td>
</tr>
<tr>
<td>Brazil</td>
<td>214.86</td>
<td>229.41</td>
<td>233.76</td>
<td>2%</td>
</tr>
<tr>
<td>South Africa</td>
<td>44.88</td>
<td>45.13</td>
<td>41.12</td>
<td>-9%</td>
</tr>
<tr>
<td>India</td>
<td>15.6</td>
<td>25.1</td>
<td>14.78</td>
<td>-41%</td>
</tr>
<tr>
<td>Others</td>
<td>109.24</td>
<td>107.08</td>
<td>94.98</td>
<td>-11%</td>
</tr>
<tr>
<td>Total</td>
<td>1024.71</td>
<td>1075.4</td>
<td>1064.61</td>
<td>-1%</td>
</tr>
</tbody>
</table>

Source: IHS Markit, China customers

© 2019 IHS Markit
Chinese coal imports up 3.4% in 2018

- Chinese coal import volumes were 281.5 million tonnes in 2018, up 3.4% from last year, while China produced 3.55 bnt of raw coal last year, up 5% from 3.34 bnt in 2017
- China increased its thermal coal imports by 10% in 2018, as international prices, particularly Indonesian, provided strong competition to domestic material throughout much of the year
- The country's total thermal coal imports - which covers steam coal, lignite and others - were 207.16 mt in the year, up from 187.80 mt
- Indonesia made the greatest gains into China in 2018, with thermal volumes up 16% on the year, giving it a market share of 60.5%
- Australia, Mongolia and the United States also saw healthy percentage rises in imports, but Russia and the Philippines saw notable declines
- China’s efforts to keep 2018 imports flat to 2017 levels, culminating in the introduction of import restrictions at ports throughout the last six weeks of the year, brought a heavy decline in December
- Thermal imports into China in December dropped 57% on the year, to 6.75 mt from 15.80 mt
- Australia bore the brunt of this, suffering a 71% drop on the year in December, to 1.59 mt, with the restrictions particularly hard to navigate for Capesize vessels
- China’s coking coal imports fell 7% on the year in 2018, to 64.72 mt
- Australia and Mongolia were by far the top two suppliers of coking coal into China, accounting for 44% and 43% respectively
China’s thermal coal imports up 10% in 2018, despite December restrictions while coking coal imports down 7%

### Chinese import of steam coal and lignite, 2016-2018 (mt)

<table>
<thead>
<tr>
<th>Exporters</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Y-o-Y(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>103.22</td>
<td>108.25</td>
<td>125.38</td>
<td>16%</td>
</tr>
<tr>
<td>Australia</td>
<td>42.95</td>
<td>47.40</td>
<td>50.83</td>
<td>7%</td>
</tr>
<tr>
<td>Russia</td>
<td>13.66</td>
<td>17.10</td>
<td>15.94</td>
<td>-7%</td>
</tr>
<tr>
<td>Mongolia</td>
<td>2.72</td>
<td>7.65</td>
<td>8.45</td>
<td>10%</td>
</tr>
<tr>
<td>Philippines</td>
<td>6.68</td>
<td>5.54</td>
<td>4.40</td>
<td>-21%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>169.95</strong></td>
<td><strong>187.80</strong></td>
<td><strong>207.16</strong></td>
<td><strong>10%</strong></td>
</tr>
</tbody>
</table>

Source: IHS Markit, China customers, IHS McCloskey - Coal market alert

### Chinese imports of coking coal, 2016-2018 (mt)

<table>
<thead>
<tr>
<th>Exporters</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Y-o-Y(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>26.82</td>
<td>30.98</td>
<td>28.23</td>
<td>-9%</td>
</tr>
<tr>
<td>Mongolia</td>
<td>23.56</td>
<td>26.27</td>
<td>27.28</td>
<td>5%</td>
</tr>
<tr>
<td>Russia</td>
<td>2.62</td>
<td>4.62</td>
<td>4.36</td>
<td>-6%</td>
</tr>
<tr>
<td>Canada</td>
<td>5.19</td>
<td>4.25</td>
<td>2.13</td>
<td>-50%</td>
</tr>
<tr>
<td>US</td>
<td>0</td>
<td>2.82</td>
<td>1.98</td>
<td>-30%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>59.30</strong></td>
<td><strong>69.90</strong></td>
<td><strong>64.72</strong></td>
<td><strong>-7%</strong></td>
</tr>
</tbody>
</table>

Source: IHS Markit, China customers, IHS McCloskey - Coal market alert
USEC coal export volume recovered from November drop as per AIS signal, while long haul shipments to Pacific decreased according to custom data.

### US coal shipments

- **AIS Cape**
- **AIS SMX/Handy**
- **AIS PMX**
- **Excluding Canada (custom)**

### US coal seaborne exports by destination

- **Pacific**
- **Europe**
- **Others**

Source: IHS Markit, Baltic Exchange

© 2019 IHS Markit
Australian Capesize coal shipments increased in Dec 2018 before falling in Jan 2019, while Panamax shipments stagnated.
Expensive Australian coal price and slow demand from Europe will attract US coal to the Pacific (to India), which will increase long haul shipping demand.

**Steam: Australia and US East FOB spread vs P4TC**

**Coking: Australia and US East FOB spread vs C5TC**

Note: At 12th Sep 2018
Source: IHS Markit, IHS-McCloskey © 2019 IHS Markit
When Capesize become more expensive than Panamax, Capesize cargo starts to split into Panamax cargoes and both rates start to move together.

Cape and Panamax spread in Atlantic Basin (Ratio 1.5)

Cape and Panamax spread correlation (Ratio 1.5)

\[ y = 0.6719x + 2734.5 \quad R^2 = 0.6048 \]

Source: IHS Markit, Baltic Exchange

© 2019 IHS Markit
Capesize coal shipments from US to India increased over last two months, whilst PMX decreased, which explains widening Cape/PMX spread in Jan 2019.

**US coal shipments to India vs Capesize Atlantic rates (C8)**

- AIS Cape
- AIS PMX
- AIS SMX/Handy

**Cape/PMX Atlantic freight spread vs US coal shipments market share**

- Atlantic ratio (C8/P1A), right axis
- PMX/Cape number of US Coal Shipments

Source: IHS Markit © 2019 IHS Markit © 2019 IHS Markit
Panamax mainly carries Australian coal to India and its shipments decreased significantly over the last two months.

**Australian coal shipments to India vs Panamax Pacific rates (P3A)**

**Cape/PMX Pacific freight spread vs Aus coal shipments market share**

Source: IHS Markit © 2019 IHS Markit © 2019 IHS Markit
This year, China has started purchasing a limited number of soybeans from the US following the trade war truce

- With a new Chinese tariff, US soybean exports volume to China indeed decreased, however, total volume increased thanks to alternative buyers in Atlantic:
- US soybean exports volume to China decreased as China shifts to Brazilian beans as cheap supplies from Brazil and trade tension with China made US cargoes less attractive to buyers
- Through the first seven months of the year, US soybean export volumes to China decreased by 23% year-on-year from January–July 2017. However, the total US soybean export volume increased nearly 10% year-on-year, thanks to alternative buyers in Atlantic basin (up 61% yoy)
- In November 2018, China imported no soybeans from the US, while Brazil’s share in the Chinese soybean market increased to 75% in 2018 (January–November)
- China ordered the first quantity of soybeans from the United States following a truce in the “trade war” set to last until March 2019, tempting the market that potential future negotiations may be possible
- However, the incentive for China to negotiate soybean tariffs may be delayed until the fall of 2019 as Brazil’s new record soybean crop will begin to be available for export in Q2 and there are increasing concerns about China's swine fever outbreak
- Panamax’s are expected to be mainly used for the soybean shipments from PNW to China

![US and Brazil soybean prices outlook](source: IHS Markit © 2019 IHS Markit)
China’s soybean imports down 7.8% in 2018, with US volume down 49% from last year.

China soybean imports

China soybean imports by source

Source: IHS Markit © 2019 IHS Markit
US soybean found alternative market in Europe, MENA (Egypt and Iran), South East Asia, and Argentina (3rd biggest soya exporter)

**US soybean exports to rest of world (ex. China)**

**US soybean exports by country (July–Oct)**

Source: IHS Markit © 2019 IHS Markit
China’s bauxite imports up 20% in 2018, with Guinean volume up 38.33%

**Bauxite trade to China by source**

<table>
<thead>
<tr>
<th>Source</th>
<th>2013</th>
<th>2015</th>
<th>2017</th>
<th>2018</th>
<th>Y-o-Y(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guinea</td>
<td>0.83</td>
<td>0.33</td>
<td>27.65</td>
<td>38.25</td>
<td>38%</td>
</tr>
<tr>
<td>Australia</td>
<td>14.29</td>
<td>19.58</td>
<td>25.48</td>
<td>29.77</td>
<td>17%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>48.70</td>
<td>0</td>
<td>1.29</td>
<td>7.55</td>
<td>483%</td>
</tr>
<tr>
<td>Malaysia</td>
<td>0.15</td>
<td>24.19</td>
<td>4.86</td>
<td>0.55</td>
<td>-89%</td>
</tr>
<tr>
<td>Others</td>
<td>7.63</td>
<td>11.99</td>
<td>9.48</td>
<td>6.6</td>
<td>-30%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>71.61</td>
<td>56.10</td>
<td>64.76</td>
<td>82.72</td>
<td>20%</td>
</tr>
</tbody>
</table>

**Guinea bauxite shipments (AIS)**

Source: IHS Markit, China customs © 2019 IHS Markit

Source: IHS Markit, China customers © 2019 IHS Markit

Chinese import of Bauxite, 2013-2018 (mt)

Source: IHS Markit, China customs © 2019 IHS Markit

© 2019 IHS Markit
Based on last year’s slippage of 23%, the dry bulk fleet growth is expected to be 3.5% in 2019 compared to 2.9% in 2018.
Orderbook seems to be still under control, although newbuilds in 2019 will be much higher than 2018 due to scheduled VLOCs delivery.
Owners will find it difficult to maintain their old fleet due to increasing regulation cost; BWTS + Scrubber + Dry docking.

**Deletion**

- Handysize
- Supramax
- Panamax
- Capesize

**Estimated Dry bulk fleet due for 3rd special survey and later**

Source: IHS Markit © 2019 IHS Markit.
IHS Markit Energy’s HFO and LSFO price scenario expects considerable spread from mid-2019 and scrubbers on large ships have strong positive economics.

**HFO and LSFO spread**

- **3.5% S fuel oil, 380 cSt**
- **0.5% S bunker fuel oil**
- **Spread**

**Daily bunker cost spread between HSFO and LSFO**

- **Cape**
- **PMX**
- **SMX**

Source: IHS Markit IMO 2020 sulfur cap study - navigating choppy waters 
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Note: based on eco speed fuel consumption; Cape 43mt/day, PMX 32mt/day, SMX 23mt/day 
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Scrubber retrofits are intensifying particularly among larger tonnage, but capacity indicated so far has had minimal effect on fleet supply.

- Scrubber retrofitting as it currently stands is not expected to bring much relief to the dry bulk feet, but larger disruption may happen as more ships are sent for retrofitting in shorter time periods as the compliance date approaches.
- Larger units may consider scrubber fittings for older vessels as well, particularly in case of high HSFO/LSFO differential.

**Confirmed and unconfirmed scrubber fitting tonnage influence on fleet supply (2018 fleet size)**

**Confirmed scrubber fittings**

<table>
<thead>
<tr>
<th>Size type</th>
<th>In service No of ships</th>
<th>In service DWT</th>
<th>On order No of ships</th>
<th>On order DWT</th>
</tr>
</thead>
<tbody>
<tr>
<td>VLOC</td>
<td>3</td>
<td>967,180</td>
<td>36</td>
<td>11,705,104</td>
</tr>
<tr>
<td>Capesize</td>
<td>4</td>
<td>827,363</td>
<td>29</td>
<td>5,842,000</td>
</tr>
<tr>
<td>Post Panamax</td>
<td>2</td>
<td>181,531</td>
<td>2</td>
<td>164,000</td>
</tr>
<tr>
<td>Panamax/Kamsarmax</td>
<td>3</td>
<td>202,066</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supramax/Ultramax</td>
<td>3</td>
<td>179,491</td>
<td>32</td>
<td>2,021,870</td>
</tr>
<tr>
<td>Handymax</td>
<td>1</td>
<td>48,184</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Large Handy</td>
<td>13</td>
<td>449,438</td>
<td>4</td>
<td>152,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>29</strong></td>
<td><strong>2,855,253</strong></td>
<td><strong>103</strong></td>
<td><strong>19,884,974</strong></td>
</tr>
</tbody>
</table>

Notes: confirmed number as of Jan 2019

Source: IHS Markit, China customers

Retrofits are not expected to have a large effect, although some supply distortions may occur due to timing of the retrofitting.
Most of the dry bulk fleet sails with eco speed and consumption while Capesize sailing speed is highly correlated with the freight market.

**Bulk carriers average speed**

- Average speed
- Service speed
- % speed reduction (secondary axis)

**Capesize speed and C5TC**

- Average of C5TC
- Average of Under way (Ballast)

Notes: 2018 average speed; ships moving at 5 kt and above

Source: IHS Markit © 2019 IHS Markit
## Snapshot of global dry bulk fundamentals and outlook

<table>
<thead>
<tr>
<th>Fundamentals</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>World economic growth (% from previous year)</td>
<td>3.3</td>
<td>3.2</td>
<td>3.1</td>
</tr>
<tr>
<td>Dry Bulk Trade growth base case (% from previous year)</td>
<td>4.2</td>
<td>3.5</td>
<td>3.1</td>
</tr>
<tr>
<td>Dry Bulk supply growth base case (% from previous year)</td>
<td>3.1</td>
<td>3.0</td>
<td>3.5</td>
</tr>
<tr>
<td>Implied balance</td>
<td>1.1</td>
<td>0.5</td>
<td>(0.4)</td>
</tr>
</tbody>
</table>

**Dry Bulk Trade growth scenario 2 (% from previous year)**

Chinese iron ore imports volume stagnant due to scrap-driven steel production. Depreciation of emerging-market currencies lowers import demand. Higher bunker cost may put more pressure on long-haul trade flows.

**Dry Bulk supply growth scenario 2 (% from previous year)**

Higher scrappage due to increase in environmental cost – BWTS and high bunker cost. Scrubber installation and IMO-compliant bunker usage could cause productivity loss and off-hire – slower steaming and engine problems.

**Implied balance**

<table>
<thead>
<tr>
<th>High case</th>
<th>Low case</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
<td>(1.0)</td>
</tr>
</tbody>
</table>
Analytics-Big data driven models can supplement the fundamental outlook with an unbiased view

Capesize utilization and freight

Source: IHS Markit

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Categories of main predictors used
- Baltic indices
  - spread/BCI-BPI-BSI
- Trade of commodities
- Commodity prices/Price spreads
- Economic drivers
  - Bunker prices
    - HFO-MGO/LSFO
- Fleet Supply
  - Regional Vessels availability by AIS

Advanced analytics, supplementing the fundamental outlook
The dry bulk freight rate forecast (FRF) – data driven computer models

A data-driven-bias-free forecast model

| Forecast Horizon | Freight rates on a monthly basis up to 3 years. Models will be updated at the 1st week of every month and results published on the 2nd week. |
| Charter Rates Type | Voyage charter ($/ton) and Time charter ($/day) |
| Vessel Types & Routes | Capesize: 5TC + 12 routes  
Panamax: 4TC + 5 routes  
Supramax: 10TC + 10 routes |
| Deliverables | Web-based interface with dynamic dashboards showing model results & in-depth analysis of influential drivers per route |
For more information please contact:

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