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Market Data Ecosystem Degradation

Divergence between Private and Social Costs

Per our submitted comments to the Securities and Exchange Commission (SEC) regarding the proposal to govern the **public dissemination of real-time consolidated equity market data** (commonly referred as the CT Plan), we argue that it is not a win for the industry. The CT Plan as proposed by the Self-Regulatory Organizations (SROs – Exchanges and FINRA) **omitted to consider** the **divergence between private and social costs**. The plan failed to achieve its goal of "making sure market data governance structure would eliminate conflicts". In example, as provided in the proposal, Non-SROs gain only a 1/3 voting right in the Operating Committee.

The plan **adds bureaucratic processes** to ensure the SROs remain in their control. The industry and/or the SEC instead may think the SIP should be a public utility. *Table 2* of our submitted comments also highlights additional concerns such as: the 10-second tolerance stated in §5.4(b)(iv); the plan structure being organized as LLC agreement instead of non-profit; Article V, §5.1 about the processor's role being insufficiently described; how unaudited matters may be claimed as confidential information to prevent non-SROs' access; potential stacking the deck issues; shortfalls in subcommittee arrangements; the public would suffer from potential failure of the CT Plan if there is no accountability given the exculpation and dissolution clauses and the lack of dispute resolution, etc. If policy makers despise status quo and want to ensure "core data evolves alongside the broader ecosystem", then suitable covenants (e.g. <2.5 times connectivity disparity ratio) must be struck between the SROs and market participants. Without a fair (synchronized) start, the (equity) **market** would **remain unjust**.

Ownership right does not mean usage of private property without restrictions. When shaping a new 2.0 version of the National Market System (NMS), it should be a full-fledged exercise like the Music Modernization Act, which governs digital streaming and related copyrights and royalties issues for the music industry. For that and as an example, we have showcased paths toward assessing the **divergence between private and social costs** per *Figure 2*. We also studied the **industry's value chain** to plot the smile curves in *Figure 1* (the green line represents the time before digitization disrupted the inter-dealer brokers' floor based trading model; the red line represents today's structure of a pure speed "drag race"; the blue line represents the future state assuming our suggestions to realign market and tech innovations can be adopted).

Figure 1

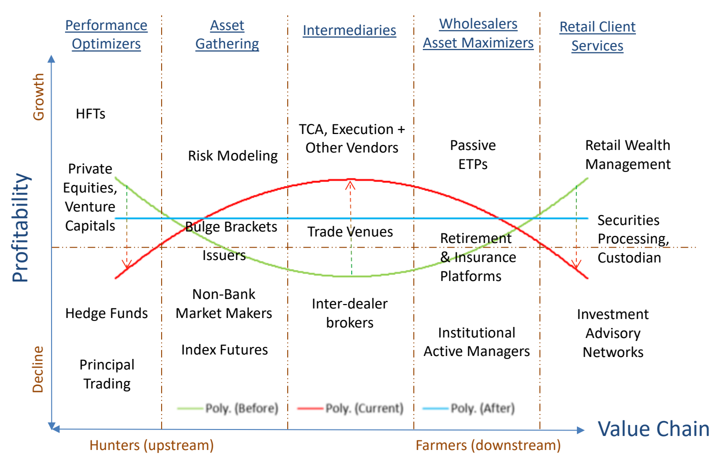
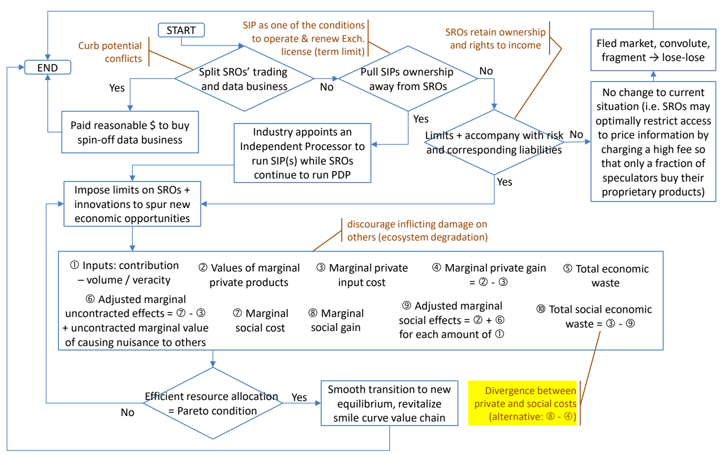


Figure 2



Ecosystem degradation happens when damage is **inflicted on others**. Such damage can be in form of delayed access to information by subscribers of the public SIPs while unreasonably priced Exchange proprietary data products (PDP) optimally allow access to only by few elite players. It can also take the form of under developing the public SIP feeds in favor of self-interest to promote PDP. Ecosystem degradation can also result in high **barriers of entry**, in which one must rely on certain tools (e.g. smart order routers, transaction cost analyzers, liquidity/ execution services) to have reasonable chance to survive in the market. Damage onto "others", may also refer to **uncontracted marginal value of the adverse effects that turn into nuisances that affect the general public** with **no** direct stake in the US equity market (e.g. foreign/ private markets, OTC, option, futures, and derivatives trades, as well as academia).

In reference to *Appendix I* of our submitted comment, we explain how market data and nuances (e.g. the **over reliance on tool sellers** to navigate the market, source liquidity, execute trades, comply with BestEx, etc.) in the intermediaries sector have caused the impending smile curve to turn up-side down. Over time, many market participants fled the market, some undergo consolidation, and more seek ties with trading venues and other players in the market causing a convolution of rebates and **potential conflicts of interest**. There is a **delicate line between** the permissible use of one's '**economy of scope**' to discover new revenue streams and the potential prohibited action(s) that generates a spectrum of adverse effects **inflicting damage onto others**. According to an empirical study – The Myth of Social Cost, "the divergence between private and social cost equals the Adjusted Marginal Social Effects minus the Marginal Private Input Cost".

To yield a proper balance or Pareto Condition, we hypothetically realign the 4Vs for a healthier ecosystem. **Our goal is NOT about completely denouncing 'speed'** as one of the positive attributes to a resilient modern market ecosystem. Instead, the emphasis is on revisiting the mixture of **data value contribution versus data value extraction** and the **redistribution of wealth** effect (e.g. access fees, payment for order flow, 'rents' extraction on market data and connectivity) administered by the Exchanges. We successfully explained the current phenomenon of why '**performance optimizers**' (hedge funds and proprietary trading firms in particular) and '**asset maximizers**' are the two groups that **suffered the most** if the market structure remains as a "drag race".

Promote the **Fair, Reasonable, and Non-Discriminatory** (FRAND) principles by implementing time-lock for a secured availability of the public SIP and the private PDP feeds in synchronized time, enforcing maximum connectivity ratio, and revising certain incentives. It will **attract new money** into the market and lower transaction costs. Further by equipping the crowd it will enable them to trade like the Pros. They will have a fair chance to win. The stuck-at-home trading phenomenon, introduced during the pandemic, will be **sustainable**. We firmly believe that **innovations** (such as the open platform we proposed in *Part F* and *Appendix II of our comments)* would propel new economic opportunities and **reward those who are able to contribute by reducing** the number of unknown unknowns (**market crashes** in particular).

The resulting effect of our counter proposal is a **safer and sounder market** that does not require constant policing by the SEC and FINRA. No adverse consequences to the non-equity markets, but rather supportive of the overall development of the capital markets. The appropriate **interdependency among different constituents** will be built-in to resolve disputes and potential abuses will be curbed to serve the **common goal** in reviving or flattening the "frowned" smile curve.

Please see *Table 1* for what this market data reform should and should not be about. Exchanges market data is NOT subject to significant competitive forces, Co-location ≠ Latency equalization ≠ Market data available Securely in Synchronized Time. The fight to enhance market integrity must continue!

*By **Kelvin To**, Founder and President of Data Boiler Technologies*

At Data Boiler, we see big to continuously boil down the essential improvements that fit for your purpose. Between my patented inventions and the wealth of experience of my partner, Peter Martyn, we are about finding rare but high-impact values in controversial matters, straight talk of control flaws, leading innovation and change, creation of viable paths toward sustainable development and economic growth.