✉ info@databoiler.com https://www.databoiler.com

# *Can Order Protection be replaced by Competing Market Forces?*

Regulation National Market System (NMS) Rule 611 a.k.a. Order Protection Rule (OPR) was adopted 20 years ago. The SEC is hosting a roundtable on September 18, 2025 with 3 panel discussions: (1) market participants' experience with trade-through prohibitions; (2) a trade-through prohibition's role in today's market structure; and (3) forward thinking. Two Commissioners (one being the current SEC Chair Paul Atkins) had previously expressed their dissent on the OPR. Is it the right time to roll-back or modernize OPR? What changes to the OPR and other relevant provisions of the NMS would contribute to the furtherance of market efficiency without compromising market integrity? This article discusses the strategic possibilities.

## Context Matters

The historical transition from principle-based "Intermarket Trading System" (ITS) that was launched in late 1970s to OPR, the SEC cited concerns and rationales in the past that included: *"fairness across venues where investors receive inferior price because of trade-throughs; uniform rules reduce fragmentation and gaming of slower venues; and codify protection foster trust in NMS in the post-decimalization era given the rise of Electronic Communication Networks and Alternative Trading Systems (ATSs)."* OPR was welcomed by retail, while it complicated the way institutional firms move trade blocks. OPR price protection in automated markets relies on a centralized Processor – SIP for market data. Best Execution (BestEx) requires a trade-by-trade review with consideration of liquidity priced better than the top-of-book National Best Bid and Offer (NBBO).

To foster an ecosystem in racing toward constant refreshing of the NBBO with meaningful size of at least a round lot to execute a trade, OPR's simultaneous routing requirement is: *"when a trading center* [Exchanges, ATSs, and other OTC market makers] *receives an Intermarket Sweep Order* (ISO)*, it may execute the order immediately – even if better-priced quotations exist elsewhere – provided that the ISO sender simultaneously routes additional ISOs to those other venues to execute against the full displayed size of any better-priced protected quotations."* Points of controversy include: technically difficulties during high-speed market events (e.g. Flash Surge, MEME); latency-sensitive traders exploited latency gaps between quote updates and ISO routing; logistical challenges, analogy to different travel sites offer varying top recommendations (i.e. fragmentation); and the time precision on what constitutes as "simultaneous". We do NOT believe any trading centers lack the technical know-how to handle simultaneous routing, but whether they want to and to what degree it would be profitable for them.

The noumenon of NMS, where a single change to the components (OPR, Market Data, Tick Size, Access Fees, Payment for Order Flow, BestEx compliance, definition of Exchange / Dealer, etc.) can affect the entire system, market integrity, as well as the US competitiveness with foreign markets. Amid imperfection, *"the US equity markets are the most robust in the world and continue to be among the deepest, most competitive, most liquid and most efficient."* Some feel comfortable with the current stage of equilibrium amid the NMS stock and listed options markets have as they evolved overtime. When formal rules do not yield the most optimized market efficiency, informal practices as "sub-system" emerge as a counter response.

## What broken needs to be fixed

OPR did provide exceptions (e.g. non-automated quotes, flickering quotes, VWAP trades). Our observed counter responses to a less-than-optimal NMS include: ATSs together with all the TCA, BestEx compliance, liquidity sourcing, outsourced execution tools and smart order routers were developed to fabricate the fragmented markets that are underserved by exchanges. These tools are "bandages" and often profit from an ever more fragmented market. Market participants are required to comprehend various order types and functions of different lit and dark venues. More and more choose to collaborate with HFTs for outsourced execution capabilities rather than compete. Distorted rebates and other gimmicks to get ahead of others all favor the Elites. Smaller firms struggle to survive and merge away (number of FINRA registered firms has dropped from

4,000+ in 2014 to 3,249 at 2024-year end). Bandages-over-bandages of bureaucracy attributed to an upside-down smile curve and have widened the gap between the "haves" and "have-not."

Market Data Infrastructure Rule (MDIR) modernizes how market data is collected and disseminated by introducing competing consolidators to create a decentralized, competitive market data infrastructure. It will ultimately replace the previous exclusive, exchange-run SIP model. MDIR is a step towards allowing competing market forces to reduce the government or centralized party involvement in the markets. However, the SEC currently has a partial stay of the amendments to §600(b)(89)(i)(F) of MDIR that requires *"the primary listing exchange to provide an indicator … of the applicable minimum pricing increment… under the definition of regulatory data"* with respect to OPR Rule 612, and Rule 610(c) regarding reduction in access fee cap.

Many smaller broker dealers depend on ATSs to counter the disadvantages they face with lit venues' skewed privileges (32 mils super tier rebates, faster proprietary feed market data connections, DMM programs, etc.) provided to the elites. There are *"onerous administrative obligations on data users, ambiguous language in the agreement, frequent unilateral amendments to the agreement, general lack of transparency on terms and conditions, excessive fees, increase of fees through penalties, and overly burdensome audits,"* plus high switching and connectivity costs, as well as learning about nuances like trade-out, allocation, anti-gaming, adverse selection, pool vetting, etc. All drive up the cost of market transactions.

Within and among Exchanges, ATSs, Systematic Internalizers (SIs), Single Dealer Platforms (SDPs), there is already intense competition. Unhealthy competition in a low-latency arms race has made the trading community subservient to the telecom infrastructure. To address that, time-lock encryption should be adopted to make market data available securely in synchronized time. Another key issue to address is the **LACK OF STANDARDS** across different market centers' rebate and incentive. A mechanism is needed to efficiently delineate the rights and obligations about WHO OWNS THE DATA.

### US advantages over other jurisdictions

OPR does NOT put the US in a competitive disadvantage to its neighbors – Canada and Europe. Similar to the US, the enforcement of Canadian-style order protection focuses on trading venues' responsibility. In contrast, the scope of the Canadian rule is applicable to all visible accessible quotes instead of the US top-of-book per CSA National Instrument 23-101. In Canada, OPR is a shared responsibility between marketplaces and participants, and directed action orders resemble ITS-era discretionary routing, allowing participants to bypass better-priced quotes without strict simultaneity.

The UK and EU have no OPR. They place substantial burden on investment firms to comply with best execution obligations under MiFID II and MiFIR. Amid Europe is catching up in building a centralized Consolidated Tape (CT, similar but different than the US SIP), industry associations are opposing mandatory consumption of CT for BestEx quality assessment. The ESMA has stated, *"these evaluations will not take the standardized shape of SEC Rule 605 or 606"*. Addressable liquidity is a fluid concept in Europe. The UK Financial Conduct Authority has opted to shift away from it, particularly in the context of SIs and post-trade transparency reforms. The US should resist any impulse to emulate regulatory missteps observed abroad—it must lead, not follow, in setting robust market standards.

Factors attributed to the US advantages over other jurisdictions: (a) **placing the burden on those who can afford it** (e.g. Exchanges who rent seek from everyone, G-SIBs) and **be practical** to drive down costs for all market participants; plus (b) **innovations**. We acknowledge that it increases costs to connect with additional venues for BestEx compliance when those additional venues may add little or no real benefit. Canada introduced a 5% market share threshold to exempt dealers having to connect to new marketplaces with visible quotes that are under the threshold. That being said, such thresholds hinder innovations from smaller venues and deter new entrants to compete with their larger counterparts.

To NOT exacerbate the gap between the "haves" and "have-not," the focus should be about incentivizing innovations to overcome the high switching and connectivity costs, as well as learning about nuances like trade-out, allocation, anti-gaming, adverse selection, pool vetting, etc. For example, Model Context Protocol (MCP) works like a USB-C connector to ease some of the API costs. MCP accommodates latency draft and can be used for cross-venue price discovery. AI agents reconcile

fragmented quotes in conjunction with MCP's context-rich orchestration that respect execution preference, data providers' paywall integration, and how HFTs may monetize microstructure inefficiencies in real with MCP are to be wait-and-see.

### No point in gutting OPR for Crypto Trading

It is an Animal Farm where every constituent wants to negotiate to be *"more equal."* One size does not fit all. Mass customization and shared services unleash tremendous values that traditional property rights frameworks struggle to capture. Yet, we are concerned that when *"everybody a trading venue, nobody a trading venue."* Opportunists will not abide by multilateral agreements when bilateral deals generate higher returns without compromising efficiency. If everybody trades or transacts on decentralized chains (distributed ledger technology), there may be no point in having any market.

The existence of markets is because there is a finite amount of goods and financial resources where effective valuations and delineate the exchanges of rights and obligations can occur efficiently. SEC Investor Protection should ONLY be applicable to countable securities (strict rule 15c3-3 around custody). The trading of those uncountable digital assets that akin to "non-cashable gambling chips" should NOT be subjected to investor protection over securities trading activities. CFTC is in a better position to regulate the trading of Spot Crypto Asset Contracts and Tokens sold via SAFT. Its authority under §2(c)(2)(D) of Commodity Exchange Act and COMEX Rule 7 help curb and mitigate situations such as the Monex case, retail metal fraud cases, and Silver Thursday event. Changes to the SEC's OPR should steer clear of non-securities and non-exchange matters.

We do NOT desire the SEC to cross subsidize the cost to regulate crypto from equity trading. We suggest a stackable approach to create a "2-tier hierarchy" and periodically review the long-term betting odds at a securities exchange, an ATS, a Designated Commodity Market, or other Digital Assets Portals. Private activities should NOT induce harms to the public.

### Concerns with Opt-Out + One size does not fit all

NMS reform needs to focus on: (i) the economics dynamics of "farmers" (asset maximizers), "hunters" (performance optimizers) and various intermediaries; (ii) reduce the need of regulatory enforcements or constant policing; (iii) to let the functioning of markets be self-managed with healthy competition, (iv) ensure the fairness and timely access to essential information where people can make educated choices, and (v) achieve sustainable grow of the overall pie.

To encourage limit orders and aggressive quoting, an "opt-out" from the trade-through rule for informed customers was previously considered but NOT adopted. Using Smart contract attestations for opt-out consent does NOT alleviate concerns about market depth. As I have said in the past, *"artificially altering the queue (equal waiting line at all checkout counters, except leaving much room for the Exchanges to selectively use tier rebates and other perks to divide the cake with the elites in hurting the other "content" creators) may affect the "apparent", NOT the real supply and demand for securities."* Depending on the SIPs/ competing consolidators increasing their bandwidth to cater for the additional data under MDIR and tick size regime, some degree of data fragmentation will happen under a decentralized consolidation model, and benchmark reference-price arbitrage will persist due to multiple-NBBOs.

It is inevitable that policy makers have to deal with capabilities differences of different trading venues. Tiered protection regimes based on investor sophistication and/or venue type is one of the possibilities, amid fragmentation would still persist, venues with lower protection standards may incentivize fleeting or non-committal quoting behavior, degrading the reliability of displayed prices. Audit trail ambiguity and timestamp arbitration would add costs and complexity to transparency and surveillance. We are concerned about its potential burden on broker-dealers.

### Protection without constant policing and healthy grow of the overall pie

Our counter recommendations are as follow. Picture the Exchanges, ATSs, SIs, SDPs as different streaming platforms. Broker-dealers, and their algo developers/ traders are the content creators, like the "record labels/ publishers", and "featured composers/ artists" in the music industry. **STANDARDIZE** the way different trading centers' reward to "content creators" without pushing potential conflicts down or upstream nor rebate harvesting through phantom quotes. Let assume the existing copyright frameworks are applied to our capital markets. Order flows would be like "songs" streaming on different platforms. Broker-dealers would earn "performance royalty" on top of their trading revenue, whereas "performance royalty"

in today's term would be equivalent to access fee rebates or Payment for Order Flow (PFOF), except the incentives being standardized and available to all "content creators." See this for further elaboration and a discussion about derivative work.

Consideration factors are: whether streamers are exploiting content creators with rent seeking behaviors; would aggregators opt for heightening prices to pass increased costs on subscribers or restricting access to cause information asymmetry. The opportunity here is – a substantial portion of traders and algorithm developers' cost would be paid for by this Copyright mechanism, off-loading burden for participating broker-dealers.

By no mean does our proposal take anything away from the Exchanges. All streaming platforms, including Communication Protocol Systems, ought to bear royalty payments before earning appropriate subscription fees. It uses existing funding resources such as Access Fee Rebates and PFOF to realign capabilities of different venues and how incentives are paid out – NOT by volume-based tiers, but are determined by contributions to the 4Vs. This is a simpler market structure. It will help weed out conflict-of-interest, curb rent seeking behaviors, and address issues of arbitrage or a particular type of trading venue at competitive disadvantage compared to other streaming platforms.

According to Hannes Datta, George Know, and Bart J. Bronnenberg in their empirical research, *"adoption of streaming leads to: INCREASES in QUANTITY of consumption … INCREASES in VARIETY of consumption… INCREASE in DISCOVERY of NEW music … Streaming revenue are climbing not only because more consumers are adopting streaming, but because consumers' OVERALL consumption of music is GROWING as well. Streaming creates a MORE LEVEL PLAYING FIELD for SMALLER artists… Streaming EXPANDS consumers' ATTENTION to a WIDER SET of artists… Streaming INCREASES consumer WELFARE by reducing search frictions (e.g., ENHANCING DISCOVERY) and help users DISCOVER NEW HIGH-VALUE CONTENT."*

The authors measured **volume** based on the number of songs (order flow) each user consumes in a given period. They measured the breath of **variety** consumed by users, and concentration – popularity of consumed content and calculated the concentration ratio based on each user's own favorite top song and genres, as a share of total plays. They measured repeat consumption share for both new and known artists, calculated the ratio of top new variety plays to top overall plays over a rolling period to access chance of new artists and/or songs being 'discovered'. "Discovery" in the context of Capital Markets, can encompass **veracity** in price discovery, **velocity** in filling orders/ finding matches, as well as discovering unknowns. Rebates in the form of standardized copyright royalties encourage contents creation and help build communities. In short, the 4Vs are essential elements to contrive a New Paradigm, where there are bigger pieces for everyone.

***

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

*Data Boiler has patented inventions (US, Canada, Singapore, Japan, Europe, and Australia). It is a crossover between Music and Trading in signal processing, trade analytics, machine learning, time-lock cryptography, etc. We commented frequently on regulatory policies, was a Type C organization member of the European Commission's Data Expert Group, and a former committee of BITS (Banking Policy Institute). With over 12 years in business, we remain deeply passionate about the long-term development of capital markets.*