TESTIMONY OF

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HEARING ON

"COMPUTERIZED TRADING: WHAT SHOULD THE RULES OF THE ROAD BE?"

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Chairman Reed, Ranking Member Crapo, and members of the Subcommittee, I want to thank you for the opportunity to appear before you today. My name is Chris Concannon and I am an Executive Vice President for Virtu Financial, LLC.

Virtu Financial ("Virtu" or the "Company") is a global electronic market maker. Virtu is an active market maker on more than 100 markets around the globe. Virtu makes markets from our six offices in New York, Los Angeles, London, Dublin, Sydney and Singapore. The Company's market making activity spans across multiple asset classes, including cash equities, fixed income, currencies, futures, options, energy products, metals and other commodities. Virtu, through its subsidiaries, is directly registered as a broker dealer or investment firm and operates as a registered market maker on most primary markets around the globe. In the US, Virtu operates two registered broker dealers that are also registered as market makers or designated market makers on the NYSE, Nasdaq, BATS Exchange, NYSE Arca and NYSE MKT. In Europe, Virtu operates a registered investment firm that is also registered as a market maker on the London Stock Exchange, the Swiss Exchange, Euronext and the Deutsche Bourse Exchange. Obviously, Virtu believes in the benefits of market making and is committed to providing continuous, obligated liquidity in the markets we serve.

In discussing the state of the US equity market, I start from the premise that our equity market is the most dynamic and efficient market in the world. The US equity market is a special asset that should be celebrated. Our markets are envied by nations and financial centers

around the globe. Our US equity market is also the most liquid and robust pricing mechanism on the planet. My firm trades across all of the major financial markets and no market can compare to the US equity market in terms of pricing efficiency and liquidity. Companies listed on our US markets enjoy the most efficient and liquid market which contributes to higher returns for their investors. Over the last four years, I have witnessed an unprecedented number of claims that our markets are horribly broken, unfair and dangerous. These claims tend to be short on facts and evidence, but long on press coverage and book deals. Our market is not perfect. And it has recently experienced some dramatic mishaps. But, despite its flaws, it is a market that has withstood the most unprecedented volatility and repricing of equity values in our lifetime while maintaining the same levels of pricing efficiency.

Let me be clear, our market is not perfect. It has flaws and unnecessary complexity. The US equity market is overly fragmented and, likely, over engineered. Stocks in the US trade electronically on 13 national securities exchanges and over 40 dark pools. The current state of our equity market is not one that we would set out to design if we did it all over again. The US equity markets began evolving into a fully electronic market during the 1990s. For the last decade, our markets have been largely automated. That means every exchange and every market in the US is a fully automated, electronic destination. Virtually every order arrives at its intended exchange in electronic form. The automation that exists in our market today is not a new phenomenon. Technology has been operating our markets for the last fifteen years.

With fragmentation and technology comes complexity. Our market is one of the most complex securities markets on the planet. It is not naturally complex. It is complex because of the number of major regulatory reengineering events that have taken place in the US over the last fifteen years. For example, the list of major market structure rule changes includes the Limit Order Display Rule, Regulation ATS, Decimalization, T+3 Settlement Cycle, Regulation NMS, Regulation SHO, Single Stock Circuit Breakers and, more recently, the Market Access Rule. Each of these major regulatory reengineering events required substantial technological enhancements to be delivered by all industry participants and exchanges. These were not simple software programming endeavors. These were all major technology projects completed across the industry.

I would like to focus on three areas that I believe deserve further review: (1) our choice of a single market structure for all listed companies; (2) our markets failure to enhance market maker obligations; and (3) the industry's current risk management standards.

First, our market is currently designed as a "One-Size-Fits-All" market. What I mean by this is that most of our major market structure rules do not distinguish between the size or market capitalization of the listed company, or the trading characteristic of its stock. Our markets are designed to execute all stocks, regardless of shape or size, using the same market mechanism. As the list of public companies continues to grow, a more diverse number of public companies trade on our market while subject to the same market structure. A stock that trades

once per day is traded in the same market structure as a stock that trades one million times per day. Our market is solely designed for Cisco, Microsoft and Bank of America and not for a stock that trades by appointment. I believe we should revisit our current market structure in order to create a better pricing mechanism for all stocks of different shapes and sizes. This One-Size-Fits-All approach is further exacerbated by an expansion of the portfolios of our largest investors. As institutional holdings expand further into less liquid stocks, like Russell 2000 stocks, our largest institutions are struggling to trade in our poorly designed market structure for those types of stocks.

My second area of focus is on our markets' failure to enhance market making obligations. While my firm is a market maker and it is easier for me to call for enhanced market making obligations, I fundamentally believe that we need to increase obligated liquidity in our markets. Flash crashes, mini-flash crashes and other market disruptions demonstrate the need for additional obligated liquidity in our market. However, I believe enhanced market maker obligations should be targeted where they are most needed and that is in our less liquid stocks. And so, my earlier point about our flawed, single market structure should be considered with enhanced market making obligations as a component of a new market model. New market

My final area of focus is the industry's current risk management standards. In light of recent events, I believe that the industry should explore ways to improve risk management

standards. Industry participants have already identified several areas of risk management enhancements that should be implemented and could be delivered in short order. First, pretrade risk management limits are already required by the Securities and Exchange Commission ("SEC") under SEC Rule 15c3-5 (also known as the "Market Access Rule"). Under the Market Access Rule, which has been in effect for over a year, firms are required to establish pre-trade credit limits for every customer account and for the firm's own proprietary account. The credit limits required by the Market Access Rule must be administered in real-time and at all times. These credit limits are a firm's primary defense against unwanted trading activity by the firm or by its client.

In addition, the industry is currently exploring specialized "Kill switches" that would be administered by exchanges. These "Kill switches", as currently being discussed, would provide a systematic shut-off of a firm if it exceeded prescribed or pre-set trading limits. "Kill switches" would not be a primary defense, but rather, a secondary defense to back stop the failure of other risk management measures operated by a firm. Kill switches have operated effectively on futures exchanges in the US for many years. These same trading limits could be implemented across all US equity exchanges. Like the futures exchange limits, firms would be required to establish limits on each equity exchange. Such a kill switch would have severely limited the damage done on August 1st of this year.

The last component to enhanced risk management is one of the most important. We believe a simple feature referred to in the industry as "drop copies" should be required as a mandatory risk management tool. "Drop copies" are separate and distinct connections offered by exchanges and other markets. Drop copies, which are widely used by the industry, provide a real-time echo, or copy, of a firm's trading activity on a given exchange. Drop copies are primarily used by the industry to run reconciliations that compare a firm's known trading activity against what the exchange believes was traded by the firm. This is commonly referred to as a "Street vs. House" comparison. If such a drop copy comparison is conducted in real-time by systems that are independent from the firm's trading system, a firm will always have an accurate assessment of its positions and trading activity, including both intended and unintended activity (See Exhibit I).

While I believe firms should have a robust process for developing and testing new software, the industry must have advanced risk management systems to limit the risk of unintended trading activity by a firm or its client. We know with certainty that software has bugs, hardware crashes and networks go down no matter the robustness of a firm's development and infrastructure process. The industry must build risk protections that assume the worst while a robust development and testing process avoids the worst. Pre-trade risk checks, "Kill switches" and real-time drop copies protect us from the worst events.

Thank you again for the opportunity to be here today to speak on this subject. I would be pleased to answer the Committee's questions.

