COAL SEA LOGISTICS

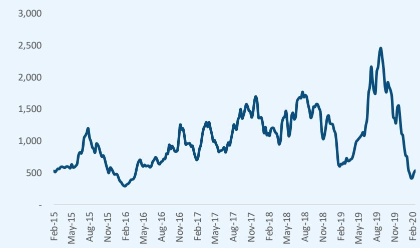
Transportation sector | Indonesia | 02 March 2020

KEY INDEX

Newcastle Coal Price (USD/tonne)

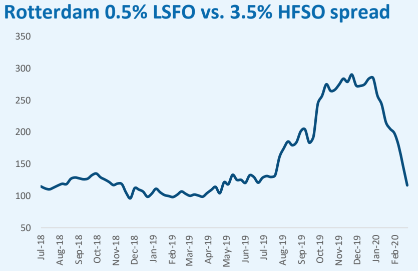
Source: Bloomberg

Baltic Dry Index



Source: Bloomberg

Rotterdam 0.5% LSFO vs. 3.5% HFSO spread



Source: Bloomberg

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Stale fundamentals hindering better outlook

- **China coal demand slumped followed by relatively stable inventory level (Jan’20: -3.4% mom vs. Jan’19: -7.1% mom).**
- **Sanguine domestic policies to act as buffer for the sector.**
- **Uncertainties on coal price direction.**

Cautious on China corona virus outbreak which has hurt China coal demand. Coal price showed a lack of sign of recovery and we expect a soft coal price (due to tight global supply and demand level). With Jan’20 inventory level rose by 5.6% yoy and coal production in China has restarted in the first week of February after Lunar New Year, supply has been higher but followed by weak demand, in our view, reflected in lower China coal futures (13 Feb 2019: -9% wow). The situation indicates a coal oversupply and as a result, China coal inventory might stall in Feb’20.

Higher 2020 Domestic Market Obligation (DMO) requirement to ensure coal volume transported. Putting aside external negative sentiment, we believe coal shippers should benefit from higher DMO requirement this year (+25% yoy); highest recorded since 2012. While DMO is not exactly favorable coal miners, at this stage, we expect coal shipper can relatively play safe in the coal sector, especially those with high exposure to inter-island shipping (power plant purpose) to benefit from the scheme.

In need of positive catalyst to boost coal price. At the same time, we are still wary on coal prices movement, in which our channel-check with a local coal transshipment provider said its performance highly correlates with the Newcastle coal price index. Following China SARS outbreak throughout 3Q02 to 1Q04, coal price was recorded at lowest level in the period of 2001 – 2004, which could play out again in the period of coronavirus outbreak. With fleets supply seemingly not a problem in Indonesia, we are wary of freight rate as well, which is worsened by declining Baltic Dry Index (BDI) since May’19.

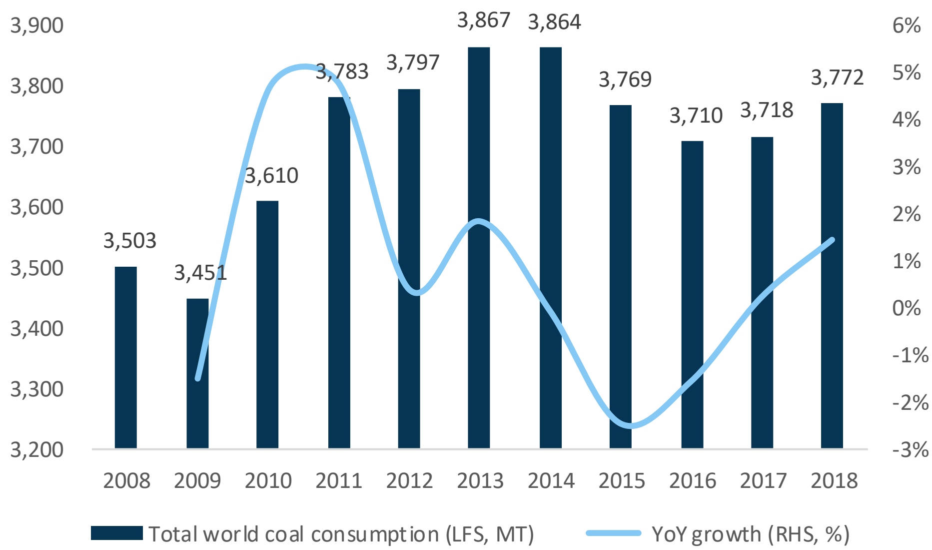
DEMAND SIDE: A LOOK AT THE COAL MARKET

Global coal demand

The demand side of the coal sea logistic market consists mainly of the demand by coal mining companies itself, although other dry bulk cargo companies also diversify by transporting other commodities such as CPO and nickel ore. Despite being one of the most used energy and traded in the commodities market, we are seeing a slower total world coal consumption growth with FY2013-2018 CAGR of -0.5% vs. FY2008-2013 CAGR of +2.0%, attributed to the response of countries to achieve their climate goals by reducing coal consumption.

Total world coal consumption has been declining since 2013 and we saw the deepest drop happening in 2015 of -2.5% yoy, mainly due to China and US agreement to cut carbon emission and Paris Climate Agreement which was finalized in 2015.

Total world coal consumption

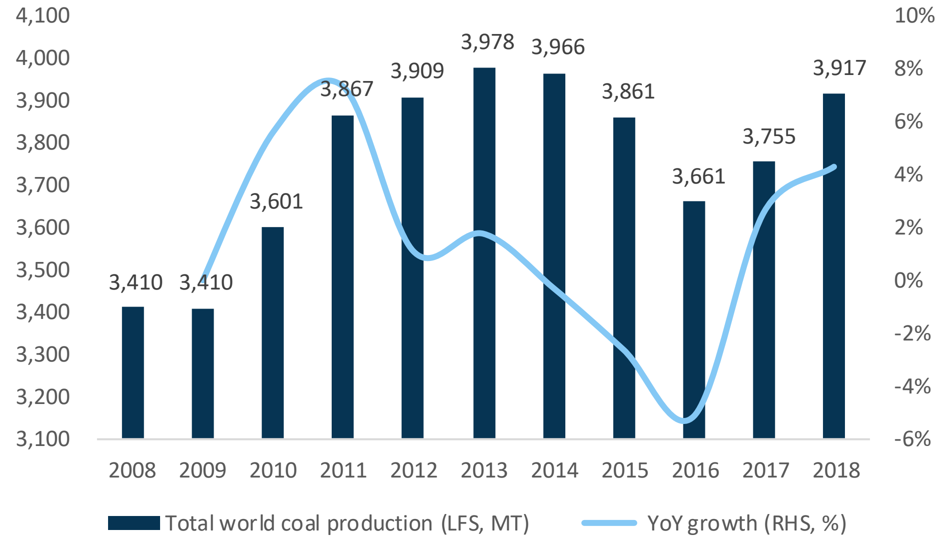


Source: BP Statistical Review of World Energy 2019

Global coal supply

The International Energy Agency (IEA) forecasted a slow but steady coal demand which will reach 5,624 MT in 2024 (assuming annual compounded growth of 0.5%). At the same timeframe, we also see slower growth in the production side with FY2013-2018 CAGR of -0.3% vs. FY2008-2013 CAGR of +3.1%.

Total world coal production

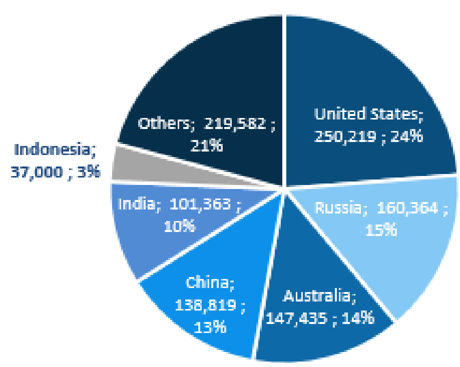


Source: BP Statistical Review of World Energy 2019

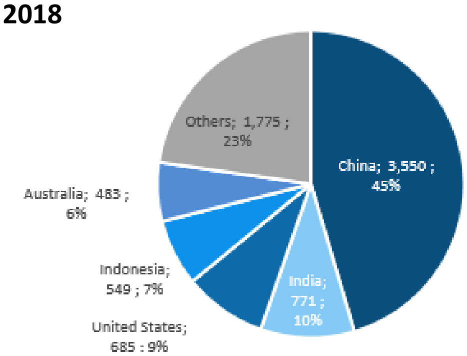
Key players in the coal market

The coal logistic industry in Indonesia is growing due to the country's large coal reserve and massive coal sales. According to 2019 BP Statistical Review of World Energy, Indonesia ranked 6th in coal reserve, 1st as net exporter and 4th as net importer. On the demand side, China has been dominating the coal demand with 1st position as the net importer. Despite being the most-polluting fuel, the IEA still forecasts that going forward, worldwide coal demand is still likely to increase fueled by demand from Southeast Asia, China, India.

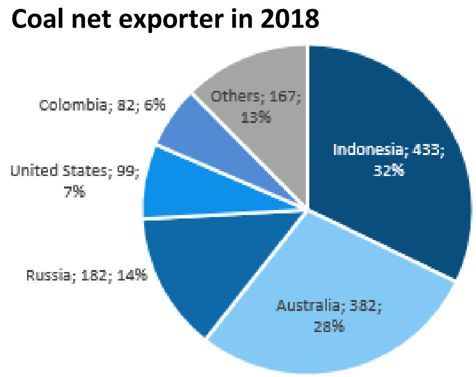
Worldwide coal reserve in 2018

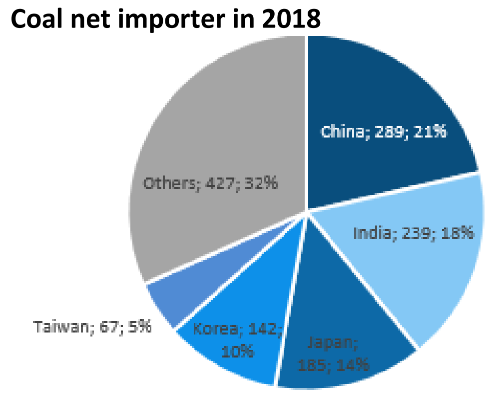


Worldwide coal production shares in 2018



Source: Key World Energy Statistics 2019



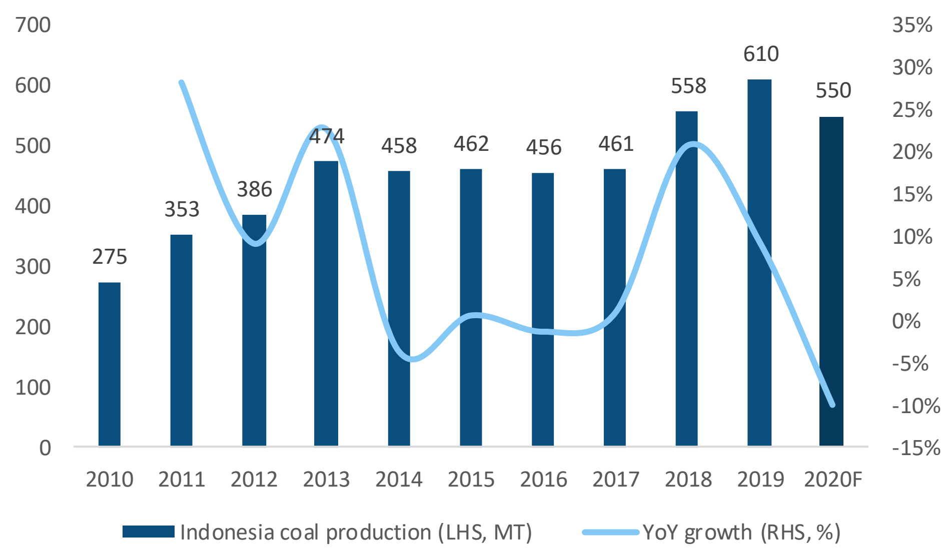


Source: Key World Energy Statistics 2019

Coal production in Indonesia growing at slower pace

Indonesia coal production in 2019 grew at a softer growth of 9% yoy after a high-base (vs. 21% yoy growth in 2018) while coal sales also has been slowing since 2015. Going forward, the Ministry of Energy and Mineral Resources expect a lower total coal production target of 550 MT (vs. 2019 target: 489.73 MT) after exceeding its initial target in 2019, translating to a -10% yoy expected coal production in hope to bolster coal prices.

Indonesia coal production

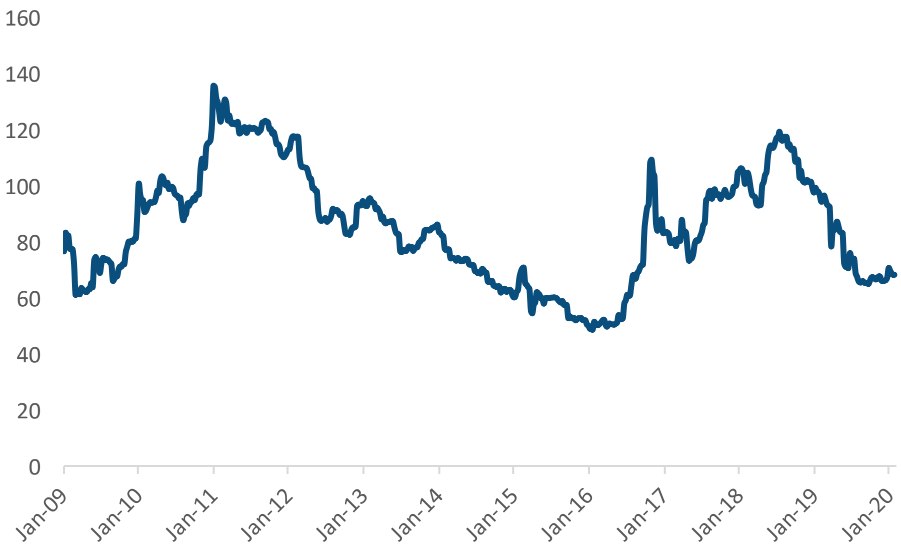


Source: Handbook of Energy & Economic Statistics Indonesia

Another hit to coal price

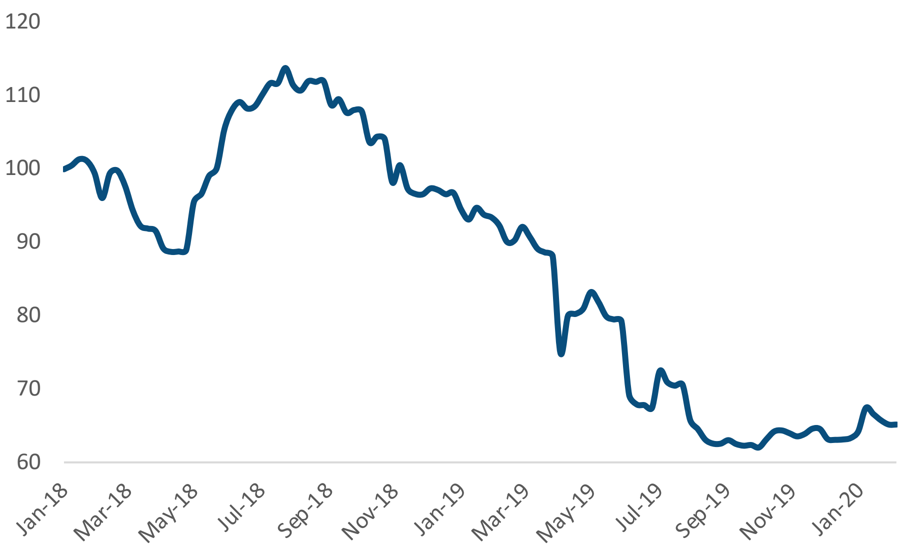
We also see a downtrend in coal prices since a high base in mid-2018, which made us think 2019 coal prices could be a bottom point. However, coal prices had flattened again, with Newcastle coal price reaching 68.4 USD/tonne (-0.8% wow; +0.7% yoy) as of February 18 as a result of ongoing coronavirus outbreak starting January 2020. At the same time, coal sales have been growing softer too with FY15-18 CAGR of 1.4% compared to FY12-15 CAGR of 7.4%. Indonesia's coal sales mix has been dominated by export sales, mainly to China.

Coal prices (Newcastle)



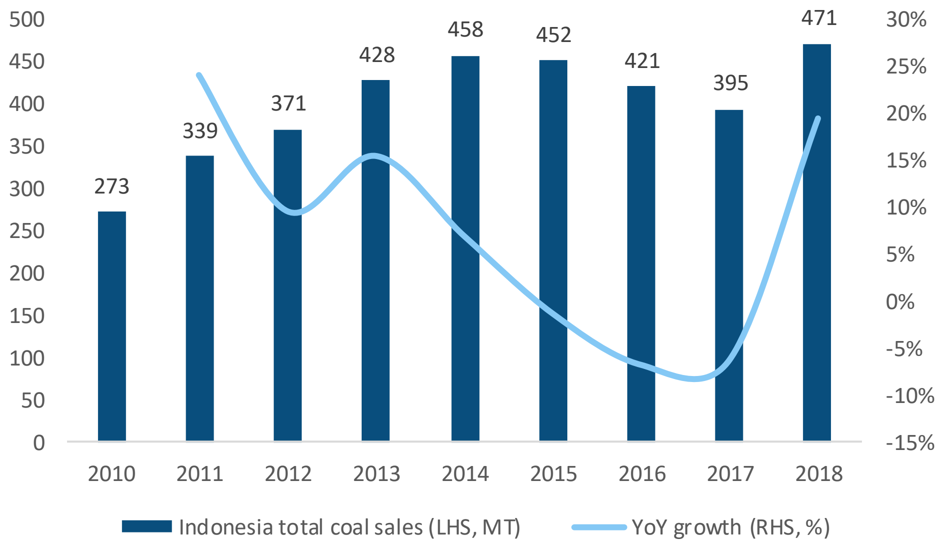
Source: Bloomberg

Coal price index (Jan 2019=100)



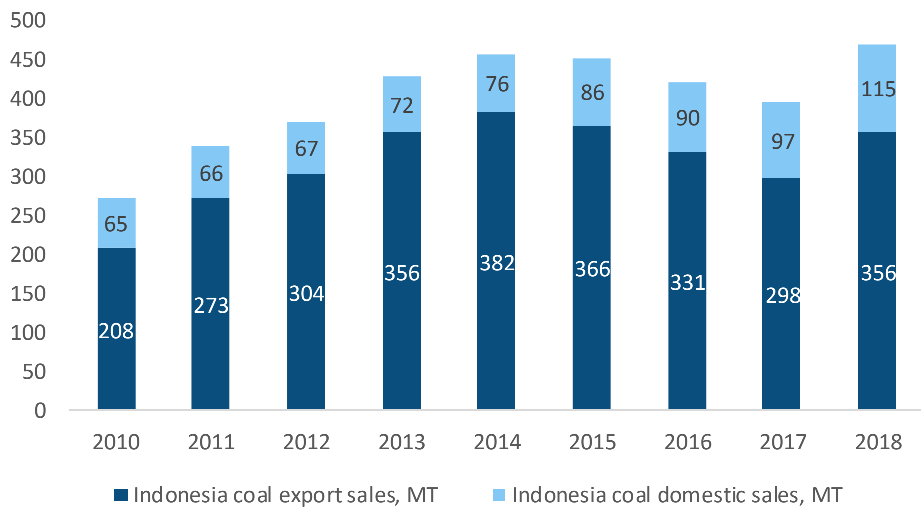
Source: Bloomberg, KRI

Indonesia total coal sales



Source: Handbook of Energy & Economic Statistics Indonesia

Indonesia total coal sales mix



Source: Handbook of Energy & Economic Statistics Indonesia

DMO regulations to ensure volume for domestic-focused coal barging providers

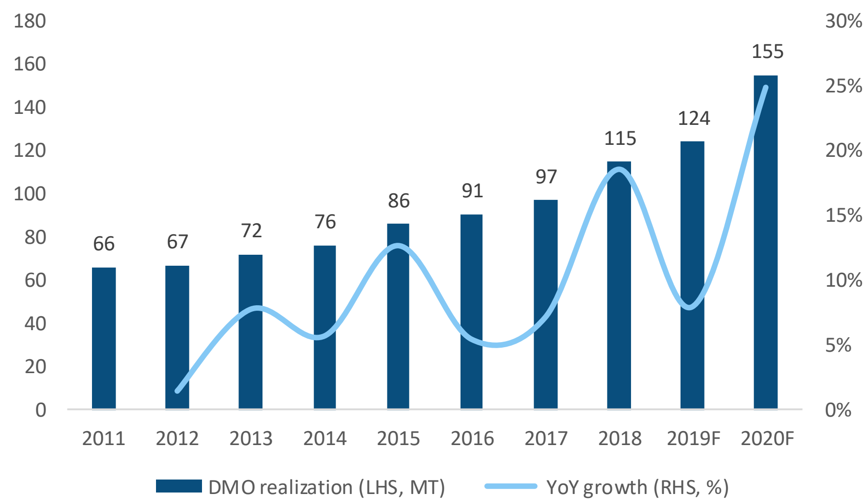
Generally, the Ministry of Energy and Mineral Resources created DMO regulation to cap coal prices and impose a certain required portion of local coal production to be sold to the domestic market for various uses, but mainly to be sold to coal-fired power plants (PLTU). The price cap is set at $70/tonne. However, this regulation only applies when the Indonesian coal reference price (HBA) exceeds $70/tonne. The regulation then continues to 2020, in which the price cap and quota of minimum 25% of total production stays. We view that the same regulation is slightly positive for barging providers due to stable volume transported.

Development in Indonesia's power plant capacity

In-line with higher DMO is increasing power plant capacity in Indonesia, in which the capacity has booked a stellar growth of 6.6% in 2019, and is expected to increase by 8.1% in 2020 (highest growth since 2015). This will translate to higher demand for coal as the main energy source for the power plant, which accounts for 58.36% in 2019 and is expected to steadily rise 68.19% in 2021.

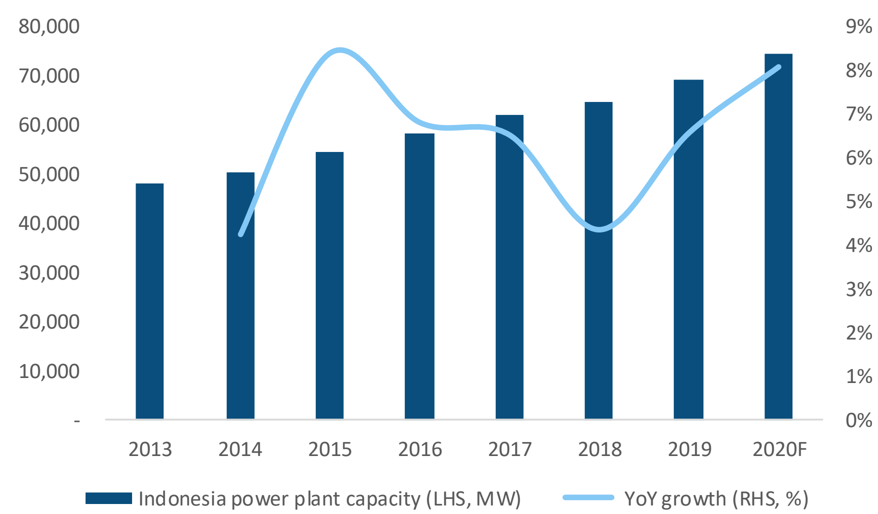
In 2019, PLTU in Indonesia has 28 - 30% of its coal supplied from PLN Batubara, and the rest mainly supplied by 8 mining companies which accounts for 90%, namely: PT Bukit Asam, Kaltim Prima Coal, Arutmin Indonesia, Adaro Indonesia, Kideco Jaya Agung, Berau Coal, Indo Tambangraya Megah, and Titan. The story is in-line with higher DMO needs in 2020 (+25% yoy), in which more than 70% of the supply is absorbed by PLTU. We believe coal barging providers with major PLTU exposure will benefit from the demand increase.

DMO realization



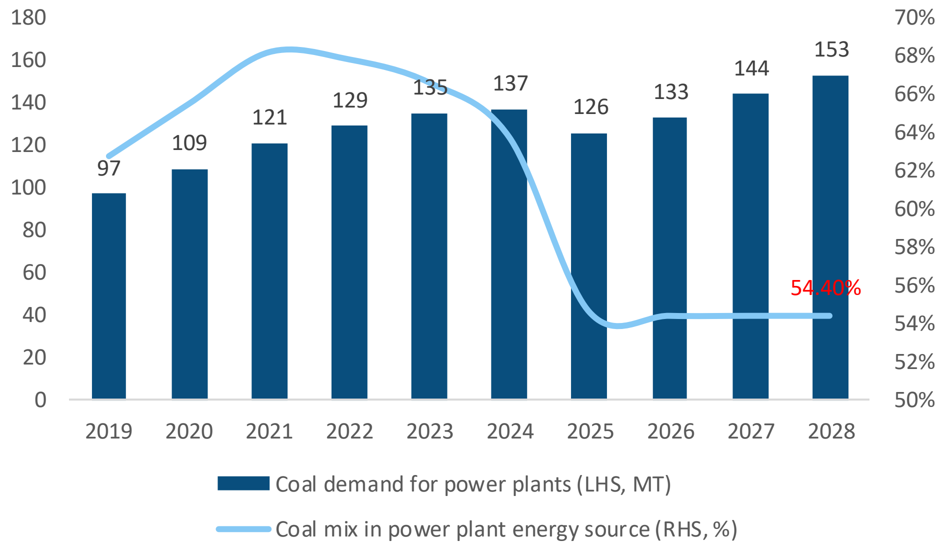
Source: Ministry of Energy and Mineral Resources

Indonesia power plant capacity



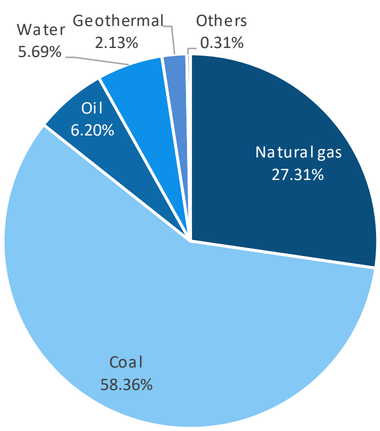
Source: PLN Statistics 2018

Projected coal demand for power plants



Source: Rencana Usaha Penyediaan Tenaga Listrik PT. PLN 2019 - 2028

Energy sources used in power plants in 2018



Source: PLN Statistics 2018

Indonesia as net exporter to China

Aside from domestic demand, we also expect that going forward, Indonesia's coal sector will still be heavily influenced by China's coal imports (China imported around 10% of its coal supply). As such, China's coal inventory, consumption, and imports have been our main focus to gauge coal prices movement.

China coal inventory and import as key drivers

Looking at China's monthly six major power plant stock could be a way to predict coal prices, and in January'20 we saw a decrease in the stock level (after consecutive increase since September), which might increase coal prices in the short-term. In addition, China coal production has recovered and on the highest level since 2015 in order to provide sustainability to its domestic coal miners, and at the same time, limiting its coal imports. In-line with this, coal import in December'19 slumped to only 2.77 MT (-73% yoy), bringing 2019 imports to stall at 299.67 MT (+6.6% yoy).

Future China coal demand

Furthermore, China still plans to cap coal imports at around 200 – 300 MT in 2020; if realized, should bring another round of stagnant growth of coal imports and might squeeze Indonesia coal miner's profitability. Also, despite coal still being the main energy source for its power plants, the country has been migrating to green energy sources and might pose a threat to long-term coal prices. Upside risk for the overall sector might come from lesser pressure from trade war with the US. We believe the overall sentiment for the coal sector from China influence is positive for coal logistic with exposure to China, but we see mixed signals for its long-term outlook due to China's import cap and its on-going migration to green energy.

China coal: what happened

Coal price should stay soft, in our view, due to coronavirus outbreak. Bloomberg reported in its news "Coal Resumes Slide as Supply Restarts, Virus Stifles Demand" that there might be coal oversupply in China. The situation is worsened, which according to the news, daily coal consumption in China as of February 17 was low at 388k tons (-20% yoy).

Despite Newcastle coal showing increase of 1.5% YTD (as of first week of February) and approaching USD70/tonne, weak China coal futures of 562.2 CNY/MT as of February 19 (-1.6% wow) could hint that recovery of coal supply in China after Lunar New Year holiday ended does not seem enough to balance demand; offset by coronavirus outbreak. All in all, we expect the declining ZCE thermal coal futures could imply a sluggish coal demand in the mid-term.

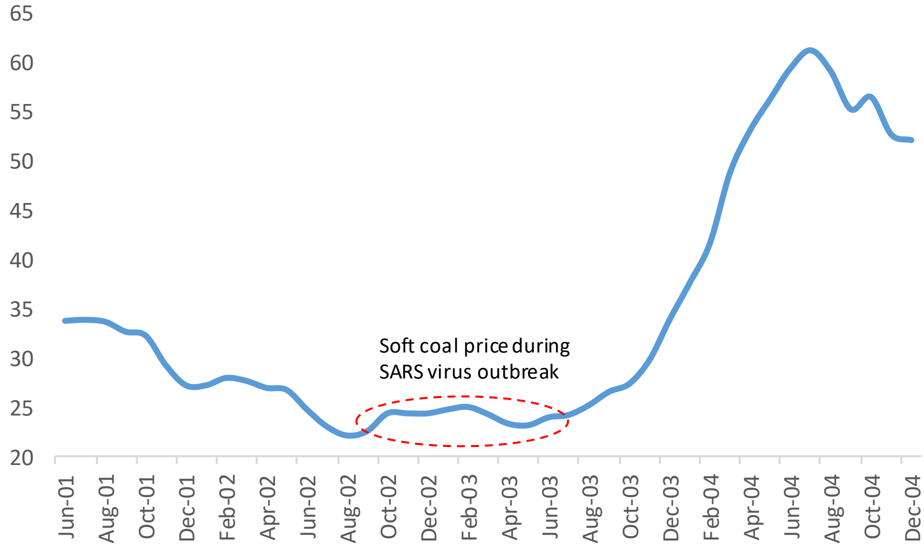
Indonesia coal sea logistics: what to expect

While external sentiments are negative, we believe Indonesia's coal sector is quite resilient as domestic demand is still strong and domestic coal production will most likely go to the higher DMO requirement. However, we believe China will import less coal in the short-term as China has restarted more than 70% of its coal mining capacity as of February 17, according to the National Energy Administration. This will be slightly offset by strong domestic coal demand and support coal shippers that provide inter-island shipping (coal barging, transshipment, and port management), and less positive for shippers with mother vessels with high exposure to China.

Newcastle coal price (USD/tonne) in coronavirus outbreak period

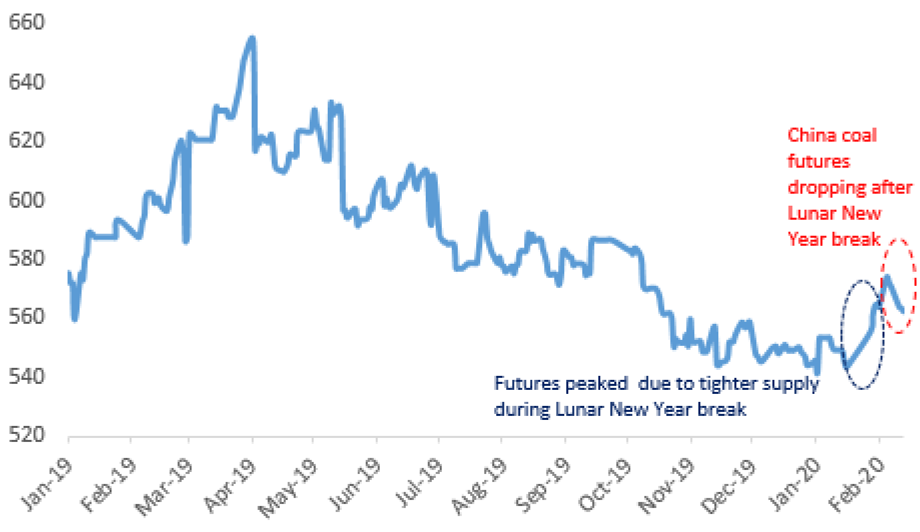
Source: Bloomberg, KRI

Newcastle coal price (USD/tonne) in SARS virus outbreak (3Q02 – 1Q04)



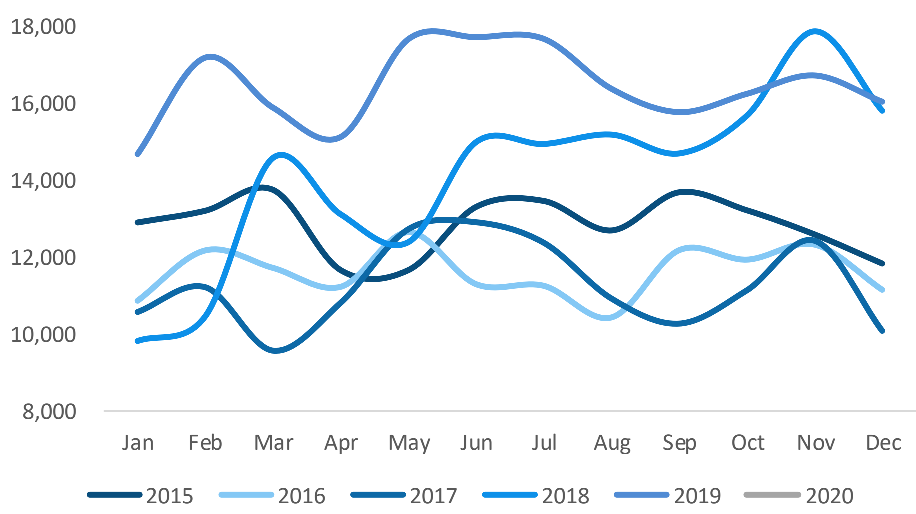
Source: Bloomberg, KRI

ZCE Thermal Coal Futures (Contract size = 100 MT, in CNY/MT)



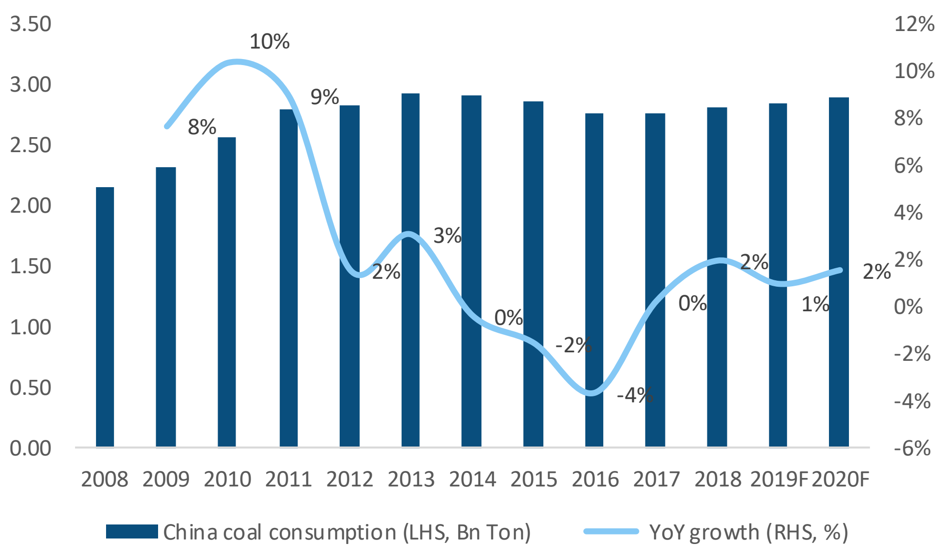
Source: Bloomberg, KRI

China six major power plant stock



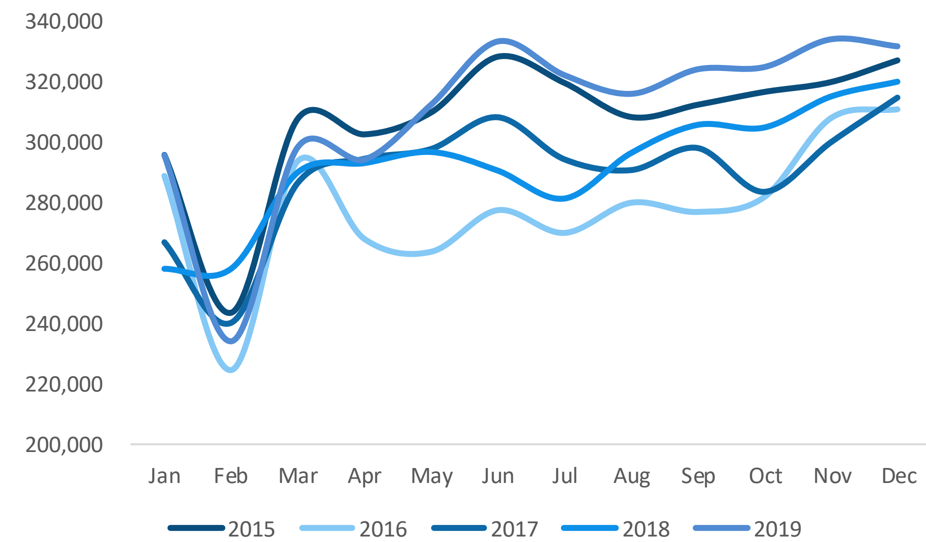
Source: Bloomberg, KRI

China coal consumption



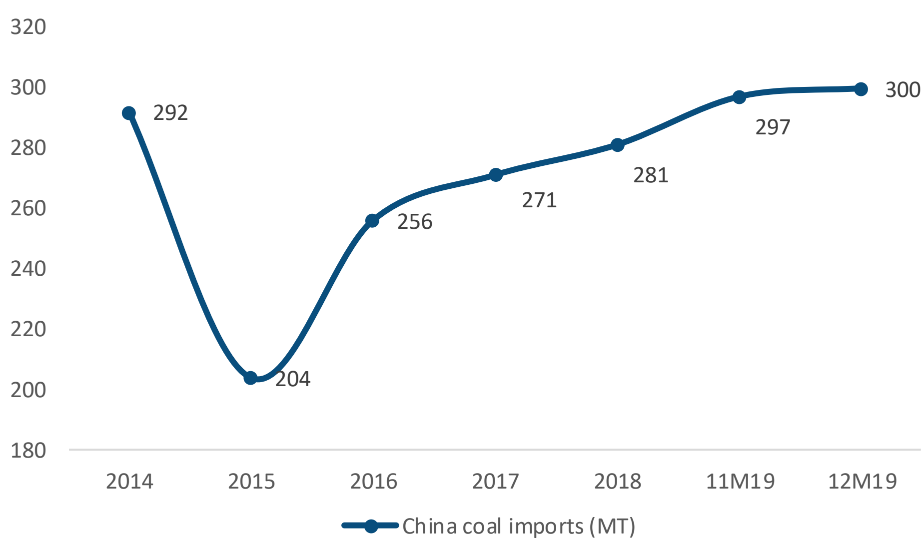
Source: Bloomberg, KRI

China coal production



Source: Bloomberg, KRI

China coal imports



Source: Bloomberg, KRI

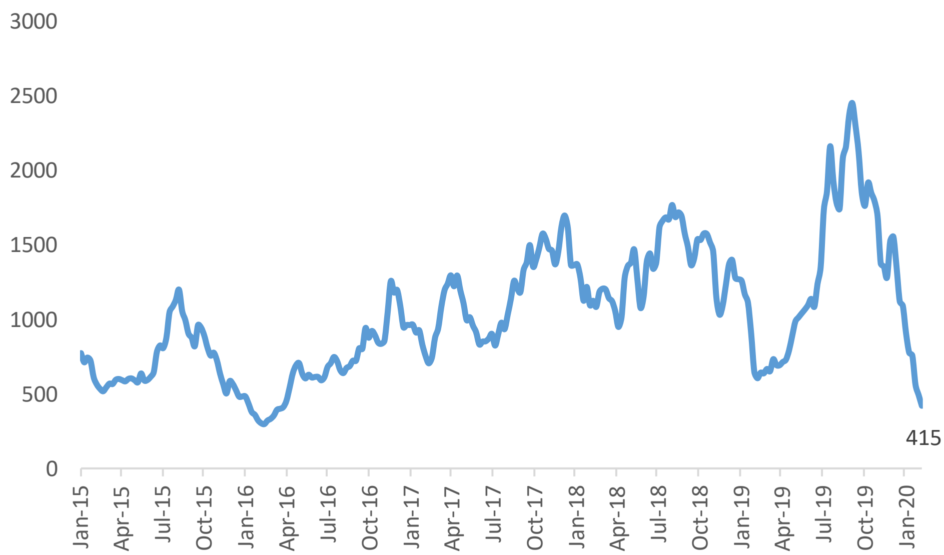
Blackrock divestment makes coal even more unattractive

In January 2020, Blackrock, the biggest asset management in the world, announced its plan to decrease its exposure to investment in coal companies, in which they will exit from investment on companies generating >25% of their revenue from thermal coal. Reason for the divestment is not only about on-going concern on the climate change, but also due to coal companies are performing less than expectation. We believe the action could be a pioneer to promote more climate-friendly investing strategy, which makes us cautious on its impact to funding of coal companies. Along with coronavirus outbreak and the divestment, we see the coal sector itself is yet to recover.

SUPPLY SIDE: GLOBAL DRY-BULK FREIGHT RATE ON A DOWNTREND

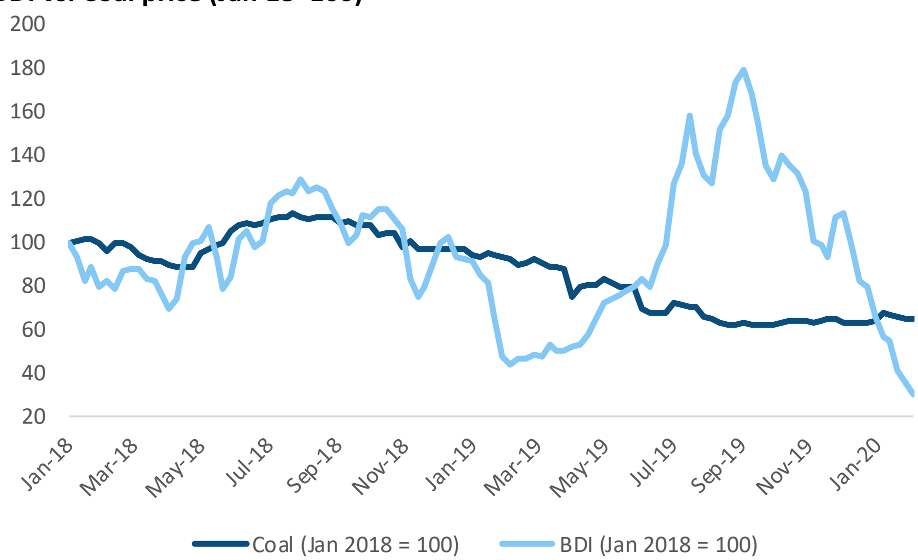
Global dry-bulk sea freight rate, represented by Baltic Dry Index (BDI), showed a bleak start in 2020 as the index hit its lowest level since May 2019 due to lower demand for vessel and overall lower trade due to China-US trade tension. The BDI is also more volatile than coal price, which we believe is the result of oversupply situation of fleets while demand takes the wheel. Our channel checks with a local coal transshipment provider told us that their performance correlates more with Newcastle coal price index rather than BDI, which verify that coal volume transported is a better parameter than freight rate which usually is has low volatility.

Historical BDI



Source: Bloomberg

BDI vs. Coal price (Jan'18=100)



Source: Bloomberg, KRI

Global supply and demand of vessels

In-line with lower BDI, we also see a slower growth of total vessels both in the dry and liquid cargo segments, possibly to prevent vessel oversupply and adjusting to requirements of International Maritime Organization (IMO 2020). With the policy taking effect, shippers have to install scrubbers and speed up the process of scrapping old vessels to comply with the use of low-sulphur fuel oil (LFSO). On the other hand, we also note that acquisition price of vessel also slowed for both bulker and container due to lower demand from shipping providers, but tanker vessel price is still on an uptrend due to consistency in oil fuel demand.

Tight availability of LFSO in some countries might drive up demand for tanker vessel to transport them. On the flip side, fewer availability of bulk vessel (idle ships due to adjusting process with IMO 2020) could help push up freight rates for dry-bulk segment.

Dry-bulk cargo demand

Demand of dry-bulk cargo remains to depend on trade activities, with iron ore amounting to 28% of total tonnage, followed by seaborne coal which amounts for 24% (according to Bloomberg Intelligence). Both these commodities are exported mainly to China. Iron ore sector has not shown recovery in Jan'20 as supply from Brazil and Australia has been declining, same goes with coal sector with China tightening its import policy and increasing support to its local miners.

LSFO showing signs of pricing in in despite being in initial stage

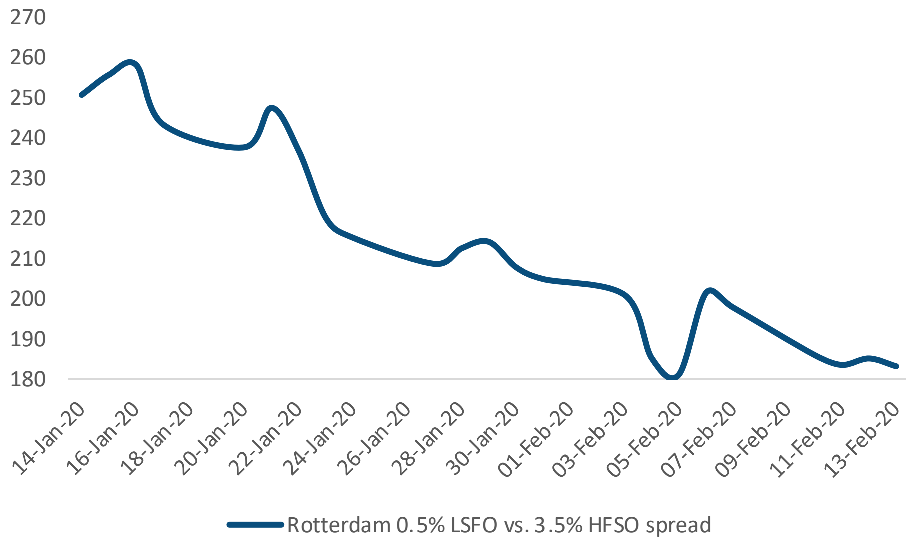
After a brief increase of LSFO price due to immediate adjustment of bunkers, the spread started plummeting with its lowest level of USD181.08/ton; hinting faster than expected adjustment.

Indonesia coal sea logistics: IMO 2020 impact

With international implementation of IMO 2020 taking place, there are concerns among ship owners about higher fuel expense due to the availability of LSFO. We are more cautious on local shippers with open sea shipment business; although the fuel spread has been declining.

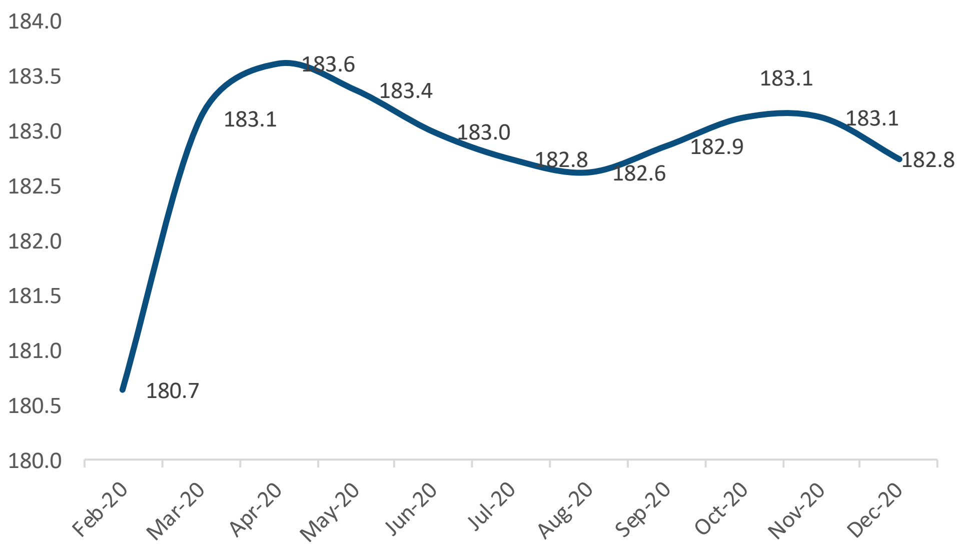
On the other hand, with Indonesia's coal logistic providers' heavy portfolio in coal barging, we see little to no impact on those. Our channel-check with a local coal transshipment operator suggests that as big players in upper-stream to mid-stream coal delivery (from coal barging to transshipment) that the policy does not necessarily affect their business, however it will burden down-stream players, such as mother vessel owners. At the same time, providers providing open-sea shipment will have to adjust to the new policy.

Historical Rotterdam 0.5% LSFO vs. 3.5% HFSO spread (USD/ton)



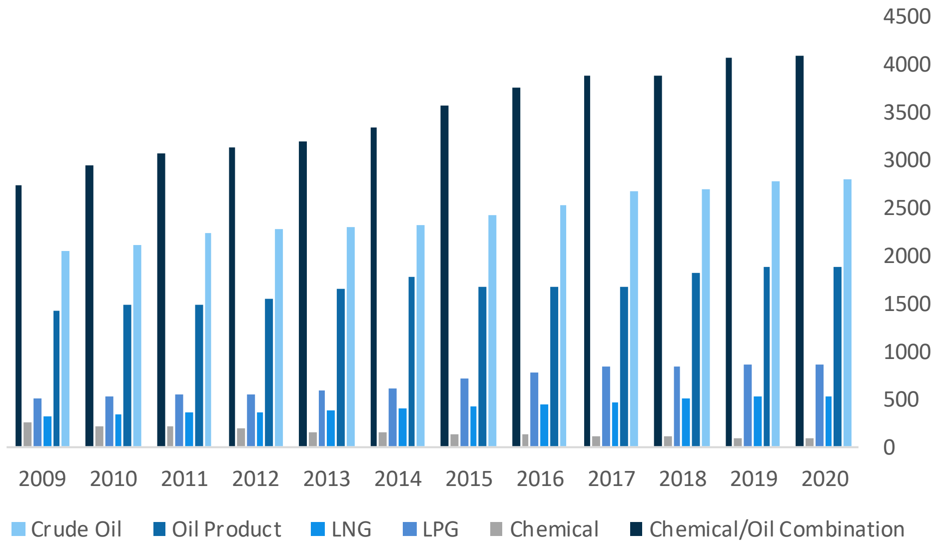
Source: Bloomberg, KRI

Rotterdam 0.5% LSFO vs. 3.5% HFSO spread forward curve (USD/ton)



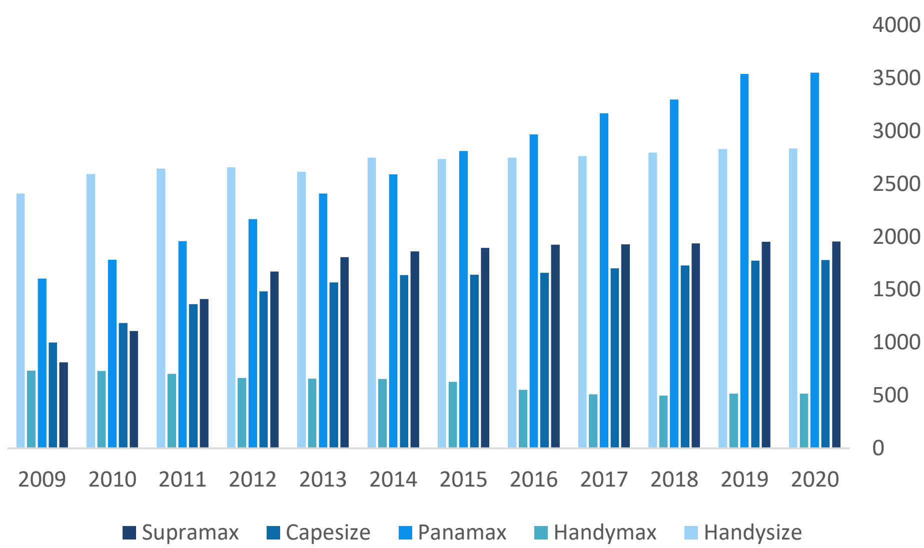
Source: Bloomberg, KRI

Number of vessels in liquid-cargo segment



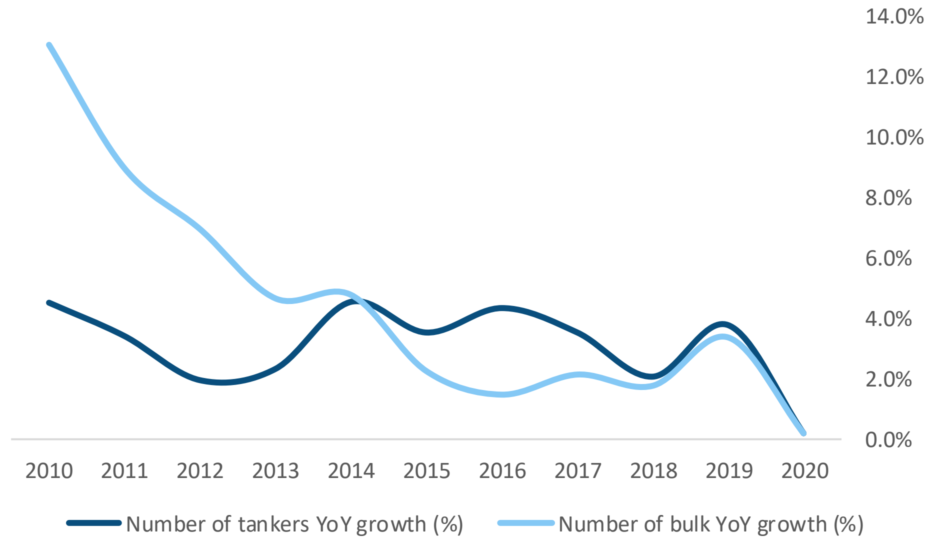
Source: Bloomberg, KRI

Number of vessels in dry bulk cargo segment



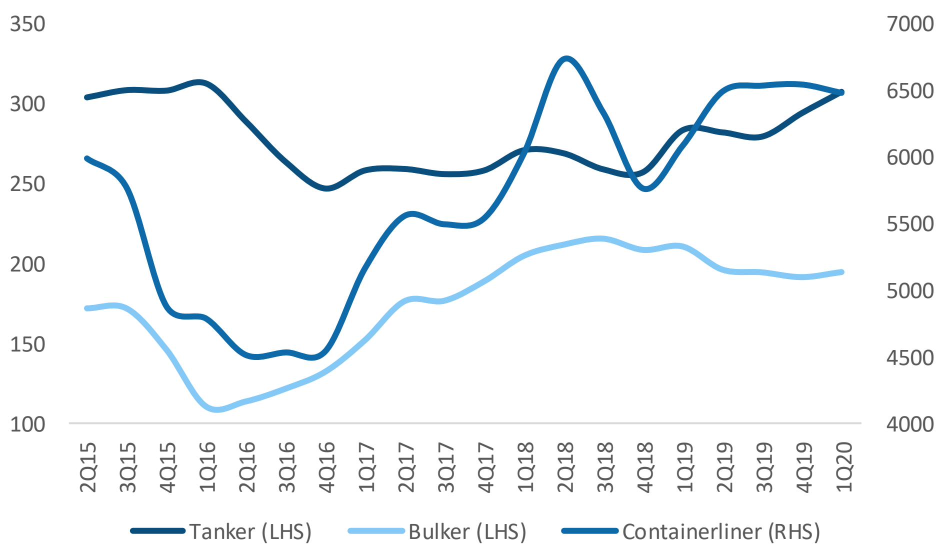
Source: Bloomberg, KRI

Growth of number of liquid cargo vs. dry bulk cargo



Source: Bloomberg, KRI

Global vessel price



Source: Bloomberg, KRI

Dry bulk cargo industry in Indonesia growing steadily amid mixed signals

Taking revenues from major public dry bulk cargo which specialize on coal shipping in Indonesia (Mitrabahtera Segara Sejati (MBSS), Pelita Samudera Shipping (PSSI), Transpower Marine (TPMA), Transcoal Pacific (TCPI)), we still see the positive growth (3Q19: +3% qoq; +15% yoy) amid declining Baltic Dry Index and Newcastle Coal Index. The industry faces uncertainties from China coal demand, low BDI level and lower coal trade activity (export).

Implementation of cabotage law

At the same time, recent government reinforcement of cabotage law might push local cargo providers to prepare for its said implementation in May 2020, after many years of issuing the regulation since 2008. The implementation was delayed to May 2020 with issuance of

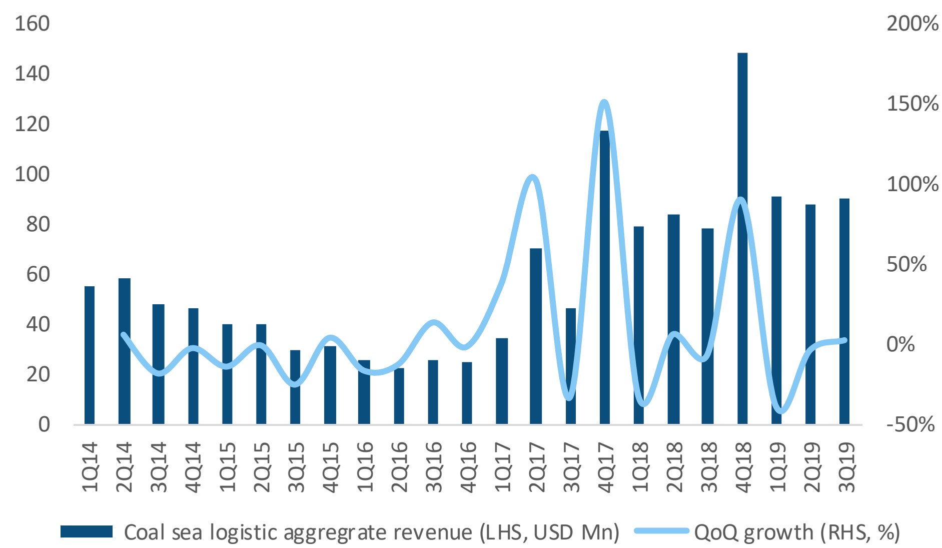
Permendag No 48/2018 after the government deemed the dry bulk cargo industry not ready to cater export needs of coal and CPO.

Uncaptured market share of mother vessel to transport coal

According to Indonesia National Shipowners Association (INSA) in 2019, only 5% of total coal volume exported used national ship and they forecast only 10% of total coal volume exported could be catered by national ship supply. This implies that there is 90% market share untouched by domestic cargo owners. However, in the initial stage of the implementation, the policy only applies for export destination to Southeast Asian countries, and later on coverage will increase gradually.

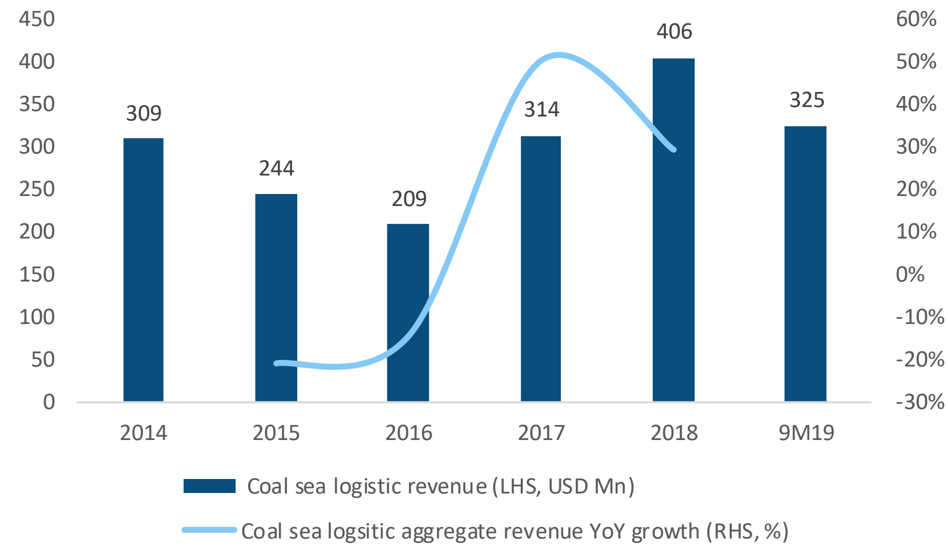
We are of the view that with total seaborne coal volume traded will decrease in 2020 due to the China situation in addition to uncertainties of coal prices. However, domestic coal trading will increase following higher DMO target and thus will slightly increase volume for barging service. Going forward, we believe coal shipper with long-term contracts locked with fixed freight rate and volume transported floor level will have more favorable position. Coal shippers might spend more capex in the upcoming years on preparing to cater the uncaptured market of export.

Quarterly aggregate revenue of coal sea logistic providers



Source: Bloomberg, KRI

Yearly aggregate revenue of coal sea logistic providers

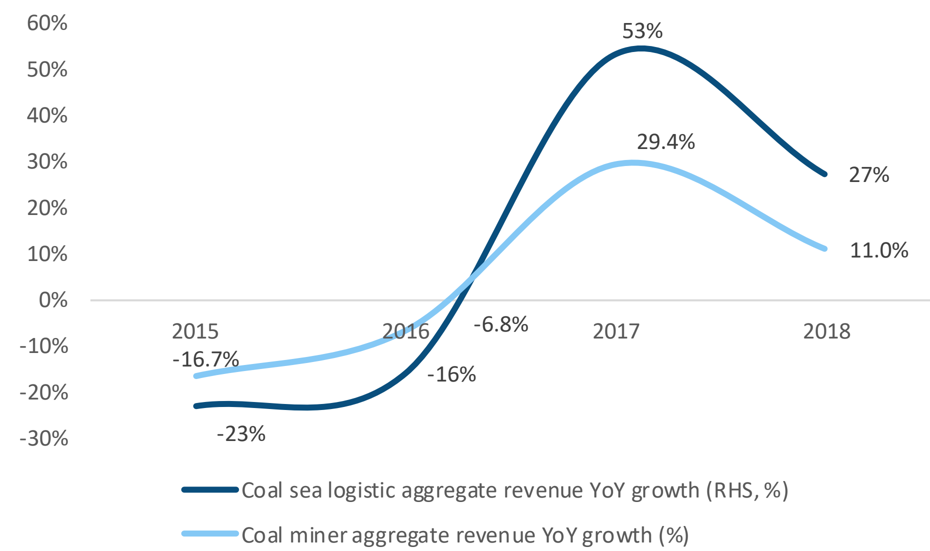


Source: Bloomberg, KRI

Coal sea logistic providers' growth follows coal miners'

We believe that revenue of the coal sea logistic providers in Indonesia correlates positively with revenue of the coal miners, as the coal sea logistic providers act as the downstream of supply chain of the coal miners. In the chart below, the sea logistic providers included are MBSS, PSSI, TPMA, and TCPI only included in 2016 onward), while coal miners are represented by top-tier coal producers Adaro Indonesia, Bukti Asam, and Indo Tambangmegah Raya.

Coal sea logistic aggregate revenue YoY growth vs. Coal miner aggregate revenue YoY growth



Source: Bloomberg, KRI