

HFT Debate: Two Experts Square Off On Market Structure

By [Ivy Schmerken](#) May 01, 2013 URL:

A lively debate on high frequency trading or HFT was held last night at Baruch College in Manhattan featuring two well-known speakers who are polar opposites on the controversial practice.

Professor Bernard Donefer, Distinguished Lecturer and the Associate Director of the Subotnick Financial Services Center at Baruch College, faced off against Sal Arnuk, co-founder, partner and co-head of equity trading at Themis Trading LLC.

Donefer was introduced as the speaker who would defend Frankenstein's Monster – an analogy coined by The New York Times business columnist Joe Nocera to describe the invention of HFT.

“HFT is an inevitable conclusion that we've been seeing going on for decades. This has been put into place due to regulatory changes, business changes, and availability of the technology,” said Donefer. Donefer, who teaches in the information systems department of Baruch, but worked for 35 years on Wall Street, most recently at Fidelity Capital Markets.

On the other hand, Arnuk who came to Wall Street in the mid 1980s and worked at Morgan Stanley and then at Instinet, was leveraging technology to bring buyers and sellers together without intermediaries, which added leakage and cost. Today, Arnuk is critical of the market structure that in his view has evolved to cater to the hyper-class of day traders. “Technology advances are taking the amount of intermediaries and amplifying and inserting them between natural buyers and sellers,” he said.

During the nearly two-hour debate, attended by Baruch students and Wall Street professionals, Donefer and Arnuk discussed, disagreed and agreed on many of the aspects of HFT.

Defining HFT One of their first points was coming up with a definition for HFT. Displaying a slide showing the CFTC Technology Advisory Committee's (TAC) definition in October 2012, one of the key parts of the definition is that a computer program initiates the transaction without human interaction. But later on in the discussion, Arnuk said there was money and politics behind the definition. Arnuk's partner Joseph Saluzzi at Themis Trading is on the CFTC Technology Advisory Committee. “We fought tooth and nail to have other things included in this definition,” said Arnuk.

“HFT use algos that are trading without human interactions using high technology spends, using low latency, he said. “We wanted the definition [of HFT] to include that they had very high turnover,” said Arnuk at the debate. “They start the day flat, they trade millions and millions of shares all day long, and they end the day flat. Their holding period is seconds. That is excluded here.”

Another bone of contention was whether mutual funds that invest for grandmothers should be included in the HFT definition. Donefer said that mutual funds that use algorithmic strategies to slice and dice their orders are part of HFT because they use all of the infrastructure and techniques, but he agreed there is debate in the industry on whether they should be included in the definition. Arnuk said that the HFT community wanted mutual funds that invest for grandmothers to be lumped into the definition since it would be harder to enact legislation against HFT.

It’s been impossible to come up with a definition of the term HFT because trading professionals in the business each provide a different definition, said Donefer. To avoid the discussion, Donefer has come up with the big 3 examples: algorithmic trading where a large institution tries to execute a large order; automated market making where someone earns the bid/offer spread and exchange rebates for providing liquidity and quantitative strategies like statistical arbitrage.

While the European Union has its own definition, as does Australia, the SEC in the United States doesn’t have their own definition, Donefer noted.

But the big question of the event, which most of the discussion revolved around was how did electronic trading evolve and come to this point. “There was a day when the NYSE had the lion’s share of trading,” said Michael MacKenzie, U.S. Markets Editor at The Financial Times who was the moderator. “Today it’s down to 25 percent.”

Going back to the 1990s, when there were two pools of liquidity, the Nasdaq stock market and NYSE, when they were member-owned entities and had diverse deep pools of liquidity. As technology advanced, traders wanted to trade faster than the infrastructure could handle. They talked about the rise of ECNs like Instinet, among others.

Both speakers delved into all the historical factors that led up to electronic trading and current market structure, including SOES [short for Small Order Execution System] bandits who traded against Nasdaq market makers in the 1990s, the evolution of ECNs, decimalization in 2001, Reg NMS and exchanges turning into for-profit entities that sell market data and colocation.

In 2004, the SEC proposed Regulation NMS (National Market Structure), which Arnuk said is considered the birth date of modern HFT. While there was much discussion of Reg NMS as something that was evil leading up to the current fragmentation that exists today, i Reg NMS was intended to protect investors in getting the best price in the market and to make it more competitive. Reg NMS created the concept of the protected quote and that all the stock exchanges and ECNs had to be connected and route the order to the market with the best price.

But it was the unintended consequences of Reg NMS that has evolved into the current convoluted market structure of today with 13 stock exchanges and about 40 dark pools as well as major brokers matching orders internally.

Dark pools have proliferated due to Reg NMS, according to Arnuk. Because Reg NMS created a costly routing process for routing orders, each broker decided to create their own dark pools to avoid the economics of the routing fees. While some of the dark pools like Liquidnet and Posit serve the purpose of institutions to trade naturally with each other, the average trade size in dark pools is around 200 shares, which is exactly equal to the trade size on NYSE and Nasdaq, indicating that HFT market makers are taking advantage of dark pools.

A casualty of the current market structure is the role of market makers, said Arnuk. “We’re evolving to a market structure that has eviscerated market makers and is having the market’s backbone rely on mechanized proprietary traders with no customers,” said Arnuk. Donefer pointed out profit margins after decimalization eroded and the only way that market maker could making money was having a computer drive the buying and selling rather than a person picking up the phone.

Back on the topic of HFT, Arnuk accused HFT of being a mechanized form of scalping, noting they provide liquidity, they didn’t narrow spreads, and they step in front of another person’s order. But Donefer pointed out that locals on the Chicago Board of Trade/CME were also continuously buying and selling during the day. They took advantage of short-term price movements and went home flat. They had access and immediacy vs. someone at home.

As for for profit-exchanges, they were criticized for caring more about selling data feeds for HFT firms than operating a level playing field. HFT has become such an important component of revenues for the exchanges, they who earn more money from selling infrastructure and colocation services to HFT than they do from trading U.S. equities. In this new electronic ecosystem, based on Q4 2012 revenues, Nasdaq earned 7 percent of their revenue from US equity trading, and 9 percent from selling data feeds. It earned 47 percent from technology related services, including colocation and other ancillary services.

But, Donefer pointed out that about a quarter of NYSE and Nasdaq revenues still come from trading, because they have trade European equities and derivatives, not just data.

Order Types: 2,000 or 200?

One subject that both men agreed upon was overly complex order-types need to be addressed. HFT shops requested these order types from the exchanges and “they were dutifully rubber stamped” by the SEC, according to Arnuk. He said the order types are not available to everyone and work differently on each exchange, adding that “Hide Not Slide” on Direct Edge works differently than “Post No Preference Blind” on BATS. He claimed these order types distorted price-time priority, allowed for queue jumping, caused leakage (i.e., like Flash orders) and were a tax.

While Arnuk estimated there are 2,000 order types, Donefer said the total was closer to 200. Both agreed they should be standardized across all marketplaces so all exchanges have the same ones.

In addition, similar to the way that specialists used to glean information from retail orders, there are not savvy technological traders who are making money by knowing patterns in retail orders. "Firms like Citadel, Knight and UBS are buying retail orders from the likes of Schwab and TD Ameritrade. The retail investor has given up their privacy and data set to model their activity," said Arnuk.

Despite all the discussion about fragmentation and complexity, one audience member pointed out that people on Wall Street likes the fragmentation and having all the complexity. A statistical arbitrage trader who works at Getco told me he came for his own entertainment. But many participants also came to discuss the issues, asking questions about fairness and if the SEC will act on dark pools.

One person in the audience said, "People become traders to make money. Traders are gladiators. It's survival of the fittest in the markets. They're in the business of making money, not in the business of being fair." Arnuk agreed that brilliant traders and programmers have a right to make money. "However the playing field needs to be fair."