

Commodity to commodity trading is a concept whereby commodities are traded without an intermediary market exchange medium (currency). Ostensibly this probably sounds backwards as it appears at first glance to be a step backwards in marketplace dynamics: currency was invented eons ago to reduce transaction costs in trading. However we believe that with modern algorithms the transaction cost to the individual would be minimal and the benefit to the marketplace great, both quantitatively and qualitatively.

Jason Lind authored a thesis in 2011 entitled [“On Exchange Medium and Speculation”](#) where he defines the BluePrint for a game theory framework that could demonstrate that exchange medium itself drives speculation, basically because human brains are hard wired to maximize their numerical score in comparison to others at expense to their real utility resulting in massive market failure that is accelerating with increased accessibility to modern trading platforms with a prediction of eventual total market collapse.

Jason design and implemented [prototype algorithm](#) in 2014 that defined the mechanics of a marketplace without currency in the confines of commodities. Essentially the algorithm calculates the possible chains to create the desired sale from existing Bids that have not yet been executed by the market for example even if a seller of copper and buyer of gold could find a buyer of copper for gold it may be more efficient, from the sellers perspective, for that seller to trade their copper for platinum and trade that platinum for gold.

Proving this all out from historical data

The stated goal of this project is to increase volume on a commodity exchange. To see if this is possible we need access to account level trade request and execution data for a decent swath of time from a real world commodity exchange, which according to my sources are proprietary/classified. There must be two analysis done: first the superficial looking at bid and asks before they are executed and determining if cross commodity sales could have resulted in more trades. Second is to look at what accounts are selling and then acquiring to see if those trades could have been made more efficiently.

Technically we suggest building the algorithms in CosmosDB on Azure where we will have massive compute power. Our hope is to get the Bill & Melinda Gates Foundation to foot the bill as this is certainly within their core mission and given their special relationship with Microsoft the massive compute time needed for these simulations could be substantially discounted with their involvement.

According to the former Head of Historical Market Data at Citadel if we're right this would increase global GDP by an order of magnitude.