



BUNKER/CRUDE: A DEVIATION FROM THE NORM

No. 22 ~ 11 September 2009

With high-cost bunkers back in the limelight and increasing their painful bite into vessel owners' earnings, we found it a fitting time to update our bunker/crude correlation curves. But as this latest data plot illustrates, the last year has seen a bit of a deviation from the normal correlation experienced over the last 15 years.



We plotted the corresponding spot prices of Brent and West Texas Intermediate (WTI) crudes against Rotterdam, US Gulf and New York fuel oils. The correlation between these averaged out crudes with the averaged fuel oils yields the results seen in Table 1. However, as new data points entered the plot in the past year, we have taken notice of their outcropping above our historic curves. For instance, a US \$70 barrel of crude that used to yield \$342/metric ton bunkers has now spread to \$398—up by over 16%.

So what has caused this deviation in the relationship, and will it last? There are a number of explanations as to why the spread on fuel oil has risen this year. Most notably, bunkers are being sourced from lighter and more expensive crudes in the face of OPEC cut-backs on their basket of typically heavier crudes. These lighter crudes in the market are not only more costly, but yield less fuel oil as well. Additionally, refinery technologies are evolving from the old days of hydroskimming. As their productivity is improved, there are less residual fuel oils left over as operators optimize output of higher-grade distillates in order to take advantage of crack spreads yielding better profits.

Finally, while the available supply of fuel oils is diminishing, the call for bunkers is coming from an increasingly larger fleet of vessels. All things combined, we have a dangerous recipe for high-cost bunkers on top of freight levels that are already hovering frighteningly close to operating costs for most fleets.

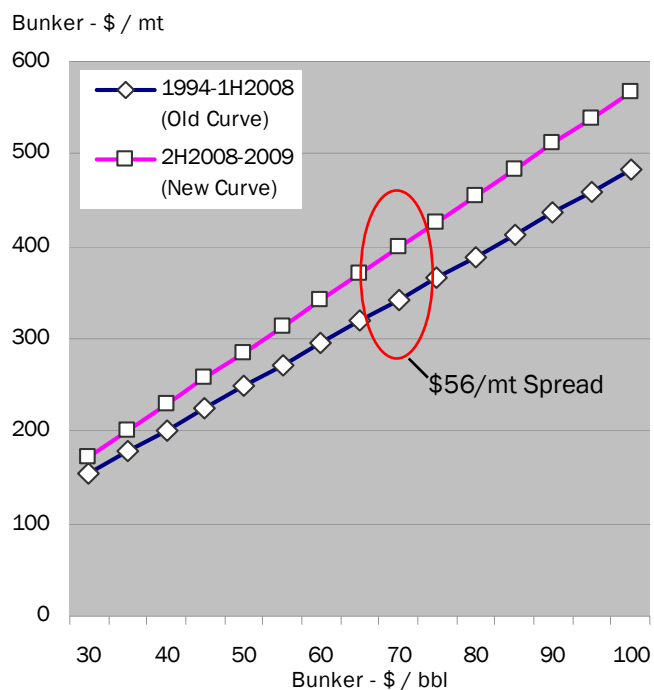
Table 1 – Crude / Bunker Correlations

Crude US \$ / bbl	Fuel Oil \$ / mt 1994-1H2008	Fuel Oil \$ / mt 2H2008-009	Difference - Fuel Oil Price
85	413	483	17.0%
80	389	455	16.8%
75	366	426	16.6%
70	342	398	16.3%
65	319	370	16.1%
60	295	342	15.7%
55	272	314	15.3%

Source: US EIA

In the realm of tankers, where fuel consumption typically comprises the lion's share of voyage costs, the premium price on bunkers that we are experiencing is taking an even large chunk out of vessel earnings. Our Time Charter Equivalent calculator shows that with US \$398/mt bunkers on TD3 (260,000 mt crude - Arab Gulf / Japan), fuel costs comprise \$1.5 million, or 71% of total voyage costs; whereas, at \$342/mt bunkers fuel cost drop to \$1.3 million, or 68% of the total costs on TD3.

Figure 1 – Correlation Curves of Bunker to Crude
Average of WTI/Brent Crude and NY/USG/ARA Fuel Oils





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Is there relief? Probably Not...

While each of these rationalizations may be adding weight to the higher priced bunkers yielded from a barrel of crude, we believe not all are lasting. Once the dust settles after what will long be remembered as one of the deepest and most widespread global recessions in history, and OPEC withdraws their cut-backs on heavy-grade crudes, the bunker/crude correlation should be able to settle back down somewhat. However, against this will be the growing list of nations enacting Emission Control Areas (ECA) that will call for vessels to burn more environmentally friendly—albeit more expensive—fuel oils. Furthermore, ever-improving refinery productivity, as well as a swelling fleet of ships hungry for fuel, will likely keep the bunker/crude correlation elevated from what we've historically seen.

If bunker buyers are cringing now, it will only get worse. In accordance with the International Maritime Organization's MARPOL Annex VI, vessels will be mandated to burn Marine Diesel Oil (MDO) on open oceans and Marine Gas Oil (MGO) in ECAs by 2020. Both fuels, being distillates rather than residuals, are significantly more expensive than the presently used IFO.

It is too early to speculate the extent that bunker prices will remain above the historic correlation curve. But this thought certainly should have many ship owners teetering on the edge of their seats as they ponder how bunkers will continue to poke deeper holes into their pockets.

Sources: US EIA and IEA

For a more in-depth analysis of specific voyage economics, or to learn how bunker prices affect your firm's preferred trades, please contact McQuilling Services. We look forward to answering your consulting needs.



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