

## Article from

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## High Speed Refereeing— How IEX Put The Brakes On High Frequency Traders

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The SOA Investment Section had the privilege of sponsoring two sessions at this year's Life & Annuity Symposium: Session 33: "High Speed Refereeing," and Session 61: "Economic Scenario Generators: Risk-Neutral Applications in Life Insurance and Annuities." The focus of Session 33 was around so called "high frequency traders" and the influence they have had on equity markets, some of it good, some of it not so good.

The session presenter was Jay Fraser who is head of Business Development at IEX, an investor-owned equity trading platform created by Brad Katsuyama in December 2013. Brad is the main protagonist in Michael Lewis' latest Wall Street expose', "Flash Boys," and IEX was his brainchild in response to the market distortions created by high frequency trading (HFT) firms. The goal of IEX was to eliminate these distortions and bring fairness back into equity trading markets.

Jay began the session by pointing out that while equities make up less than 1 percent of general account assets for U.S. Life insurers, equity exposure through policyholder separate account assets has grown substantially over the last decade. Performance guarantees on these funds offered through Variable products (e.g., Variable Annuity GMWBs) has created material downside risk to shareholders. Any bias or friction in the equity market place that systematically erodes fund value for these policyholders also increases the cost to life insurers providing these guarantees.





Jay then walked the audience through the evolution and mechanics of the U.S. equity exchanges and how the introduction of electronic trading completely changed the landscape and heuristics of equity trading. HFT firms at the vanguard of this new universe were able to create value for investors by reducing transaction costs, but some (not all) were also guilty of rigging the system to be skewed in their favor. In many cases these firms were making money on all but a few days per year, and taking little to no risk, rarely if ever ending a day with an open equity position.

The most notorious transgression was something known as front-running whereby HFT firms would obtain trade data from one exchange, literally microseconds before the rest of the market, and then "frontrun" via fiber optic cables to an alternate exchange and bid up the price before the rest of the trade arrived. This was done multiple times a day over thousands of trades. IEX's solution? Slow down the trades ... everyone's trades ... HFT firm or not. In essence, level the playing field so all traders were obtaining the same information at the same time. Jay then flashed a slide of the now-famous magic shoebox which is nothing more than a large spool of fiber optic cable over which all trades must travel before reaching the IEX exchange. This shoebox lengthens the amount of time a trade takes to reach the market, eliminating any advantage the HFT firms were exploiting.

The presentation ran for 45 minutes followed by a very interactive Q&A session that ran for 30 minutes, but could have run longer. The presentation was a refreshing change from the more traditional sessions and we expect more provocative offerings from IEX in the future. Look for Jay and his colleagues to present again in October at the 2015 SOA Annual Meeting in Austin, Texas. ■



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