



# **Regulatory issues raised by the impact of technological changes on market integrity and efficiency. November 2011.**

The report prepared by IOSCO Technical Committee is the response to the G 20 mandate who, at the Seoul Summit (November 2010), demanded from IOSCO issuing before June 2011 some recommendations to promote market integrity and efficiency and to mitigate the risks of last technological developments to the financial system. This International Bulletin (see Edition nº 5 July-2011) included a summary of the consultation report prior to this final report about the technological changes that had occurred -in particular, the high frequency trading- and the risks they posed.

The report contains 6 recommendations that, even though they are not principles and do not fundamentally change IOSCO's principles either, provide an important starting point for consideration and analysis by regulators and are designed to: help regulators to identify the practical impact that technological developments have had and the regulatory issues to which they may give rise, promote a consistent approach amongst global regulators to the latest technological developments, and mitigate the risk that technological change may pose to the integrity and efficiency of the markets. The recommendations address two main topics:

## **Trading venue operators and trading participants.**

**Recommendation 1:** Regulator should require that trading venue operators provide fair, transparent and non-discriminatory access to their markets and to associated products and services.

Market access include access to data feeds, to co-location space services, to membership and to the trading fees and incentives (also those associated with submitting high volumes of orders or quotes to the given trading venue). Regulators should have regard to any conflicts of interest the trading venue operator may have (by virtue of commercial model, ownership structure or for-profit-status) and ensure that these conflicts are appropriately managed.

**Recommendation 2:** Regulators should seek to ensure that trading venues have in place suitable trading control mechanisms (such as trading halts, volatility interruptions, limit-up-limit-down controls, etc.) to deal with volatile market conditions. Trading systems and algorithms should be robust and flexible such that they are capable of dealing with, and adjusting to, evolving market conditions. In the case of trading systems, this should include the ability to adjust to changes (including sudden increases) in message traffic.

**Recommendation 3:** All order flow of trading participants, irrespective of whether they are direct venue members or otherwise, must be subject to appropriate controls, including automated pre-trade controls. These controls should be subject to the regulatory requirements of a suitable market authority or authorities. In addition, regulators should identify any risks arising from currently unregulated direct members/participants of trading venues and, where any are identified, take concrete steps to address them.

## **Regulators.**

**Recommendation 4:** Regulators should continue to assess the impact on market integrity and efficiency of technological developments and market structure changes, including algorithmic and high frequency trading. Based on this, regulators should seek to ensure that suitable measures are taken to mitigate any related risks to market integrity and efficiency, including any risks to price formation or to the resiliency and stability of markets, to which such developments give rise.

It is necessary to evaluate if the algorithmic trading and, in particular, the high frequency trading, pose an additional risk to financial stability and whether the benefits produced (e.g. tighter spreads) outweigh the costs associated with a changing market structure. A technological arm race requires expensive material and human resources and can lead to the so-called adverse selection that could drive business towards the use of dark liquidity, although at the end the technology could be shared by all market participants.

**Recommendation 5:** Market authorities should monitor for novel forms or variations of market abuse that may arise as a result of technological developments and take action as necessary. They should also review their arrangements (including cross-border information sharing arrangements) and capabilities for the continuous monitoring of trading (including transactions, orders entered or orders cancelled) to help ensure that they remain effective.

New technologies have brought novel forms and variations of market abuse and, where appropriate, market authorities should amend regulations, issue guidance to market participants on what is and is not considered acceptable market practice, update surveillance Systems to facilitate the identification and analysis of novel forms of market abuse, and reassess the tolls to shave information and pursue cross-border investigations.

IOSCO will assess the new challenges that technological changes pose for regulators in their market surveillance, which include: the fragmentation of markets; the dispersal of trading information; the increased speed of trading; and the ability to gather and process the increased volume of trading data. It will consider the feasibility of regulators having additional tools to deal with the challenges arising from market surveillance, some of which may include: additional audit trail or surveillance data consisting of all orders and trades by market participants in a given instrument; a single reporting point for all orders and for all transactions, by jurisdiction or geographical zone and across asset classes; and unique legal entity identifiers that allow a better surveillance on the responsible of a transaction or of an order introduction or withdrawal.

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