

Proxy hedging

The commodity market has the unique particularity to have both a physical and a financial side. The financial market will offer standardized tools and underlyings (benchmarks) to transfer the price risk from one market participant to another.

That risk transfer enables each player to focus on his core business: producers or consumer on their industrial activities and financial institutions in pooling liquidity.

However standard products can hardly represent the entire commodity specificities linked to physical transactions. The price of a physical commodity includes a premium (basis) linked to its specific “grade” (density for oil, purity for base metals , type of crop etc.) and its location of delivery (in the field in Ukraine, at a port in south America , etc.).

Having reached the stage where the commodity exposure has been identified, documented and measured, there are the somewhat obvious questions of whether it is possible to hedge, and if so, whether it is wise to do so.

The IAS 39 and FAS 133 offer the framework under which the constraints linked to the futures and commodities market specificities have to be dealt with. Those standards enable corporations to use best practice risk mitigation techniques while being compliant with accounting rules.

The 2 components, the price risk that can be transferred to the market thanks to a liquid benchmark and the basis linked to physical specificities, make up the commodity price. Proxy hedging is effectively the technique that consists of finding the right benchmark to minimise the basis risk.

Hedging with a Proxy requires finding the right asset and being able to monitor and account for that hedge.

Finding the right benchmark is done based on the sectorial knowledge:

- How will any physical relationships be taken into account?
- What are the liquid assets?
- Statistical analysis.

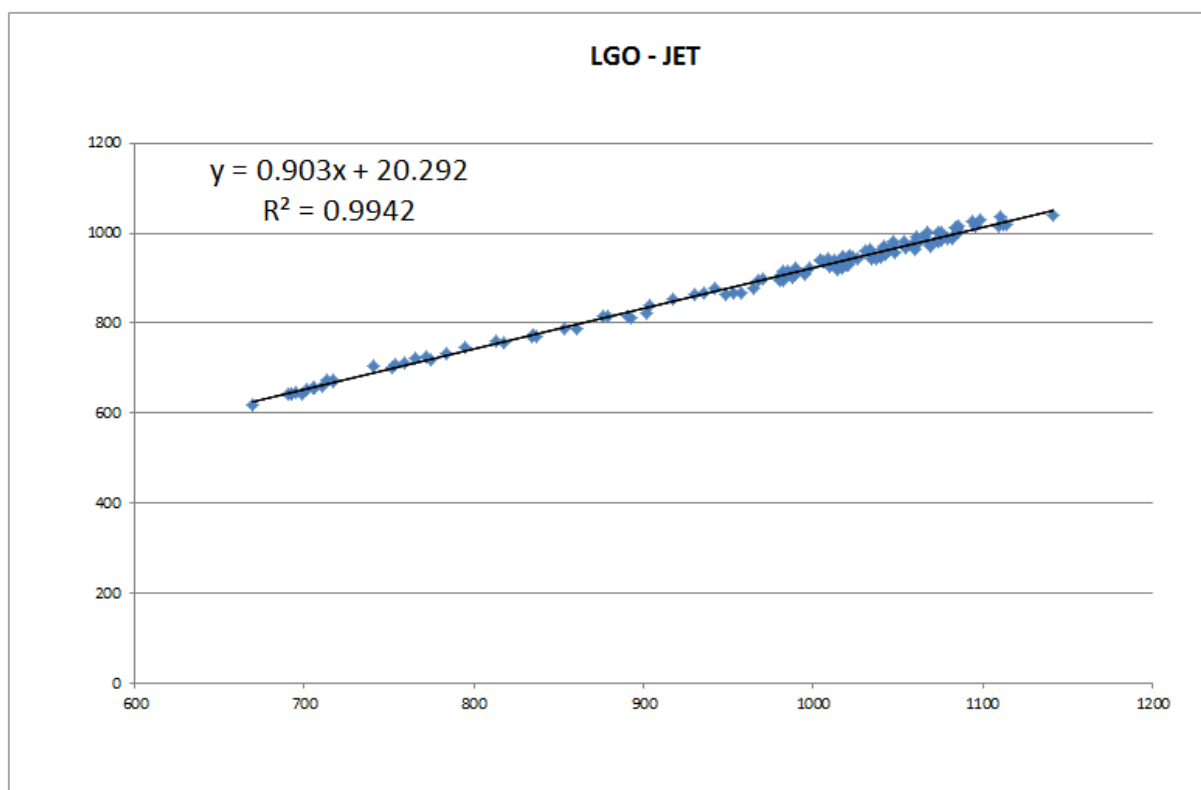
The result of the said analysis could be finding a “perfect” proxy but one that is so illiquid that the cost of hedging with that proxy will be greater than the risk of hedging with a less stable proxy but more liquid underlying. The potential divergence between the proxy and the asset will be weighed against the costs of entry and rebalancing. Essentially, this means considering whether one is better off:

- Paying 5 dollars with a tracking error of \$ 0.5
- Paying 1 dollar with a tracking error of \$ 2

An 'effective hedge' both from an accounting as well as from an economical perspective, is one which tracks positions and weighs the real \$ costs associated with hedging and also re-hedging (how could I get out of a position? Can the price be challenged etc.).

When conducting the analysis and consuming large quantities of data, it is paramount to keep in mind that the maths need to be linked to real life situations. The goal of proxy hedging is not to have a correlation of 1 between two time series but to insure a convergence of price over a given hedging period.

The example on JET and LGO below demonstrates that even with a relatively low correlation of below 80%, hedging JET with LGO could be very effective since the prices move in parallel. The regression being $Y = 0.903X + 20.292$ with an R^2 of .9942.





Having quality data already incorporating sectorial business knowledge and pricing tools will help make a cost effective hedging decision and thus allows price sensitive hedgers to pick from an array of appropriate underlyings.