

The Story behind the Wider Spread between WTI and Brent

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(1) Overview

The price of WTI (West Texas Intermediate) should be higher than that of Brent due to its sweet and lighter quality. However, the price of Brent jumps up to be higher than that of WTI occasionally by the end of 2010, and continues to be higher in the 2011. Starting from the beginning of 2011, some experts believe that the wider spread between WTI and Brent is caused by the war of Libya and would converge or even disappear soon after the cease-fire. Unfortunately, no such evidence is found so far. Since quality is only one of the determinants of price spread, this paper intends to identify all other factors for clarifying the full story behind the current wider spread between WTI and Brent.

(2) Methods

After reviewing all related articles, we tackle this issue step by step as below:

1. Collect the data series of the price of WTI and Brent from EIA, DOE.
2. Separate to several periods and draw some simple trend Figures for these two data series.
3. Implement some simple statistical analysis.
4. Find significant structural change by implementing the Bai & Perron model.
5. Match these significant structural changes with the explanations by some experts or institutions such as the arguments raised by EIA, DOE.
6. Predict the spread evolution between WTI and Brent.
7. Conclude and make some suggestions.

(3) Results

Current results show that there is a significant structural change in recent period for the price differentials of the WTI and Brent. The war of Libya, the insufficient outflow infrastructure in mid-west area of US and the slow economic rebound in North American should be the main causes. Except these three common reasons raised by some experts, these authors believe that the stricter exchange regulation of futures markets in US should also play an important role.

(4) Conclusions

WTI and Brent are two important benchmark prices for oil market. Many sellers and buyers count on these two benchmark prices to judge the market situations and make better decision. The abnormally wider or narrower spread between these two benchmark prices would distort the market information and raise more cost for traders. This paper would examine all related articles and use some econometric techniques to disclose all possible factors for explaining the spread change between WTI and Brent. We found the war of Libya, the insufficient outflow infrastructure in

mid-west area of US, the slow economic rebound in North American and the stricter exchange regulation of futures markets in US should be the main causes. Hope these findings can shed some light for explaining the changing spread between WTI and Brent.

Major References

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