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Baltic Dry Index



The Baltic Exchange in London is an exchange where contracts on shipping costs are traded. The exchange provides daily freight market prices and maritime shipping cost indices that are used to settle freight futures. The exchange used to operate on a trading floor, but now all transactions take place over the phone. The BDI is a composite of the Capesize, Panamax and Supramax Time charter Averages. It is reported around the world as a proxy for dry bulk shipping stocks as well as a general shipping market bellwether.

The exchange was founded in the mid-18th century. Like several other London exchanges, it started out as a coffee shop. The name first appeared as the Virginia and Bal tick Coffee House in 1744.

The BDI is the successor to the Baltic Freight Index (BFI) and came into operation on 1 November 1999. The BDI continues the established time series of the BFI, however, the voyages and vessels covered by the index have changed over time so caution should be exercised in assuming long term constancy of the data.



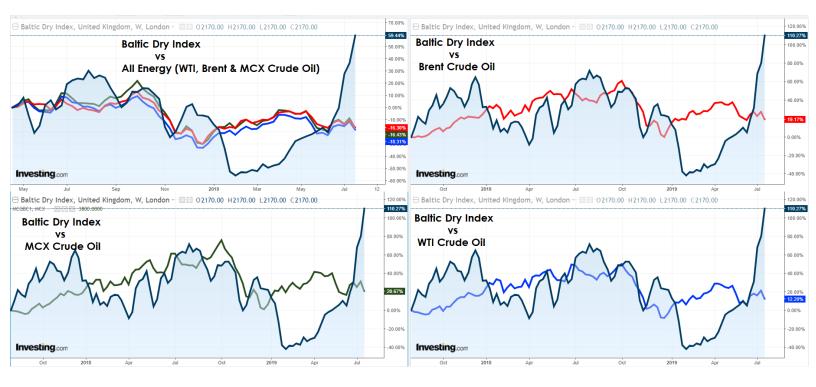
Why is the Baltic Dry Index important?

- The Baltic Dry index measures the demand for shipping capacity versus the supply of dry bulk carriers. The demand for shipping varies with the amount of cargo that is being traded or moved in various markets (supply and demand).
- The supply of cargo ships is generally both tight and inelastic—it takes two years to build a new ship, and the cost of laying up a ship is too high to take out of trade for short intervals, the way you might park a car safely over the winter. So, marginal increases in demand can push the index higher quickly, and marginal demand decreases can cause the index to fall rapidly. e.g. "if you have 100 ships competing for 99 cargoes, rates go down, whereas if you've 99 ships competing for 100 cargoes, rates go up. In other words, small fleet changes and logistical matters can crash rates. The index indirectly measures global supply and demand for the commodities shipped aboard dry bulk carriers, such as building materials, coal, metallic ores, and grains.
- Because dry bulk primarily consists of materials that function as raw material inputs to the production of intermediate or finished goods, such as concrete, electricity, steel, and food; the index is also seen as an efficient economic indicator of future economic growth and production.
- The exchange also publishes indices covering oil tankers transporting both crude oil and refined products. The movement of this indicator is difficult to interpret, because tankers can be used to ship oil when demand is high or to store oil when demand is low.
- The Baltic Dry Index is a leading indicator that provides a clear view into the global demand for commodities and raw materials. The fact that the Baltic Dry Index focuses on raw materials is important because demand for raw materials provides a glimpse into the future.
- The Baltic dry index measures the supply/demand balance for shipping. The supply of ships is relatively inelastic in the short term – it takes two years to build a ship, while once it's built, the fixed costs of owning it are so high that ship owners would often rather run them at a loss than take them out of service. Therefore, the short-term movement of the index is a good indicator of the global demand for the commodities shipped aboard dry bulk carriers, such as iron ore, coal, and grains. Since these goods are generally raw material inputs that are used in making other goods, the index is also considered to be a leading index of future economic growth.
- One key point to note is that there is no speculative content to the index. People who charter ships have goods to move. Also, the index is not subject to revision and it is available every day.

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Correlation between Baltic Dry Index Vs Crude Oil:

- The cross-correlations between BDI and crude oil prices are significantly multifractal. The cross-correlations are **strongly persistent** in the **short term**. The cross-correlations are **weakly** anti-persistent in **the long term**.
- The multifractality of the cross-correlations is attributable to the **volatility persistence** and fattailed distributions. The empirical results show that the cross-correlations between BDI and crude oil prices are significantly multifractal.
- By introducing the concept of crossover; we find that the cross-correlations are strongly persistent in the short term and weakly anti-persistent in the long term.
- Moreover, cross-correlations of all kinds of fluctuations are persistent in the short time while cross-correlations of small fluctuations are persistent and those of large fluctuations are antipersistent in the long term.
- We have also verified that the multifractality of the cross-correlations of BDI and crude oil prices is both attributable to the persistence of fluctuations of time series and fat-tailed distribution.





Crude Oil Seasonality

CRUDE OIL PRICE MOVEMENT SINCE 2010													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Growth
2010	3378	3669	3751	3814	3464	3523	3654	3449	3591	3630	3923	4088	361.00
	-9.36	8.61	2.23	1.68	-9.18	1.70	3.72	-5.61	4.12	1.09	8.07	4.21	9.69
2011	4229	4444	4744	5047	4631	4241	4237	4081	3995	4516	5219	5296	1208.00
	3.45	5.08	6.75	6.39	-8.24	-8.42	-0.09	-3.68	-2.11	13.04	15.57	1.48	28.56
2012	4927	5227	5274	5514	4919	4695	4921	5358	4887	4666	4838	5015	-281.00
	-6.97	6.09	0.90	4.55	-10.79	-4.55	4.81	8.88	-8.79	-4.52	3.69	3.66	-5.31
2013	5202	5076	5400	5014	5273	5763	6409	7246	6440	5996	5839	6122	1107.00
	3.73	-2.42	6.38	-7.15	5.17	9.29	11.21	13.06	-11.12	-6.89	-2.62	4.85	22.07
2014	6169	6371	6119	6015	6106	6337	6006	5831	5673	4931	4210	3369	-2753.00
	0.77	3.27	-3.96	-1.70	1.51	3.78	-5.22	-2.91	-2.71	-13.08	-14.62	-19.98	-44.97
2015	2855	3064	3025	3790	3869	3776	3038	3230	2979	3068	2798	2493	-876.00
	-15.26	7.32	-1.27	25.29	2.08	-2.40	-19.54	6.32	-7.77	2.99	-8.80	-10.90	-26.00
2016	2286	2321	2572	3035	3333	3304	2782	3003	3212	3153	3377	3541	1048.00
	-8.30	1.53	10.81	18.00	9.82	-0.87	-15.80	7.94	6.96	-1.84	7.10	4.86	42.04
2017	3614	3566	3284	3174	3127	2968	3183	3038	3373	3528	3687	3850	309.00
	2.06	-1.33	-7.91	-3.35	-1.48	-5.08	7.24	-4.56	11.03	4.60	4.51	4.42	8.73
2018	4112	4093	4234	4583	4517	5086	4734	4959	5335	4892	3576	3170	-680.00
	6.81	-0.46	3.44	8.24	-1.44	12.60	-6.92	4.75	7.58	-8.30	-26.90	-11.35	-17.66
2019	3869	4090	4185	4467	3775	4095							925.00
	22.05	5.71	2.32	6.74	-15.49	8.48							29.18
Average	-0.10	3.34	1.97	5.87	-2.80	1.45	-2.29	2.69	-0.31	-1.44	-1.56	-2.09	Average



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