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**BY ELECTRONIC MAIL**

Mr. Werner Bijkerk
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International Organization of Securities Commissions (IOSCO)
Calle Oquendo 12
28006 Madrid
Spain

Re: **Public Comment on Consultation Report: Regulatory Issues Raised by the Impact of Technological Changes on Market Integrity and Efficiency**

Dear Mr. Bijkerk:

Knight Capital Group, Inc. ('Knight')[1] welcomes the opportunity to comment on the Consultation Report regarding Regulatory Issues Raised by the Impact of Technological Changes on Market Integrity and Efficiency of the Technical Committee (the "Consultation Report") of the International Organization of Securities Commissions ("IOSCO"). We support the FIA European Principal Traders Association ("EPTA") Response to the IOSCO Consultation Report. Please find Knight's additional overview and answers to specific questions that IOSCO requested addressed in this letter.

[1] Knight (collectively with its subsidiaries, "Knight") has three operating business segments, Equities, Fixed Income, Currencies and Commodities (FICC) and Corporate. The Equities segment includes all global equities market-making and trading, including electronic trading and traditional sales and trading, within Knight Capital Americas, L.P., Knight Execution & Clearing Services LLC, Knight Capital Europe Limited and Knight Capital Asia Limited. Products and services in this segment include Corporate Access, EdgeTrade Algorithmic Suite, Knight Link, Knight Match and Knight Strategic Research. The FICC business segment includes institutional fixed income sales, trading, research and capital markets within Knight Capital Americas, L.P., Knight Capital Europe Limited, Knight Asia Europe Limited and Knight Execution & Clearing Services LLC, which also includes Knight BondPoint which offers electronic fixed income trading solutions and the Hotspot FX foreign exchange ECN. Corporate includes strategic investments in financial services-related ventures, corporate overhead expenses and all other expenses that are not attributable to the Equities and FICC segments.

Knight Capital Europe Limited ("KCEL") is a U.K. registered broker-dealer that provides execution services for institutional and broker-dealer clients in U.S., European and international equities. KCEL is authorized and regulated by the FSA and is a member of the London Stock Exchange, Deutsche Börse AG, Euronext N.V. (incorporating Euronext Amsterdam, Euronext Brussels, Euronext Lisbon and Euronext Paris), Borsa Italiana, OMX (incorporating the Copenhagen Stock Exchange, Helsinki Stock Exchange and Stockholm Stock Exchange), Oslo Børs, virt-x and Weiner Börse.

## BACKGROUND

Knight opened for business in 1995[2]. Built on the idea that the self-directed retail investor would desire a better, faster and more reliable way to access the market, Knight began offering execution services to discount brokers. Today, Knight services some of the world's largest institutions and financial services firms, providing superior trade executions in a cost effective way for a wide spectrum of clients in multiple asset classes, including: equities, fixed income securities, derivatives, and currencies.

Knight Capital Europe Limited (KCEL), a wholly owned subsidiary of Knight, opened for business in 1998. Today KCEL provides high-quality, client focused trade execution and sales trading services to more than 1,000 European clients. Through our network of local brokers, extensive exchange memberships and market access solutions, our clients can access KCEL's full range of voice trade execution services. KCEL also provides a direct market access solution and algorithmic trading on its electronic trading platform, Knight Direct. KCEL's market making business provides liquidity to nearly all of the equity trading venues in Europe as well as a large number of institutional and retail broker dealer clients through our Knight Link platform. Additionally, we are one of the largest Retail Service Providers (RSP) in the UK, making markets in a wide range of London Stock Exchange (LSE) listed securities as well as a retail market maker on the Equiduct regulated market. KCEL's fixed income division provides research and trade execution in high-yield and high-grade corporate bonds as well as distressed asset-backed securities, convertible bonds and bank loans. KCEL also provides clients with access to Knight's currency ECN, Hotspot, which provides clients with complete anonymity and increased control over FX trade executions.

Knight has spent the last 15 years building its technology infrastructure so that it can process millions of trades a day on behalf of retail and institutional investors – in a fast, reliable, cost effective manner, while providing superior execution quality and service. Knight spends tens of millions of dollars every year, making its technology platform better, faster and more reliable. Knight's data centres are some of the most reliable in the industry. Today, Knight has the capacity in the US to process over 20 million trades per day, with connectivity to nearly every source of liquidity in the global equities market, and trade response times that are now measured in milliseconds. Years of research and development, technology platform enhancements, and connectivity to liquidity wherever it resides are all brought to bear with a single purpose in mind: securing the highest level of execution quality for Knight's customers which includes some of the world's biggest retail brokers and, in turn, their clients – the retail investor.

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[2] Knight, through its subsidiaries, is a major liquidity center for U.S. and international equities, fixed income securities, and currencies. On active days, Knight can execute in excess of 10 million trades, with volume exceeding 15 billion shares. Knight's clients include more than 3,000 broker-dealers and institutional clients. Currently, Knight employs more than 1,400 people worldwide. For more information, please visit: www.knight.com.

## EXECUTIVE SUMMARY

Technological advances and an evolving regulatory framework have raised the level of competition in the European capital markets, with many associated benefits for investors. Today's European market is more transparent, more efficient and accessible at a lower cost than ever before. Technology has been at the forefront of allowing the transformation from slower and costly trading to cheaper and quicker executions. In most cases, technology has created efficiencies and effectiveness as legacy trading models are updated to fit the new trading environment.

As the European trading landscape evolves certain practices will be replaced, others will be adapted and certainly, in many cases, various types of trading practices will coexist side by side. Knight believes in a robust regulatory environment that fosters innovation and competition.

We welcome the opportunity to assist IOSCO in helping to formulate principles that will drive improvements in the European marketplace. Generally, in terms of overarching themes, we support the European Securities and Markets Authority ("ESMA") approach to governance guidelines. The Consultation Report is an important step in that ongoing process, and we respectfully submit that any proposed regulatory changes or frameworks for best practice must satisfy two criteria:

1. It must meet a cost benefit analysis; i.e., there must be a proven failure in current market structure and/or regulation and the cost of the proposed solution to all affected participants must not outweigh the benefits; and

2. In order to identify proven failure there must be reliable data, possessed and appropriately assessed by regulatory authorities, that demonstrates such failure. Much of the debate to date has been characterized by opinion and conjecture rather than data and fact. Opinion and conjecture are particularly dangerous when fuelled by vested interest.

Overall, we view the marketplace in a holistic way where a wide variety of investors and traders interact in order to accomplish their goals. When reviewing the HFT component of the Consultation Report we would like to reiterate certain points made in our comment letter relating to the Concept Release on Equity Market Structure published by the U.S. Securities and Exchange Commission (SEC) in January 2010. Specifically,

> *"As a subtext to many of the discussions around U.S. equity market structure, there is a sense among many that the goals of short-term market participants, such as traders, and long-term market participants, such as investors, are not aligned. Knight disagrees with this assessment and believes whether an investor or trader's*

> *time horizon is measured in seconds, days, weeks, months, years or decades, each market participant desires the best execution possible. Further, it has become apparent as a result of various discussions that there seems to be a sense that the market has become unfair over time and that technology and innovation have put certain classes of investors at a disadvantage. As we have stated, we disagree and believe that by all measures, there has never been a more equitable playing field for institutional and retail investors in trading U.S. equities."*[3]

Please find below our answers to a select group of the IOSCO questions:

## RESPONSES

**Q1 What impact have the technological developments in the markets in recent years had on your own trading?**

Knight believes that technology has profoundly altered how exchanges, brokers, and dealers trade. As stated so succinctly, "In some cases, innovative trading systems are so different from traditional ones that many people outside of market professionals, including some political leaders and regulators do not fully appreciate how they work and the many benefits that they offer to investors and to the economy as a whole."[4] In other cases, the similarities with pre-electronic are so great that processes and workflows that have been occurring for decades or longer have been translated into an automated, electronic process.

Overall, Knight believes that technological developments have been a profoundly positive force in creating a faster, more efficient, more effective, less expensive and fairer trading environment.

As such, Knight has invested significantly and continuously to provide clients with faster, more efficient market access to the myriad of trading venues that exist. Knight has introduced direct market access (DMA), algorithmic trading, and various internal crossing systems to provide the best means of executing and trading in this quickly changing environment.

**Has it encouraged, discouraged or had no impact on your willingness to participate on the lit markets, and how does this differ between asset classes and/or instruments?**

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[3] See Knight's comment to Securities Exchange Act Release No. 34-61358, citing "*The Economics of Trading in the 21st Century*" Angel, James; Harris, Lawrence; Spatt, Chester February 23, 2010.
[4] "The Economics of Trading in the 21st Century" Angel, James; Harris, Lawrence; Spatt, Chester February 23, 2010.

Our willingness to participate on lit markets has not decreased as we provide millions of client executions a day with the primary objective of best execution – which may, or may not; involve accessing liquidity on the lit markets. However, our willingness to trade in dark markets has increased as such markets offer the opportunity for price improvement and reduced market impact. The decision tree is continuously changing, but ultimately it depends on the size, immediacy and other requirements for each individual order. Knight believes that competitive forces and technological innovation are constantly changing the paths to creating liquidity. As a starting point, on the equities front, the network of connected and different types of venues has created a market ecosystem that relies on choice and innovation. Overall, we continue to increase our willingness to participate on all venue types. On both the principal and agency side, we have seen extremely rapid volume growths over the last decade. On the client front, we remain driven by our client's own demands and requirements as to which venues, light or dark, that they instruct us to route their orders to. We participate on multiple venues both lit and dark seeking the best opportunity to interact with liquidity at the lowest implicit and explicit costs. In absolute terms, we certainly continue to grow our participation on lit markets.

**Q2 What are your views on the suggestion that proprietary trading firms (including HFT firms) that are not currently subject to registration/authorisation by a regulator should be required to obtain such a registration/authorisation?**

Knight agrees that automated trading poses a challenge in relation to the potential for increased systemic risk and the monitoring of market conduct in the event of misprogrammed or rogue algorithms or other fundamental technology failure. We advocate for a more comprehensive approach to the guidelines setting out when a firm should require regulatory approval to ensure that this segment of the market is appropriately supervised. This approach will be vital in ensuring that the systemic risk posed by automated trading activity is appropriately identified and managed by firms themselves, and supervised by Competent Authorities.

**Are there specific regulatory requirements you believe such firms should face**?

We believe that guidance on control requirements could usefully be produced by, for instance, ESMA, but the systems and controls regime should be principle based and applied, appropriately, by the senior management of regulated firms in their context of their regulated activities.

**To what extent do your answers differ if the proprietary trading firm accesses the market as the customer of an intermediary firm through DEA (i.e. under that intermediary's trading rules/codes) rather than as a direct member of the market itself?**

Knight believes market participants should be able to access the market directly or through an intermediary. There is a place for both models in a dynamic, healthy and competitive marketplace. The SEC in the U.S. has spent a great deal of time on this issue and we would recommend IOSCO reviewing the recently adopted SEC Rule 15c3-5 as one step toward additional insights. We believe the obligations on such firms should be identical, irrespective of whether market access is via an intermediary or direct to market. However, intermediaries providing such services should additionaly be required to ensure that such business is appropriately risk controlled and in compliance with the rules of the relevant market to which it is providing access.

**Q3 What recommendations, if any, would you propose to strengthen the regulatory requirements around pre- and post-trade risk controls?**

Knight proposes the following:

1. Principle based requirements around the governance process for design, testing and release of trading strategies;
2. Pre-trade DMA controls for fat finger, counterparty risk and market conduct;
3. Post-trade monitoring for counterparty risk and market conduct; and
4. A consolidated European tape is the starting point to properly address pre- and post-trade risk controls in Europe. From a regulatory and perspective, we believe that the proper surveillance of markets will be both more effective and more comprehensive if prudential regulators are analyzing a complete data set for potential trading irregularities, improper conduct et cetera.

**In particular, what measures, if any, do you think regulators should introduce that relate specifically to the use of and risks posed by algorithmic trading and/or HFT?**

Only principle based requirements around governance and risk management controls should be considered.

**Q4 To what extent do you believe the use of trading control mechanisms such as circuit breakers and limit-up/limit-down systems by trading venues should be mandated?**

Knight generally supports the addition of a mechanism to pause trading in times of extreme volatility, although as we observe stock circuit breakers during periods of great volatility we are becoming concerned about their utility and effectiveness. We strongly suggest that a holistic approach be applied with regard to circuit breakers, limit-up/limit-down systems and other trading breaks including and any system-wide market pauses. We continue to have concerns relating to the manner in which the various regulatory halts might interact in a given market place.

Knight recommends prudence and reflection as it relates to the adoption and implementation of circuit breakers and limit-up/limit-down (LU/LD) rules. First, we are concerned about potentially introducing an unknown level of complexity into the equity market micro-structure. Will investors and market participants fully understand the application of this rule and the impact of the limit up/down bands to their orders? While LU/LD mechanism appears to have worked successfully in the futures markets, the retail equity investor does not typically interact in that marketplace. Professional traders and dealers are more common participants in the futures markets. Thus, investor education will be critical for the success of any such initiative. Without it, there will be a great deal of confusion, with investors questioning why their orders are not being immediately executed. This could lead to the erosion of investor confidence, which is the antithesis of the rule's design.

**If you believe they should be mandated, should venue operators be permitted to design their own controls or should they be harmonised/coordinated across venues (including between interrelated instruments such as a derivative and its underlying)?**

Circuit breakers already exist in many European trading venues, but further work is necessary to ensure harmonization across all venues; From the insights gained from the US May 6 'Flash Crash', it is clear that coordination between all RMs and MTFs is needed to make the mechanism effective. This is certainly predicated on the presence of a European consolidated tape so that the benchmarks used are clear.

**Q5 To what extent do you believe market maker schemes offered by trading venues should be subject to mandatory minimum criteria?**

Knight generally supports the idea that participants who provide liquidity should have some type of obligations. These obligations can take various forms in different markets. Market making is a crucial risk taking activity that provides tremendous benefits to all market participants. Liquidity provision is crucial to a properly functioning market place. Knight supports the view that market makers should be willing to submit to certain obligations as part of their general risk taking in a marketplace. Knight believes that market maker obligations should include some combination of the following:

- Best Price Obligation: Publish continuous, two-sided attributable or non-attributable quotations with certain value minimums. Depth Obligation: Market makers should be required to provide depth.
- Maximum Quoted Spread Obligation -- The Best Price Obligation should be subject to a maximum quoted spread obligation.

- Minimum Stock Requirement -- Market makers should be required to meet standards in a minimum number of stocks (e.g., 100 or more symbols).
- Facilitate customer order-flow.

Market makers and firms that provide liquidity need to be rewarded for risking their capital and providing the other sides of trades in a variety of market conditions.

This will also depend on market circumstances, as market makers cannot be expected to catch 'falling knives'. For instance during extreme market volatility, most quantitative models built for electronic market making are not fitted for 'black swan' events, as such it would be irresponsible to expect market making firms to continue their activity under such circumstance.

**Should the criteria be determined by the trading venue alone?**

There is logic to some basic type of standard across venues. This would avoid market making criteria on a particular venue becoming a competive differenator. That said, there are a variety of venue types and hence market making or liquidity provider schemes need flexibility to fit these different market models that occur across Europe.

**To what extent do you agree with the suggestion that the use of stub quotes should be prohibited?**

Knight believes there are better alternatives than stub quotes such as plans that encourage market makers to quote within reasonable bands around the best bid and best offer. There should also be consideration for excused withdrawals.

**Q6 Do you have suggestions for improvements to regulators' surveillance capabilities with respect to the markets and modern trading techniques? Please elaborate.**

A consolidated tape is essential to the proper evolution of the European market as well as the proper surveillance of the marketplace. Surveillance capabilities will be both more effective and more comprehensive if prudential regulators are analyzing a complete data set for potential trading irregularities, improper conduct et cetera. To begin with, it would be the glue which holds together the disparate liquidity that is arising on the continent. But more importantly, it is the starting point from which nearly every innovation regarding the proper and complete analysis of equity trading begins. Furthermore, it is crucial to keep in mind that large institutions that have the resources and expertise will always be able to create their own proprietary views of the overall marketplace, but where does that leave smaller firms, and moreover, where does that leave the European retail investor? Without a European Consolidated tape there will

never be the proper tools, nor view of the market to create real and meaningful benchmarks for measuring the effectiveness of a venue's pricing.

**Who should bear the cost of investing in such capabilities and the cost of operating and supervising the markets in order to ensure fairness among market participants? Please elaborate.**

The simplest solution for proper implementation of a consolidated tape would be to create a new entity, for instance The European Consolidated Tape Association (ECTA), modelled after the Consolidated Tape Association (CTA) in the US, or the Consolidated Tape Delivery Authority (CTDA). The cost of operating and supervising will be shared by market participants. We believe a commercial response is not recommended as such a solution needs to be affordable to the widest audience possible.

**Q7 What do you perceive as the major causes of settlement indiscipline and settlement failures?**

We do not see wide-spread evidence of settlement 'indiscipline'. There will always be some 'unperformers' in any market but we are not aware of any market-wide issues that demand a specific regulatory response. We certainly do not see short-selling as a significant contributory factor and would strongly argue against any further regulation in this area. Most likely some settlement failure is inevitable in any market.

We have no real views on this point other than we do not see any systemic or market-wide issues.

**What steps, if any, do you believe regulators should take to address these causes?**

No action required.

**Q8 Have the appropriate steps been taken to limit or manage conflicts of interest that arise where an investment firm simultaneously conducts client-serving activities and proprietary trading or a trading participant is also a shareholder in a venue on which it trades?**

Knight respectfully refers IOSCO to the letter SIFMA has submitted for a comprehensive overview of the approach U.S. regulators utilized with regard to this question.

**Q9 Do you think existing laws and rules on market abuse and disorderly trading cover computer generated orders and are relevant in today's market environment?**

Any market abuse or disorderly trading practices including various forms of fraud or manipulative trading should be detected, analysed and stopped whether the trade was

generated by a computer of a human. Illicit trading practices have always been illegal, and should be subjected to rigorous enforcement. While these practices do exist, we do not believe that they are prevalent. Many of these can be countered by anti-gaming algorithms. Others should be considered market abusive and the perpetrators dealt with accordingly.

**Q10 Are there any strategies employed by HFT firms that raise particular concerns?**

We are not sure if any of the following list of potentially concerning practices are actually practiced in any meaningful way. We are not aware of any studies that have analysed whether any of these strategies are widely practiced. We believe there are a number of 'predatory' practices which include: Liquidity Detection / Order Anticipation: Algorithms that legitimately look for hidden liquidity in the market but can be used for improper purposes; Momentum Ignition: In advance of initiating a series of order or trades to ignited a rapid price move either up or down, a trader will have put a position on to benefit from this creation of market movement; Quote stuffing: A means of obfuscating orderbooks or introducing latency by placing a large number of orders with the specific intent of impairing other computer systems.; Painting the tape: The creation of volume by trading with oneself with no legitimate economic reason.

**If so, how would you recommend that regulators address them?**

Market abuse, in any form, should not be tolerated. Regulators should pursue the perpetrators with the same vigor irrespective of their market access tools.

**Q11 Should charges or fees be imposed on messages, cancellations or high order-to-trade ratios?**

We do not believe so. Cancellations and/or cancel/replaces are due to changes in risk tolerance as market conditions vary. Chances in market conditions could be affected by: market direction, other 'related' assets and loss of opportunity. Strategies that yield high cancels do not mean that the orders were not real or unintended for execution.

**Q12 Should market operators be required to make their co-location services available on a fair and non-discriminatory basis?**

Knight believes that co-location facilities should be made available to exchange members and other persons using such facilities on fair and reasonable terms and pursuant to fees that are equitably allocated among members and other persons using those facilities. We do not feel that there is any discrimination between participants per se in the co-location offering, but exchanges are in fact pricing their facilities at a significant premium to what

normal data centre space would cost. This has resulted in the exclusion of participants who would otherwise co-locate. Knight is of the opinion that if IOSCO Commission believes this to be discriminatory, it should be referred to the competition commission for additional consideration.

**Q13 Should market operators be required to provide testing environments to enable participants in stress test their algorithms? If so, what kind of minimum requirements are reasonable?**

Realistic test environments would be greatly beneficial for all market participants and then 'stress' test days could be arranged, akin to disaster recovery ("DR") testing. However, it is difficult to see how any market operator could create a sufficiently realistic test environment. IOSCO raises an interesting concept here and one which should be investigated further with the Federation of European Securities Exchanges ("FESE"), perhaps taking the lead in soliciting the ideas of market operators on whether this is an idea that could be realistically implemented.

## CONCLUSION

Technological advances and an evolving regulatory framework have brought a new level of competition to the European capital markets, which many associated benefits for investors. Today's European market is more transparent, more efficient and accessible at a lower cost than ever before. Technology has been at the forefront of allowing the transformation from slower and costly trading to cheaper and quicker executions. In most cases, technology has created efficiencies and effectiveness as older, human based trading models are updated to fit the new trading environment.

We respectfully submit our comments. Thank you for providing us with the opportunity to comment on these rule proposals. We would welcome the opportunity to discuss our comments with the Commission.

Knight Capital Group

cc: Leonard J. Amoruso, General Counsel, Knight Capital Group, Inc.
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