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A journey through the history of futures and derivative markets regulation

Algo Bots and the Law discusses the implications for market oversight of algo-driven execution technology

DERIVATIVE trading technology has exploded in sophistication since the Great Financial Crisis, thanks to algorithms and electronic execution. The futures open outcry market is becoming a distant memory, but whether we have a regulatory environment that can effectively deal with an algo-driven execution world is not clear.

Enhancements in technology are increasingly affecting trading behaviour, yet the pandemic market crisis of March 2020 generated a wake-up call on issues of liquidity and market plumbing and the set of regulations that traders navigate to take and provide liquidity.

In a crisis, the nexus of technology, rules, and regulations might fail investors who need liquidity to minimise their cost of dealing with an adverse market environment.

In *Algo Bots and the Law*, Gregory Scopino, a Georgetown University adjunct law professor and special counsel with the Market Participants Division of the Commodity Futures Trading Commission, attempts to make sense of this important intersection between regulation and execution technology.

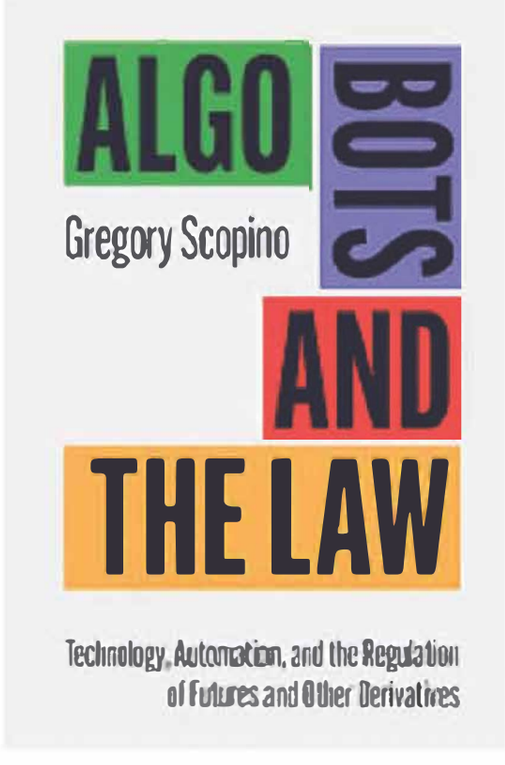
Artificial intelligence (AI) has advanced automated trading systems, or "algo bots," to the point where programs can react more quickly than any human trader and find relationships that the floor trader or market maker can only imagine. *Algo Bots and the Law* reviews and discusses the implications for market oversight of this rapid electronic execution environment.

For those not familiar with the history and context of many issues of futures and derivative regulation, the first half of this book is a good primer and addresses the key questions of what a futures market is and how it should be regulated.

Futures regulation is distinct from securities regulation, having different objectives and emphasis. *Algo Bots and the Law* clearly explains a regulatory system that is filled with arcane thinking that can be in conflict across regulatory agencies and global jurisdictions.

Derivative regulation of swaps markets is even newer, so rules and case law are limited, somewhat murky, and contradictory. Regulatory clarity is especially needed in the case of fintech developments, such as cryptocurrencies.

Scopino's descriptions serve as a foundation for more complex algo trading and regulatory oversight topics addressed in the second half of the book. Regulation today cannot be separated from past rulemaking and precedents. Technology might advance markets yet be constrained by the legal environment. Nonetheless, the regulatory environment needs to adapt to the changing technology that facilitates transactions in our largest marketplaces.



Algo Bots and the Law clearly explains a regulatory system that is filled with arcane thinking that can be in conflict across regulatory agencies and global jurisdictions. PHOTO: COURTESY OF MARK S RZEPCZYNSKI

Critical legal topics such as fraud, manipulation, "spoofing," and market integrity in the context of advanced execution technology are described in detail. These issues have broad public interest when associated with "flash crashes" (that is, extreme, short-term price declines resulting from disappearing liquidity).

Traders perform price discovery and obtain liquidity information from market microstructure. The order book provides important information regarding the intentions of market agents, yet by posting and then cancelling orders, an automated trading system can create the appearance of liquidity and market demand that do not exist. The fast addition and subtraction of orders can be viewed as both fraud and manipulation and can destroy the integrity of core market functions.

Seemingly simple issues can generate regulatory complexity. Fraud and manipulation are based on traders' intent, but can an algo bot that might pull orders during a market decline, based on an AI reaction function or feedback loop, have harmful legal intent? The author offers some answers and a solution that involves regulating the algo bots as a market participant category no different from floor traders. He also suggests a need for market disruption funds and insurance-like solutions for flash crashes.

Algo Bots and the Law provides a deeply detailed journey through the history of futures and derivative markets regulation, from market definitions to how legal precedent influences current thinking on regulating electronic markets.

However, finance professionals who are focused on market mechanics and how regulation affects their execution bottom line might be disappointed with the highly technical writing reminiscent of a law review article. Scopino does a fine job of making this work accessible via clear prose and good examples, yet he clearly has a legal audience in mind for his book. This is to the detriment of practitioners who want to understand how execution services could adapt to the regulatory environment and potentially enhance liquidity.

At more than 470 pages, this work could have been condensed and focused on the future of regulation to create a more compelling story for a wider audience. *Algo Bots and the Law* would be more effective if it attempted to link the legal issues with the growing research on market microstructure and focused on the intersection of law and economics. Although Scopino touches on many important issues, asset managers would likely prefer more vision on how regulation can shape the future of execution and prevent market meltdowns.

Execution technology is an arms race, with those trying to create a market-making edge competing against those who are trying to minimise the cost of execution. The actions of one group that achieve a technological advantage invite a response from the other group. This conflict over different trading objectives drives trends in liquidity and transaction costs. The resulting benefits cannot be realised if market integrity is questioned or market meltdowns occur.

Markets are public goods, places where price discovery occurs through the conveyance of order information. Regulation therefore needs to look beyond competition and ensure the integrity of price information and adequate liquidity in a crisis.

From my vantage point as a market practitioner and economist, Scopino's legal focus, while well presented, misses an opportunity to advance views on market structure and to potentially influence readers and regulatory thinking in a direction that will anticipate and address possible execution problems in a world of fragile liquidity.

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