

Baltic Investor Indices

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In pursuit of net zero, the value of recycled steel may remain elevated, possibly reducing residual risk.

Executive Summary

- Recycled steel demand may stay firm due to its comparatively low carbon footprint.
- Persistently higher recycle values may reduce residual risk over time.

The dry freight markets have been very weak of late with the Baltic Dry Index at 740 as of January 23rd. This is one of the lowest levels since 2020 which neared historical lows. While the market downward trend-line began in the fourth quarter of 2021, dry bulk ship asset values were stable to increasing through the summer of 2022. Asset values were supported by a modest improvement in rates over the summer of 2022 but also due the orderbook for dry bulk vessels being at a multi-decade low (where it remains). As this freight market swoon has persisted, dry bulk asset values have fallen in recent months.

Also, the price per lightweight tonne (ldt) for ship recycling has fallen over 20% since its April 2022 high. However, at ~\$520/ldt currently, the recycle values of ships are more than double the historic average since 2009 (average for bulkers over the major recycle markets).

“Net Zero” goals might keep ship recycle values higher for longer

There is reason to think that the recent elevated ship recycling values may persist. One reason is, simply, inflation. More importantly, recycling steel from scrap is far less carbon intensive than producing it conventionally. This fits well into the many global initiatives seeking to get to “net zero” and will be an important part of Chinese clean air initiatives.

Bloomberg New Energy Finance (BNEF) recently indicated that transition metals are a “\$10 trillion opportunity as demand rises and supply continues to lag” (BNEF, Jan 18th 2023). The report anticipates that demand to get to net-zero by 2050 may “lead to a super-cycle in the metals and mining industry” and “spur demand growth for both critical minerals and traditional metals”. According to BNEF, in terms of tonnage, steel will be the largest component the metals used in transition technologies with an estimated ~109 million tonnes of steel used annually by 2050, nearly a three-fold increase from the ~28 million tonnes used for the purpose in 2022.

We query, where will this “transition” steel come from? We hypothesize recycled steel may play a fundamental role.

In 2020 1.86 billion metric tonnes of steel were produced conventionally. With each tonne produced, 1.85 metric tonnes of CO₂ were released into the atmosphere according to the World Steel Association (Worldsteel). Further, Worldsteel notes:

“it’s environmentally beneficial to recycle steel (for example, each tonne of scrap recycled saves 1.5 tonnes CO₂, 1.4 tonnes of iron ore and 740kg of coal), there’s a well-established market that has been around for many decades to purchase the steel scrap to make new steel products. It’s estimated that we currently recycle over 85% of all steel products that reach the end of their life. Recycling steel scrap uses about a third of the energy that it takes to make steel from virgin raw materials. Steel scrap is also a necessary input to the Basic Oxygen Furnace (absorbing excess energy to help cool the process down) which is often perceived as the virgin steel route.”

Over the first half of 2021, Chinese demand for scrap surged over 40%. Over 2022, global demand for recycled steel, strongly driven by softer Chinese demand, was trending down ~8% through June. This may be attributed to China’s intensive COVID lockdowns and a slowing global economy. Yet, over the long term, it is reasonable, in our view, to believe that ship recycling values may stay elevated for some time due to recycled steel’s comparatively low carbon footprint.

There is a negative correlation between Residual Risk and Residual Value

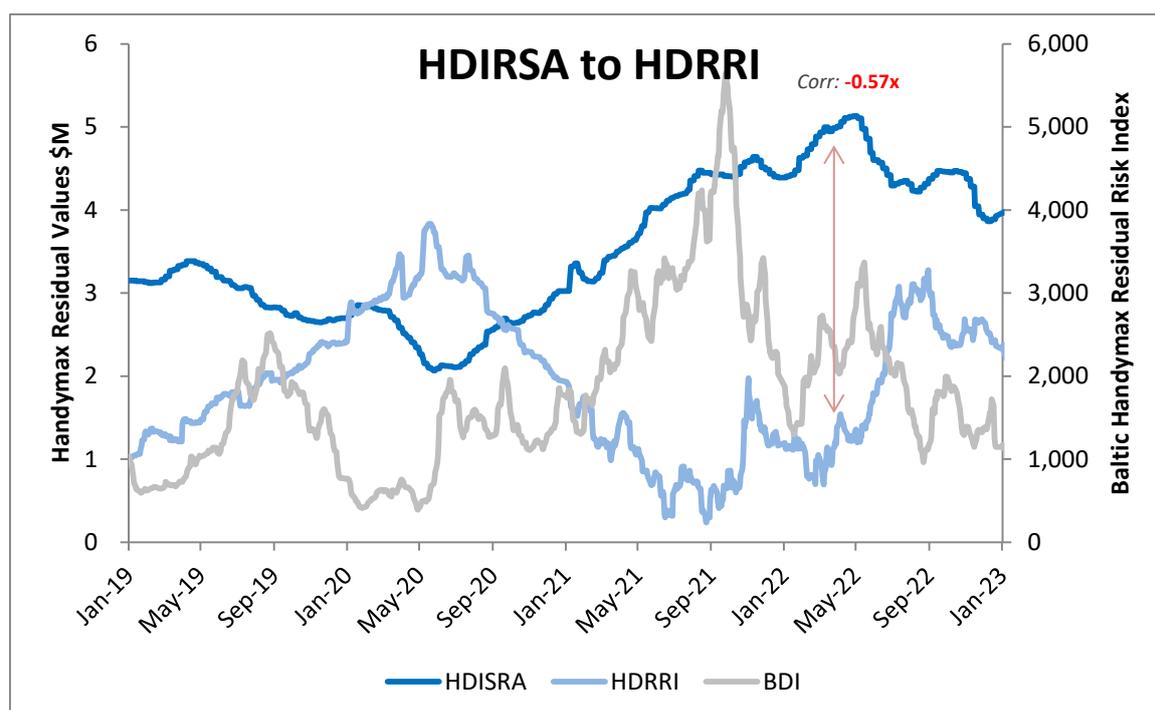
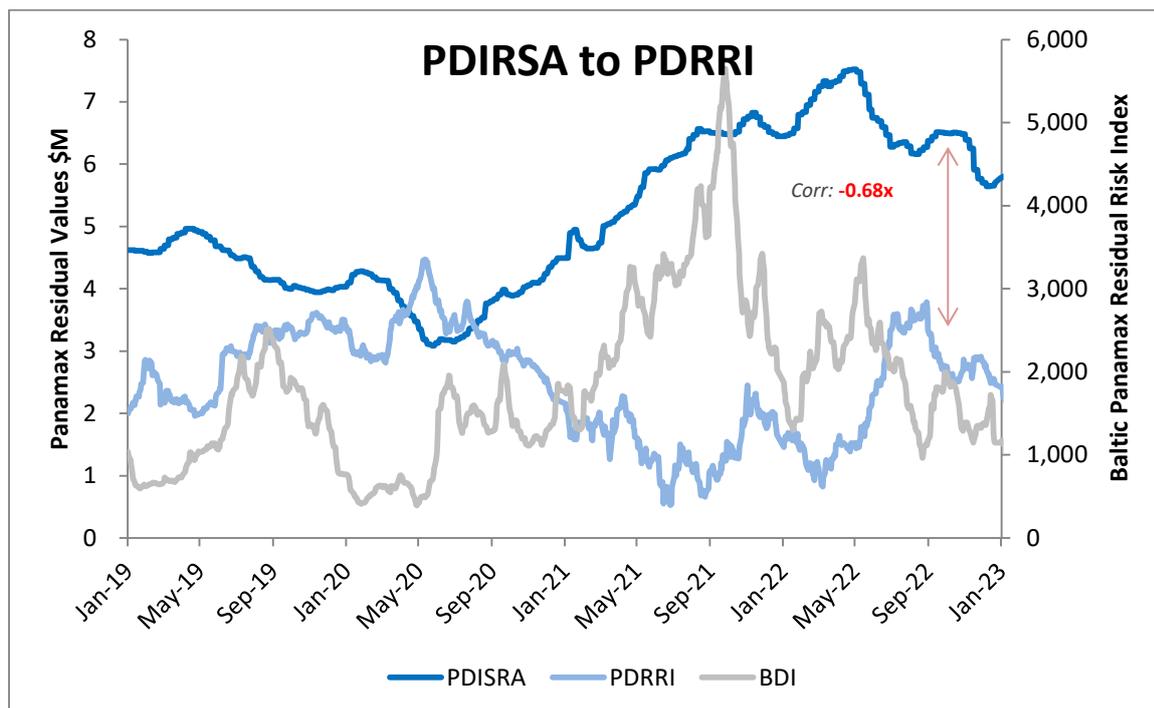
A component part of the Baltic Investor Indices (BII) is the Baltic Residual Risk Index for each of the major sectors; Capesize (CDRRI), Panamax (PDRRI), Supramax (SDRRI) and Handysize (HDRRI). The Residual Risk Index is the ratio of the residual value of the vessel against the recycling value. The Baltic Residual Value Index is calculated by taking the written down cost of a five year old vessel by fixing the earnings on the basis of a five year timecharter and adding back the operating costs. For the Baltic Residual Risk Indices, if the residual value is lower than the recycling value, the index will be negative.

During the 4th Quarter of 2022 and into 2023, the Baltic Residual Risk Indices have declined in all four of the major dry bulk sectors. Asset values dropped over the last quarter, but charter rates had weakened in advance of the drop in asset values. Also the recycling value of ships has declined to their lowest point since May 2021 - though still historically elevated - when freight rates were much stronger than they are today.

There is a negative correlation between the Baltic Residual Risk Indices and the Baltic Recycling Values at an average -0.61x: As the recycle value increases, residual risk decreases. Correlation, or negative correlation in this case, should not imply causation in full: This is not a particularly strong negative correlation and residual risk is clearly influenced by many other factors such as asset values and freight rates.

As might be expected given their higher lightweights, this negative correlation is strongest in the larger sizes of dry bulk vessels with the Panamax (PDIRSA to PDRRI) sector being the most pronounced at -0.68x.

Notably, while less negatively correlated at -0.57x, the Handysize sector has shown the broadest range of the between highs and lows of its HDRRI and its residual values.



That higher recycle values support secondhand values (particularly older vessels) is news to no one in our industry. However should the current multi-year higher recycle value cycle turn out to be a fundamental trend supported by some of the evolving demand factors discussed above, the fundamental risk of investing in middle aged dry bulk tonnage, particularly in softer freight markets, will have decreased.

If the above is the case, it might have some impact in other aspects of ship management and finance. Companies may look to adjust their depreciation accounting policies to a higher recycle

value (supporting net income and equity, though a non-cash item). Far less likely, at least in the near term, banks may also consider slower amortization based on higher recycle values. The recent two year trend in higher recycled values needs to be sustained for quite some time further, in our view, before any changes happen.

We are not saying investors should rely on these conditions to become a fundamental trend: The dry bulk space has proven to be extremely cyclical with substantial volatility throughout the cycles. There are many factors that could also impact the recycled steel market that we have not considered here. However, with recycled steel being the greenest option for steel production today, it is worth consideration that recycle values may stay elevated when viewed through the prism of global “net zero” goals and Chinese clean air targets.