



What Makes a Great E/CTRM? Part 5 – Position Management

Bob has been preparing for C/ETRM vendor product demonstrations for weeks now. (If you missed our last installation into Bob's journey through product selection, please find it [here](#).) Lots of interviews with lots of his company's staff working in lots of departments. The following is a summarized transcript of a conversation Bob had with Joe, one of his company's physical traders. Bob wanted to better understand what was important to Joe, related to C/ETRM software.

"What do you need from a system?" Bob began. Joe responded that he needed to know where he was. Silly response, Bob thought. You are right here, talking to me. But that wasn't what Joe meant. Joe shook his head. Trading is like a map of the country, with highways, states, and towns. I know where I want to be and when I want to be there. But, if I don't know where on the map I am presently, I won't know how to get to where I

want to be at the time I want to be there. So, the most important thing this new system can tell me is where I am at any given moment. That is what I call my position.

Bob leaned back and considered what Joe said. Can't be all that hard, can it? "Don't you know where you are?" Bob replied. Well, yes, said Joe. I do. I keep track of all that in my trading journal and spreadsheets. But the company doesn't know where I am. And, that's the purpose of this system, isn't it? So, the company can monitor my positions. And, if my position in the company's system is different from my own notes, then I will know something is wrong and can investigate the problem.

Why would this be so hard? Bob asked Joe. Seems simple to add up a few numbers, right? Joe smiled at Bob. Joe didn't want to embarrass Bob. Bob was a nice guy trying to help out. Well, it can get complicated, Joe

replied. You see, I trade many commodities and products over a period of many months into the future at many locations. Each product/location/month combination (in general) has a position. Collectively, they are my positions. So, you see, first of all, there are a lot of positions to track. Bob nodded his agreement.

Secondly, I want to see my positions at their physical delivery locations in order to understand my physical delivery obligations. But I also need to see the same positions propagated back to benchmark locations where I can buy and sell financial hedges against my positions.

Bob wasn't sure what language Joe was speaking. Physical delivery obligations. Position propagation. Joe saw that Bob looked confused. OK, he said, let's back up a bit. First, let me tell you about market structure. Every mature commodity market has price basis at a specific location. Exchanges are built around this price basis to bring some structure, and hopefully liquidity, to trading.

You have probably heard of some of them: Brent crude (North Sea), WTI crude (Cushing, Oklahoma), North American natural gas (Henry Hub/Sabine pipeline), Iron Ore (Qingdao, China), and so forth. Each of these exchanges allows traders to trade financial futures and other derivative products for several years into the future, often in monthly increments. Each product/month combination has an exchange-traded price. The monthly sequence of prices into future periods for each product is called a forward curve.

Financial Futures. Forward Curves. OK. Got it. Bob nodded. Joe decided to continue, although not sure Bob was following. The physical markets trade relative to the prices posted by exchanges. Said differently, physical markets trade at differentials to financial markets. These differentials are called spreads. In this particular case, it is a location spread. The price of a commodity at one location will be different from the price of the

same commodity at a different location, right? There is a cost of transporting commodity from one location to another. Transportation cost is one of the components of a location spread. And, there are others. But transportation cost is the easiest to understand.

Bob appeared to understand what Joe was saying. So, this new C/ETRM system will need to model my physical markets. Or, in other words, it will need to model my market structure. Bob, you don't need to know the market structure model. But you need to select a system that CAN model my market structure. This system will need to allow me to derive forward curves based on exchange-quoted prices and various spread differentials, like a locational spread. And, if the system had some sort of visualization tool to show how my forward curves are built, that feature would be very useful.

Bob began making notes. Positions. Market Structure. Derived forward curves. Visualization tool. After finishing, Bob looked up. What's next? Joe continued his narrative. Let's go back to positions again. Remember I told you I wanted to see my physical delivery obligations? Bob nodded. That means I want to see my positions—my purchases and sales—at the location where title is transferred. Bob nodded. I also want to see another view of my positions, too, a financial view, which means I want to see my positions propagated to benchmark curves. Bob stared blankly at Joe. It just means, Joe explained, that instead of seeing positions by derived physical curve, I want the positions to be shown at the non-derived, benchmark curves, the exchange benchmark curves. No hint of a change in Bob's expression.

OK. Let me say it like this, then. When we build derived curves, we must first have a non-derived curve, right, to build upon? This non-derived curve is often the exchange benchmark curve. Then, we create derived curves based on the exchange benchmark by adding in some simple math and some spread

differential curves. Risk propagation simply means to move positions at derived physical locations back to each derived curve's foundational exchange benchmark curve. The fog in Bob's mind began to clear. Oh. OK. Bob acknowledged. So, then the position becomes a financial one, right? Right, Joe agreed. And, then I can view my physical positions together with financial positions, like exchange-traded paper trades, to see my overall exposure to movements in market prices.

Great, thought Bob. This interview is going great. "What's next?" Joe sat back and gathered his thoughts. Next, Joe said, we need to normalize each physical position. Bob's smile disappeared. Um, Normalize? What does that mean? Joe started explaining again. You know each physical product has varying qualities, right? Crude doesn't all come out of the ground uniformly. Coal is produced with all sorts of contaminants and degrees of heating quality. Bob agreed. Well, explained Joe, exchange-traded futures are traded relative to a standard quality basis. So, each physical commodity must be "normalized" to the standard quality basis. To compare apples to apples, so to speak.

That made a lot of sense to Bob. But he wasn't sure how physical commodities are normalized. Joe explained, you really don't need to understand perfectly how to normalize a position. You just need to make sure to select a C/ETRM that does normalize positions. We can test it to make sure. But since you are curious, I will tell you that I enter a quality basis for each physical deal. The exchange has a standard quality basis. So, adjusting positions using the ratio of a deal's quality basis to the exchange's quality basis is simple math. But the adjustment is really important. My positions could be overstated or understated without the adjustment. Remember the map I mentioned earlier? Without the adjustment, I would think I was somewhere I wasn't. Like being lost. And, I wouldn't get to my intended destination on time.

Bob jotted down another note: Normalize Positions. Bob thanked Joe for his time and guidance. Next on Bob's interview list was Sue, the company's middle office manager. We will find out what Bob learns from Sue in our next instalment.