

Market-Making

clients have a need- liquidity. Meeting needs expose you to risks (price & liquidity) and rewards (spreads). Judicious management of liquidity & price-risks transforms your 1 \$ client business into 1\$+ franchise opportunity. Artificial-intelligence& algorithms can create win-win-win constructs across (Client)(Regulator)(Shareholder) demands.

nature of game

Trigger

The client decides when to pull the trigger and for what volume- and (s)he must be happy on the pull !

Obligation

The market-maker must necessarily provide 2-way quotes , narrow, and close to current market.

Ticket-Size

A market for 1 mio is not the same as market for 50 mio.

Directional Bias

no matter how you trend your spread you always get lumped with positions on the wrong side.

Limits

Yes – all these must be done within all limits

P&L

the only reason why you exist in this equation

artificial-intelligence

Naturally the market maker cannot carry unlimited positions under the excuse of market making-thanks to regulatory limits. Nor will mindless market making put a smile on shareholder face. And there is no way to palm-off the customer with higher spreads- because someone else is doing a better job of market-making in the very same environment.

This makes it imperative to **Learn**-and-manage better and better within existing constraints.

ai can provide solutions to address all these factors and work out the trade-offs & actions on preferred stance across each of these and on an on-going basis as the drama-evolves. ai can also provide algorithmically-actionable – choices into the exact market marking process sliced and diced into as many granular dimensions in which the real market story unfolds without getting smoked by simplifying aggregates which are more the-end rather than the-means of changing the flow –pace-direction of the game as *it unfolds real-time*

algorithms

help translate exact movements in your [ai] grey cells into such kinetic actions into trading or market making actions including such finer *micro-kinetics* of expressions and market-actions in real-time trading environment.

It must be noted here that algorithms is what really adds alpha to artificial –intelligence process doing full justice to exploit the [ai] process.

But for algorithmic action in the here-and-now space i.e. '**as the drama-unfolds** ' with real time learning- all the benefits of ai would be under-exploited- eventually relegating it to a mere- high end analytics.

This is the core difference between sheer analytics - which is not algorithmically alpha-able in real-time trading Vs artificial-intelligence which finds a consummating expression of thought-to-action making it α -able

take away

- Nature of game requires real time learning and consummated –actions at the right moment.
- ai provides the ability to learn real time on the domain problem and come out with competing and compelling choices of doing the same better and better
- algorithms provide *seamless* execution into market actions the current evolving cry-for-action from the ai space()
- Benefits
Risk-Management | Client Liquidity | P & L
- Win-Win-Win x (Client- Regulator-Shareholder) demands