

**MEMORANDUM**

November 14, 2008

To: File No. SR-NYSEArca-2006-21

From: Scott H. Kimpel  
Office of Commissioner Troy A. Paredes

Re: Proposed Order Approving Proposal by NYSE Arca, Inc. to Establish Fees for Certain Market Data and Request for Comment (Release No. 34-57917)

On November 14, 2008, Commissioner Troy A. Paredes and Scott H. Kimpel, Counsel to the Commissioner, met with the following individuals: Markham C. Erickson, Executive Director and General Counsel of Netcoalition.com, Gregory Babyak, Bloomberg L.P., Roger D. Blanc, Willkie Farr & Gallagher LLP, William H. Rooney, Willkie Farr & Gallagher LLP, and David S. Evans, LECG LLC, University of Chicago and University College London. The participants discussed the above-referenced proposal, and Messrs. Rooney and Evans also provided the accompanying discussion materials.

Attachment



# Do “Significant Competitive Forces” Constrain the Pricing of Depth-of-Book Data: An Economic Assessment

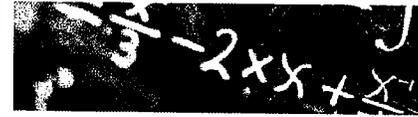
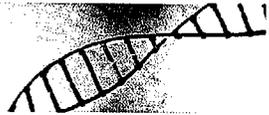
**David S. Evans**

**University of Chicago and University College London**

[devans@lecg.com](mailto:devans@lecg.com)

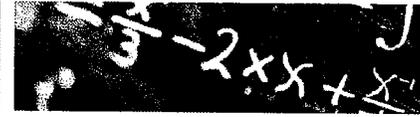
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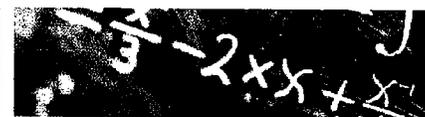
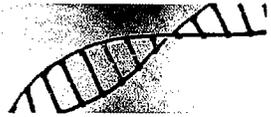
## Overview

- I. **The Proposed Order's Market-Based Approach**
- II. **The Proposed Order's Analysis of Substitutes for Depth-of-Book Data**
- III. **The Proposed Order's Claim that Order-Flow Competition Significantly Constrains Depth-of-Book Data Pricing**
- IV. **Conclusions**



## Part I

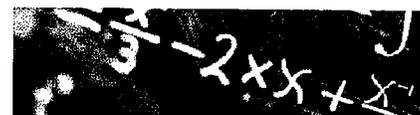
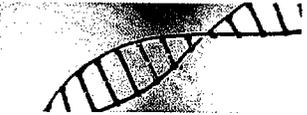
# The Proposed Order's Market-Based Approach: Framework and Analysis



Proposed Order adopted a “market-based” approach to its oversight of depth-of-book data pricing

- **Is the exchange subject to “significant competitive forces” in setting fees and other terms for unconsolidated data?**
  - If yes, then the SEC will approve the proposal unless it determines there is a “substantial countervailing basis to find that the terms nevertheless fail to meet an applicable requirement of the Exchange Act or the rules thereunder.”
  - If no, then the SEC will require the exchange to provide a “substantial basis, other than competitive forces, in its proposed rule change demonstrating that the terms of the proposal are equitable, fair, reasonable, and not unreasonably discriminatory.”

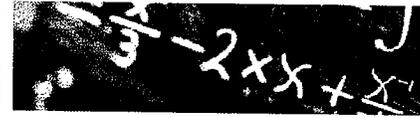
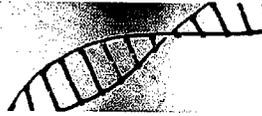
***The Proposed Order concludes that the answer is “yes,” that the exchange is subject to significant competitive forces. The Proposed Order therefore ends the analysis and expects to approve the rule proposal.***



Proposed Order claims there are two significant types of competitive constraints on pricing of depth-of-book data

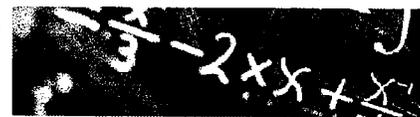
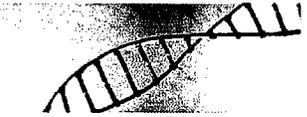
- **First Claimed Constraint: There are four purported substitutes for an exchange's depth-of-book data.**
  - Depth-of-book data from other trading venues
  - Consolidated data
  - “Pinging” orders to discover liquidity
  - Entry through collaboration by securities firms and data vendors
- **Second Claimed Constraint: Competition for order flow among trading venues constrains an exchange's pricing of depth-of-book data.**

*These claims are not supported by the Proposed Order and are incorrect.*



## Part II

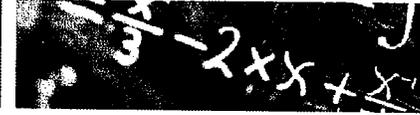
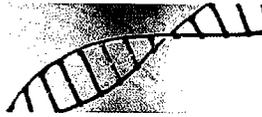
# The Proposed Order's Analysis of Supposed Substitutes for Depth-of-Book Data



Proposed Order does not support its claims of substitute products with economic evidence of market substitution

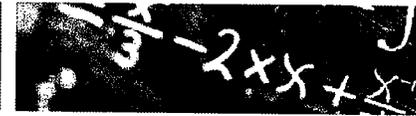
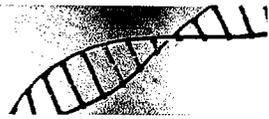
- **Proposed Order provides no meaningful evidence that any of the alleged alternative sources of data are treated as substitutes by market participants, allow market participants to achieve the same objectives, or have similar costs.**
- **Proposed Order does not apply any standard economic test (e.g., SSNIP) to assess whether sufficient number of marginal consumers would switch to alternatives to defeat exercises of significant market power.**

***None of the claimed substitutes is likely a significant constraint on an exchange's market power over the pricing of depth-of-book data.***



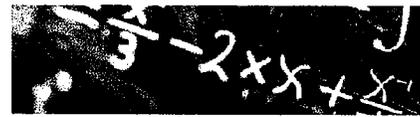
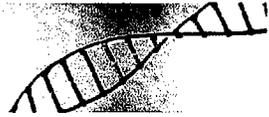
# The Proposed Order's Claimed "Substitutes"

Alternative	Substitution Possibilities
<i>Other Trading Venues' Depth-of-Book Data</i>	NYSE Group accounts for dominant share (54%) of liquidity on NYSE-listed equities. Other trading venues' depth-of-book data do not provide good substitutes.
<i>Consolidated Data</i>	Does not provide data <b>below the top-of-book</b> . Broker-dealers pay significant fees for depth-of-book <b>in addition</b> to consolidated data because they do not see these as good substitutes.
<i>"Pinging" Orders</i>	Incur the risk of suboptimal execution. Information returned by pinging orders is substantially different from an exchange's depth-of-book data.
<i>Collaboration among Securities Firms and Data Vendors</i>	Entry not likely to be timely, likely, or sufficient as required under standard competition policy analysis.



## Part III

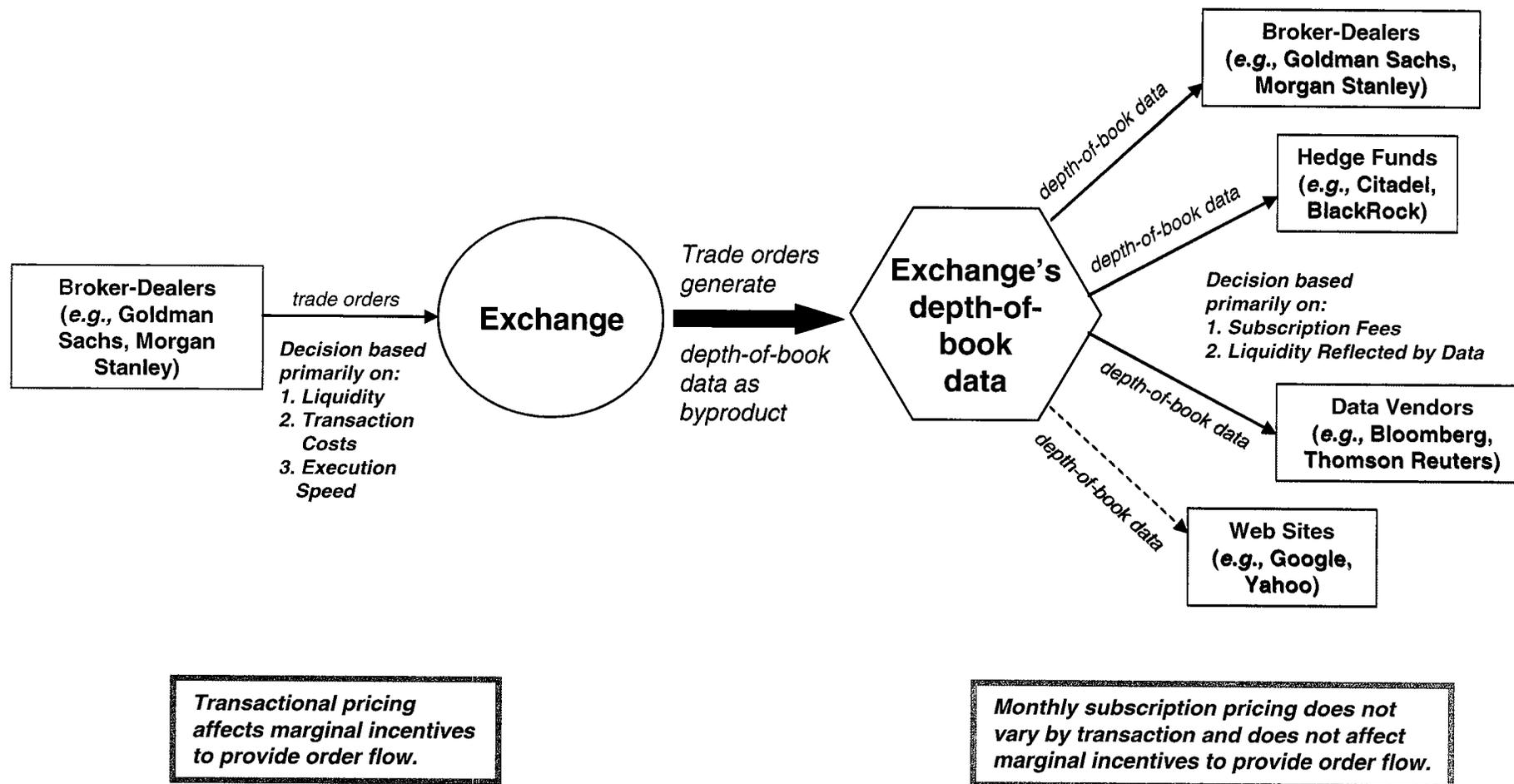
# The Proposed Order's Claim that Order- Flow Competition Significantly Constrains Depth-of-Book Data Pricing

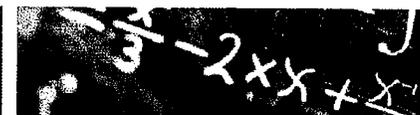
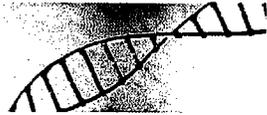


## Competition for order flow does not significantly constrain prices for depth-of-book data

- **The Proposed Order claims that competition for order flow and pricing of depth-of-book data are “two sides of the same coin” and thus competition for order flow constrains depth-of-book data pricing.**
- **That premise is wrong. The relationship between order flow and depth-of-book data is neither strong nor direct—it is asymmetrical and not two sides of the same coin.**
  - Input relationship between order flow and depth-of-book data is asymmetrical with order flow being the sine qua non for depth-of-book data while transaction fees, speed, and liquidity are the main factors leading to order flow.
  - The effects of changes in prices of trading on the demand for depth-of-book data, and vice versa, are also asymmetrical; a change in order flow prices would likely have a direct effect on depth-of-book data while a change in the fixed fees for depth-of-book data would likely have no significant effect on order flow.
  - The input and marginal demand relationships of order flow and depth-of-book data result in an incentive to charge *lower* order flow prices and *higher* depth-of-book data prices.

# Relationship Between Order Flow and Depth-of-Book Data

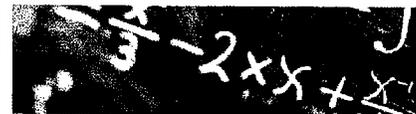




## Competition for order flow determined by liquidity, transaction costs, and execution speed

- **The price of depth-of-book data is at most only one of many factors considered in placing trades:**
  - Liquidity
  - Transactions costs, including fees/rebates and bid-ask spread
  - Execution speed
  - Ease of access and other technological factors
- **NYSE says: “The markets base competition for order flow on such things as technology, customer service, transaction costs, ease of access, liquidity, and transparency.” [NYSE Letter to SEC, Feb. 2007]**

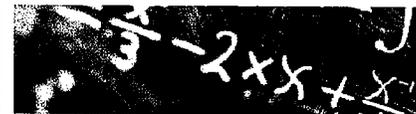
*By contrast, order flow is the sole input into the creation of depth-of-book data. Moreover, depth-of-book data are also used for purposes other than placing order flow, further weakening any relationship between the price of depth-of-book data and order flow.*



## Depth-of-book data prices do not affect marginal decisions to send orders to an exchange

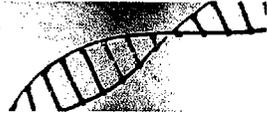
- **Trade execution fees are determined on a transactional basis and are designed specifically to affect trading incentives and attract liquidity. Those transaction-based fees for order flow affect traders' marginal incentives to direct order flow among exchanges.**
- **In contrast, depth-of-book data are sold in monthly subscriptions and are typically based on a fixed monthly fee per device or subscriber.**
  - An exchange charges customers the same per-device or per-subscriber fee whether or not they place orders on the exchange.
- **An increase or decrease in the monthly subscription fee for depth-of-book data does not change a trader's marginal cost to buy or sell on a particular exchange.**

***Order-flow competition therefore does not significantly affect—or constrain—the exercise of market power over depth-of-book data.***



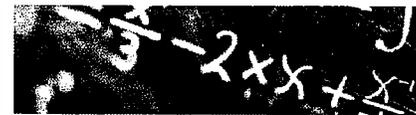
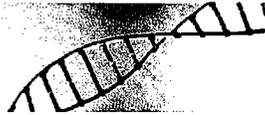
## Competition for order flow does not significantly constrain prices for depth-of-book data

- **Lower order flow prices generally will increase order flow, which, in turn, will increase the value of depth-of-book data. By attracting additional order flow, an exchange will gain not only the transaction fees associated with the order flow, it will also increase the amount it can charge for its depth-of-book data.**
- **Increased depth-of-book revenue could be used to offset the costs of liquidity rebates and discounts that attract order flow.**
- **The economically rational strategy for exchanges, given the asymmetrical relationship of order flow and depth-of-book data, is thus to set lower prices for order flow, which has the effect of increasing the value of, and the prices the exchanges can charge for, their depth-of-book data.**



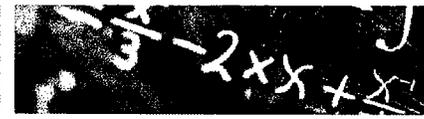
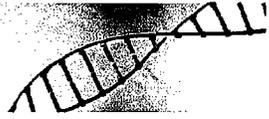
# Part IV

## Conclusions



## “Significant Competitive Forces” Do Not Constrain the Exercise of Market Power over the Pricing of Depth-of-Book Data

- **The supposedly alternative sources of depth-of-book data that the Proposed Order identifies would not significantly constrain market power over depth-of-book data.**
- **Competition for order flow would not prevent the exercise of significant market power over depth-of-book data.**
- **NYSE Arca likely has significant market power over the pricing of its depth-of-book market data.**

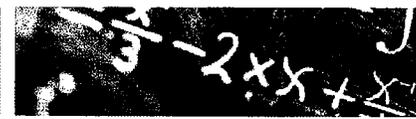
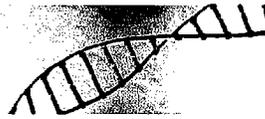


# Appendix

## Prices for market data are set on a monthly subscription basis

- **Top-of-book data (last sale and bid-ask) fees for professional users**
  - CTA Network A: \$26.50 per device per month (for customers with 100 devices)
  - CTA Network B: \$30.20 per subscriber per month (for non-member subscribers)
  - UTP Network C: \$20.00 per device per month
  - **Total across listed securities of \$76.70 per device/subscriber per month** for professional users (\$3 per device per month for non-professional users)
  
- **Depth-of-book data fees for professional users**
  - NYSE ArcaBook (proposed): \$30 per device per month (for CTA and UTP securities)
  - NYSE OpenBook: \$60 per device per month
  - Nasdaq TotalView: \$76 per device per month
  - BATS: Free
  - **Total across exchanges of \$166 per device per month** for professional users (\$85 per device per month for non-professional users)

*Sources and notes: Subscription fees are taken from fee schedules on each trading venue's web site. The monthly per device fees for Tape A vary depending on the number of devices subscribed, from \$127.25 for 1 device to \$18.75 for 10,000+ devices. Last sale and bid-ask data for Tape B are available separately; the combined fees for subscribing to both is reported above. Tape B fees for subscribers representing a member firm are lower than cited in the text above—\$27.25 for both last sale and bid-ask data. The NYSE ArcaBook proposed fee schedule would offer CTA and UTP data separately; the fee for subscribing to both is reported above. Other access and data fees, as well as enterprise licenses, may also apply. The total top-of-book fees across listed securities is the total of fees for one device in the case of Tapes A and C and one subscriber in the case of Tape B.*



## Prices for order flow are set on a per-share basis

- Trade execution fees for Tape A and C securities, all rebates/fees assessed on per-share executed basis

	Rebate per share for adding liquidity	Fee per share for taking liquidity
<b>NYSE Arca</b>	\$0.0028	\$0.0027
<b>NYSE (Tape A only)</b>	\$0.0004	\$0.0008
<b>Nasdaq</b>	\$0.0028	\$0.00295
<b>BATS</b>	\$0.0024	\$0.0025

*Sources and notes: Trade execution rebates/fees are taken from fee schedules on each trading venue's web site. The NYSE rebate reported is for "execution of orders sent to the floor broker for representation on the NYSE when adding liquidity to the NYSE Display Book system." Rebates/fees may differ depending on trading volume. The rebate/fee corresponding to the highest category of trading volume is reported above. Rebates/fees may also vary for certain special order types (e.g., non-displayed orders). Non-published rebates/fees and incentives, as well as other access and data fees, may also apply.*