TECHNOLOGY

# Market Exchanges with Continuously Scaled Limit Orders

## OVERVIEW

High frequency trading (HFT) in publicly traded securities markets has existed in some form for close to a century, yet only in the past decade has HFT become a widely known industry. By using powerful computers running advanced algorithms, High Frequency Traders can execute a variety of trading strategies in milliseconds or less. Such advantages allow HFTs to act upon price discrepancies faster than other less sophisticated traders can adjust their orders, allowing HFTs to “pick off” stale or expiring orders simply due to their speed. This places slower traders at a significant disadvantage due not to knowledge, strategy, or diligence, but simply technology. Furthermore, HFTs have been implicated in certain market inefficiencies such as the 2010 “Flash Crash”. Thus, many market participants have sough solutions to level the playing field for all traders while still providing adequate liquidity in modern securities markets and maintaining a light regulatory touch.

Researchers at the University of Maryland and Washington University in St. Louis have invented a new market limit order and exchange design that seeks to create parity amongst all traders, regardless of speed advantages. This new order type differs from standard limit orders in two ways. Termed “Continuous Scaled Limit Orders,” traders submitting these orders specify two limit prices, effectively eliminating the tick size, but also the speed at which the order can be filled. By placing a speed limit on their own order, this prevents other traders from picking off the order as it becomes stale. Continuous scaled limit orders implement Fischer Black’s vision of traders limiting temporary price impact by trading gradually over time. They dramatically lessen the rents HFTs earn from the current market design. Any such exchange designed to implement the Continuous Scaled Limit Order promises to provide a more efficient and stable market.

## APPLICATIONS

· New Market Exchanges
· High Frequency Trading
· Stock and Bond trading

## ADVANTAGES

· Reduces rents from current market designs
· Allows wider array of trading strategies
· Creates a stable market, less susceptible to a flash crash.

## CONTACT INFO

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## Additional Information

### INSTITUTION

University of Maryland, College Park

## PATENT STATUS

Pending

## CATEGORIES

- Software + Algorithm

## EXTERNAL RESOURCES

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