Principles for Dark Liquidity

Final Report

TECHNICAL COMMITTEE
OF THE
INTERNATIONAL ORGANIZATION OF SECURITIES COMMISSIONS

FR06/11 MAY 2011

Contents

Chapter		Page
1	**Introduction**	**2**
2	**Background and Purpose**	**4**
	1. 2001 IOSCO Transparency Report	6
	2. Other Relevant Current International Work	7
3	**Characteristics of Dark Pools and Dark Orders**	**10**
	1. Extent and Use of Dark Pools and Dark Orders	10
	2. Purpose of Dark Pools	11
	3. How Dark Pools Operate	12
4	**The Regulatory Environment**	**14**
	1. Current Regulatory Approaches to Dark Pool Operators and Dark Orders	14
	2. Transparency	15
	3. Reporting to the Regulator	19
5	**Regulatory Concerns**	**20**
	1. Price Discovery	20
	2. Potential Fragmentation of Information & Liquidity	21
	3. Fairness & Market Integrity	22
6	**Principles to Address Regulatory Concerns**	**25**
	Topic 1: Transparency to Market Participants	25
	Topic 2: Incentives for using Transparent Orders	28
	Topic 3: Reporting to Regulators	29
	Topic 4: Information Available to Market Participants about Dark Pools and Dark Orders	30
	Topic 5: Regulation of the Development of Dark Pools and Dark Orders	31

Appendix 1: Feedback statement on the public comments received by the Technical Committee on the Consultation Report – *Issues Raised by Dark Liquidity*

Appendix 2: Non-Confidential Responses to the Consultation Report

Chapter 1 Introduction

In February 2009, the International Organisation of Securities Commissions (IOSCO) Technical Committee (Technical Committee) approved a mandate whereby the Technical Committee Standing Committee on the Regulation of Secondary Markets (TCSC2) was to examine the key issues raised by the trading of equities in dark pools and the availability of dark orders on traditional equity exchanges. TCSC2 was to enquire whether the increasing use of dark liquidity may have any adverse effects on the market and if so, what options are available to regulators to mitigate these effects. The issues identified by the mandate for examination by TCSC2 were:

- transparency and price discovery;
- fragmentation;
- knowledge of trading intentions;
- fair access; and
- the ability to assess actual trading volume in dark pools.

In October 2010, TCSC2 published a consultation report entitled *Issues Raised by Dark Liquidity* (Consultation Report).[1] The Consultation Report identified and discussed the characteristics of dark pools and dark orders, the regulatory environment in different jurisdictions around the world and concerns with respect to price discovery, fragmentation and market integrity. Twenty-two public submissions were received in response to the Consultation Report. A feedback statement summarising those submissions is attached to this report (Appendix 1) with the non-confidential responses available in Appendix 2.

This Final Report on the *Principles for Dark Liquidity* (Final Report) sets out IOSCO's principles to guide regulators, venues and general users of dark liquidity with respect to the following topic areas:

- pre-trade and post-trade transparency;
- incentives for using transparent orders;
- reporting to regulators;
- information available to market participants about dark pools and dark orders; and
- regulation of the development of dark pools and dark order.

[1] CR05/10 *Issues Raised by Dark Liquidity*, Consultation Report of the Technical Committee of IOSCO, 27 October 2010, available at http://www.iosco.org/library/pubdocs/pdf/IOSCOPD336.pdf.

The principles establish that pre- and post-trade transparency are central to promote the efficiency of the market and the integrity of the price formation process. They are put forward with the recognition that a one size fits all approach may not be appropriate for all types of trading. Moreover, a number of jurisdictions are currently reviewing their regulatory regimes, including regulation of trading in dark pools and the use of dark orders in transparent markets.

The Technical Committee recommends that regulators consider the structure of their respective markets as a whole to determine how best to implement these principles. Importantly, regulators should seek to ensure that in implementing the principles, they do so in a way that aims to maintain the efficiency of the market and the integrity of the price formation process and, where appropriate, allows for the use of dark pools and dark orders for specific needs/trades.

The Technical Committee notes that there have been a number of industry and regulatory developments in this area and considers it important that regulators continue to monitor trends in trading conducted via the use of dark pools and dark orders. IOSCO intends to review these principles in light of market and regulatory developments.

Chapter 2 Background and Purpose

Global equity market structure has undergone significant changes over the past several years. One result of those changes is that in many jurisdictions, the search for best execution by market participants[2] now involves the consideration of multiple sources of liquidity for equity securities. These include exchanges and non-exchange trading venues, such as alternative trading systems (ATSs)[3] in the United States and Canada, and multilateral trading facilities (MTFs)[4] in Europe. These trading venues continue to develop new and innovative trading functionality to attract and maintain order flow.

One such innovation is the expanded use of dark liquidity and the development of so-called *dark pools*. Traders have always sought ways to preserve anonymity and execute orders with minimal market impact. Dark liquidity has long existed, for example, in the form of orders being held by *upstairs trading*[5] desks and liquidity offered by firms that internalise their order flow. In recent years, the handling of dark liquidity has been made more efficient due to the use of new technology and trading models. This has resulted in, among other trends, significant growth in the number of dark pools that do not display any quotations.

For the purposes of this report, a *dark pool* refers to any pool of liquidity that can be accessed electronically and provides no pre-trade transparency regarding the orders that are received by (i.e. reside in) the pool. A dark pool may operate as an ATS, an MTF, a trading facility offered by a dealer (e.g. a crossing system/process), or a facility of a transparent market (such as an exchange). We recognize that dark pools within a single category (e.g. an ATS) may have unique characteristics and incentives behind its structure and mode of operating[6] and that this may have implications for regulatory responses. Nonetheless, we believe that this high level definition is sufficient for purposes of this report.

Innovation in the market has also sped up the development of dark orders. A *dark order*, for the purposes of this paper, refers to an electronic order that can be automatically executed and

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2 For the purposes of this report, a *market participant* includes both intermediaries and investors.

3 In the United States, Rule 300(a) of the Securities Exchange Act (1934) defines an ATS as "Any organisation, association, person, group of persons or system (1) that constitutes, maintains or provides a marketplace or facilities for bringing together purchasers and sellers of securities or for otherwise performing with respect to securities the functions commonly performed by a stock exchange within the meaning of Rule 3b-16; and (2) does not perform or set self-regulatory organisation functions other than with respect to subscribers' participation in and exclusion from trading. An ATS may include proprietary trading systems, broker-dealer trading systems and electronic communications networks (ECNs), i.e. order matching systems that generally match limit orders." In Canada, the definition of "ATS" is found in National Instrument 21-101 and is similar to that in the United States.

4 An MTF is a multilateral system operated by an investment firm or a market operator which brings together multiple third-party buying and selling interests in financial instruments in the system and in accordance with non-discretionary rules in a way that results in a contract in accordance with the provisions of Title II of the Markets in Financial Instruments Directive (MiFID).

5 *Upstairs trading* generally refers to the situation where a trade in a listed stock is not executed through the listing exchange. Historically, in an upstairs trade, buyers and sellers would negotiate the price and conditions of the trade in the *upstairs* rooms of a brokerage firm. Today, upstairs trading typically occurs electronically at very high speeds.

6 Optiver, in its comments to the Consultation Report, suggested that it was important to understand what it contends are the five varieties of dark pools: public crossing networks, internalization pools, PING destinations, exchange-based dark pools and consortium based pools. *See also* Table 1, *infra*.

for which there is no pre-trade transparency. The dark order is entered on an otherwise transparent trading venue.[7] While dark liquidity in its broadest sense has existed in the markets for many years, dark orders became prevalent only with the growth of electronic trading. The benefits of using dark order types were fewer in the past because manual handling of orders, typically by a specialist or market maker, was necessary to trade. With the advent of technology, electronic systems can easily and efficiently execute matching dark orders.

Like dark pools, dark orders have the potential to minimise market impact costs because other market participants are unaware of their existence. They therefore limit the ability of other participants to identify and trade ahead of the interest reflected by the dark order. However, a visible order will typically have priority over a dark order at the same price within a trading venue.[8]

While dark pools and dark orders may meet a demand in the market, they may raise regulatory issues that merit examination. In February 2009, the Technical Committee approved a mandate whereby TCSC2 was to examine the key issues raised by the trading of equities in dark pools and the availability of dark orders on traditional equity exchanges. TCSC2 was to enquire whether the increasing use of dark liquidity may have any adverse effects on the market and if so, what options are available to regulators to mitigate these effects. The issues identified by the mandate for examination by TCSC2 were:

- transparency and price discovery;
- fragmentation;[9]
- knowledge of trading intentions;
- fair access; and
- the ability to assess actual trading volume in dark pools.

The mandate covers dark liquidity in equity securities, but does not include an examination of voice-brokering or the regulation of intermediaries. Furthermore, the mandate does not cover issues relating to how best execution is to be met in relation to dark liquidity or the

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7 This includes where a trading venue holding the order transmits indications of interest (IOIs) regarding that order. However, it does not include a reserve or *iceberg* order (where the order consists of a displayed part and an undisplayed part). SC2 acknowledges that reserve orders are becoming a common order type among otherwise displayed markets, and raise some of the same issues as do wholly dark orders. However, to limit the scope of this project, SC2 has determined not to examine issues raised by the use of reserve orders at this time.

8 CSA/IIROC Consultation Paper 23-404, *Dark Pools, Dark Orders, and other Developments in Market Structure in Canada*, October 2009, available at http://www.osc.gov.on.ca/documents/en/Securities-Category2/csa_20091002_23-404_consultation-paper.pdf and at http://www.lautorite.qc.ca/files/pdf/consultations/anterieures/valeurs-mobilieres/090930-23-404f-conspubl.pdf.

9 The Technical Committee notes that fragmentation is a natural result of broader market developments rather than a direct consequence of trading in dark pools or through the use of dark orders on displayed markets.

interaction of dark orders with transparent orders within a particular market, other than with respect to ways to provide incentives for the use of transparent orders (see discussion under Principle 3).

In accordance with its mandate, TCSC2 conducted surveys to obtain information necessary to examine the above five issues. The surveys requested information from:

- **regulators** about the regulatory framework surrounding dark pools (reporting, post-trade transparency, requirements related to price discovery) and any regulatory concerns raised by dark liquidity;

- **venues** (including exchanges, ATSs and MTFs) about the regulatory requirements (post-trade transparency, reporting to regulators, requirements related to price discovery), market structure of the venue, the use of indications of interest (IOIs),[10] and any regulatory concerns raised by dark liquidity; and

- **users** of dark liquidity about the use of dark liquidity, the types of dark pools that are used, advantages or disadvantages of using dark liquidity, concerns relating to free riding, and the impact of dark liquidity on price discovery and IOIs.

This Final Report addresses the key issues previously set out in the Consultation Report and raised in the responses to the TCSC2 surveys.

1. 2001 IOSCO Transparency Report

In its 2001 report entitled *Transparency and Market Fragmentation* (the Transparency Report);[11] the Technical Committee stated that "Market transparency… is generally regarded as central to both the fairness and efficiency of a market, and in particular to its liquidity and quality of price formation."[12] While the Transparency Report highlighted the importance of both pre- and post-trade transparency and that the wide availability of trading information may attract participation to a market, it acknowledged that transparency may create disincentives for those that trade large blocks or put up capital to facilitate larger trades. The report stressed a need for regulators "to assess the appropriate level of transparency in any particular product market with considerable care."[13]

The Transparency Report noted that with a market's evolution to multiple trading venues, there comes the need to assess whether regulators should "require all trading venues in an asset class to adopt identical, or broadly similar, transparency arrangements … it would be desirable to have a coherent transparency regime for an asset class that applies across all

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10 An IOI, in jurisdictions where they are permitted, is the transmittal of an electronic message that provides some information about a resident dark order to selected market participants which is not immediately actionable. Most often this includes at least the symbol and the trading intentions (i.e., buy or sell); sometimes, the size and the actual or implicit price are also included. IOIs can be both inbound and outbound.

11 *Transparency and Market Fragmentation*, Report of the Technical Committee of IOSCO, November 2001, available at http://www.iosco.org/library/pubdocs/pdf/IOSCOPD124.pdf.

12 Ibid. at page 3.

13 Ibid. at page 5.

market venues."[14] The Technical Committee identified two dimensions for regulators to consider when developing a transparency regime – scope of the requirements and their application to different trading methods. Scope relates to the consideration of:

(i) whether it is appropriate to provide exemptions for entities whose market share falls below a certain threshold, and if so, what that threshold should be; and

(ii) how far to extend the transparency requirements beyond exchanges.[15]

The Transparency Report noted that the same approach may not be suited to all platforms or types of trading. For example, with respect to pre-trade transparency, the Transparency Report stated that the transparency regime should arguably be the same across similar order-book venues but may be different for dealer systems or reference pricing systems. However, it stated that it may be possible to impose the same post-trade transparency regime on all venues, with possibly some differences for large trades.[16]

2. Other Relevant Current International Work

The Securities and Exchange Commission (SEC) in the United States has published a consultation paper that discuss regulatory issues surrounding dark pools.[17] The SEC continues to review the numerous responses received to its paper before proceeding with any regulatory changes.

In Canada, the Canadian Securities Administrators (CSA), jointly with the Investment Industry Regulatory Organisation of Canada (IIROC) published a position paper that outlines a potential framework for the regulation of dark pools and dark liquidity.[18] The proposed framework included a minimum size for resting orders, the requirement for price improvement for orders under a minimum size, and the priority of displayed orders over dark orders except in certain circumstances. After considering comments received on the position paper, the CSA has proposed changes to existing rules that would introduce a framework for imposing a minimum size threshold for resting dark orders.

In Europe, Directive 2004/39/EC promulgated under the Markets in Financial Instruments Directive (MiFID), is currently being reviewed by the European Commission (EC) and the

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14 Ibid. at page 13.

15 Ibid.

16 Ibid.

17 SEC Release no. 34-61358, *Concept Release on Equity Market Structure*, January 2010, available at http://www.sec.gov/rules/concept/2010/34-61358.pdf.

18 CSA/IIROC Joint Position Paper 23-405, *Dark Liquidity in the Canadian Market*, November 2010, available at http://www.osc.gov.on.ca/documents/en/Securities-Category2/csa_20101119_23-405_dark-liquidity.pdf and at http://www.lautorite.qc.ca/files//pdf/consultations/valeurs-mobilieres/2010nov19-23-405-cons-fr.pdf. Responses to the Position Paper are available at http://www.osc.gov.on.ca/en/30452.htm. Amendments available at http://www.osc.gov.on.ca/en/SecuritiesLaw_rule_20110318_21-101_rfc-notice-proposed-amendments.htm and at http://www.lautorite.qc.ca/files//pdf/consultations/valeurs-mobilieres/2011mars18-21-101-23-101-cons-fr.pdf.

Committee of European Securities Regulators (CESR).[19] CESR has published a consultation paper[20] on equity markets as part of its own review and to also provide technical advice to the EC to support its review. This consultation on equity markets includes, amongst other things, the examination of pre-trade transparency waivers provided under MiFID and policy options regarding crossing systems/processes operated by investment firms. Numerous responses have been received by CESR, with the consultation period having now closed.[21] CESR has provided its technical advice to the EC in the context of the MiFID review (CESR Technical Advice), which was largely incorporated into the public consultation of the EC on the MiFID review.[22]

Among other things, the CESR Technical Advice concludes that there should be regular reviews of the use of pre-trade transparency waivers by the European Securities and Markets Authority (ESMA) entailing potential recalibration through the setting of binding technical standards. ESMA might in this process deem it necessary to limit the use of certain pre-trade transparency waivers and therefore also limit dark trading. In the EC consultation, it is likewise proposed that ESMA be required to monitor the waivers on an ongoing basis and report annually to the EC.[23]

Regarding Broker Crossing Systems (BCS), CESR recommends the establishment of a new regulatory regime. The new regime would require, among other things, the notification of the operation of a BCS to competent Member State Authorities, identification of transactions through a BCS and the fulfilment of certain organisational requirements. Also, it is envisaged that the amount of (dark) trading executed by a BCS would be limited and that a BCS would be required to become an MTF if the volume traded through it exceeds a certain threshold. The EC incorporated these proposals into its consultation by proposing to regulate

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19 In 2011, CESR was replaced by the European Securities and Markets Authority (ESMA) as the body responsible for supervising the EU's securities markets and enhancing investor protection. ESMA is one of 3 European Supervisory Authorities that has responsibility for ensuring financial stability and strengthening and enhancing the EU supervisory framework.

20 CESR consultation paper ref: CESR/10-394, *CESR Technical Advice to the Commission in the Context of the MiFID Review - Secondary Markets*, April 2010, available at http://www.cesr-eu.org/index.php?page=consultation_details&id=161. This paper was produced in conjunction with 2 other CESR consultation papers as part of the review of MiFID. These 2 other consultation papers as well as other CESR documents related to the MiFID review include CESR consultation paper ref: CESR/10-417, *CESR Technical Advice in the Context of the MiFID Review – Investor Protection and Intermediaries*, April 2010; CESR consultation paper ref: CESR/10-292, *CESR Technical Advice in the Context of the MiFID Review – Transaction Reporting*, April 2010; letter to Commission on CESR's technical advice in the context of the MiFID review, March 2010, ref: CESR/10-359; Commission mandate requesting CESR for additional information from CESR in relation to the review of MiFID, April 2010, ref: CESR/MARKT G3/SH/cr Ares (2009); CESR press release, *CESR begins the process to overhaul MiFID by consulting on policy options*, April 2010, ref: CESR/10-423. These later documents are all available at http://www.cesr-eu.org/.

21 Responses to CESR consultation paper ref: CESR/10-394 are available at http://www.cesr-eu.org/index.php?page=responses&id=161.

22 CESR technical advice ref: CSER/10-802, *CESR Technical Advice to the European Commission in the Context of the MiFID Review and Responses to the European Commission Request for Additional Information*, July 2010, available at http://www.cesr.eu/popup2.php?id=7003. See also European Commission, Public Consultation, *Review of the Markets in Financial Instruments Directive (MiFID)*, December 2010, available at http://ec.europa.eu/internal_market/consultations/docs/2010/mifid/consultation_paper_en.pdf.

23 Ibid. at page 23.

BCS as a sub-category of the newly proposed category of Organised Trading Facilities (OTF).[24]

In Australia, the Australian Securities and Investments Commission (ASIC) published a consultation paper discussing proposals for enhancing the regulation of Australia's equity markets, including issues surrounding dark pools.[25] ASIC is currently in the process of reviewing the responses received to its paper before it advises the Government on what appropriate changes should be made and has recently indicated that it intends to consult further on pre-trade transparency in 2011.[26]

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24 Ibid. at pages 9 & 11.

25 ASIC Consultation Paper 145, *Australian equity market structure: Proposals*, November 2010, available at http://www.asic.gov.au/asic/ASIC.NSF/byHeadline/Market-structure.

26 ASIC Media Release 11-38MR ASIC announces timetable for the introduction of market competition 3 March 2010, available at http://www.asic.gov.au/asic/asic.nsf/byheadline/11-38MR+ASIC+announces+timetable+for+the+introduction+of+market+competition?openDocument

Chapter 3 Characteristics of Dark Pools And Dark Orders

1. Extent and Use of Dark Pools and Dark Orders

The following section describes the extent and use of dark pools and dark order types in different jurisdictions. Readers should be aware that the figures are not strictly comparable across jurisdictions due to differing market structures and calculation methodology, although every effort has been taken to make the figures comparable where possible.

The use of dark pools is most pronounced in North America, and particularly in the United States. The SEC reported that "[t]here [were in 2009]...approximately 32 dark pools that actively trade Regulation NMS stocks; they executed approximately 7.9% of share volume in Regulation NMS stocks in the third quarter of 2009."[27] SEC staff has estimated that the combined volume percentage of dark ATSs and broker-dealer internalisers – at least in the United States – in Regulation NMS stocks exceeded 30% by the end of 2010.

According to CESR, more than 90% of trading on organised public markets in Europe was pre-trade transparent while, on a quarterly average, 8.9% of all trading in European Economic Area (EEA) shares on regulated markets and MTFs were executed under MiFID pre-trade transparency waivers in 2009.[28] CESR, in its technical advice to the EC, has reported that for the first quarter of 2010, 8.5% of all trading in EEA shares on regulated markets and MTFs was executed under MiFID pre-trade transparency waivers.[29] Furthermore, on a quarterly average, 1.15% of total EEA trading was executed in broker operated crossing systems/processes in 2009.[30] For the first quarter of 2010, this figure increased to 1.5%.[31]

In Canada, the rules surrounding marketplaces allow for the introduction of dark pools, with the interest in dark liquidity slowly increasing. During the last quarter of 2010, the two dark pools in operation in Canada constituted approximately 2.4% and 2.3% of the volume and value traded respectively.[32]

There are relatively few dark pools in Australia when compared with Europe and the United States. Most of the dark pools operating in Australia are internal crossing systems/processes operated by large institutional brokers. There are also two dark pools that are open to wider market participation. Over recent years, approximately 19%[33] of trades by value in Australia were executed as large block 'upstairs' trades; the precise amount executed on dark pools in particular is unknown because of the manner in which these types of trades are reported.

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27 SEC Release no. 34-61358, page 18.

28 CESR consultation paper ref: CESR/10-394 at item 14.

29 CESR technical advice ref: CESR/10-802, page 8.

30 Ibid. at item 107. For the purposes of its fact finding, CESR defined broker operated crossing systems/processes as "internal electronic matching systems operated by an investment firm that execute client orders against other client orders or house account orders (excluding internal transactions where a house account order matches against another house account order and internal systems used exclusively for systematic internalisation)."

31 CESR technical advice ref: CESR/10-802, page 34.

32 IIROC Market Share by Marketplace for the quarter ending 31 December 2010.

33 ASIC Consultation Paper 145, page 17. This figure includes both voice/manual and electronic executions conducted outside transparent markets.

The use of dark pools in Asia is currently limited. In Japan, however, the number of internal order matching systems/processes operated by large institutional brokers appears to be increasing. Since March 2010, all orders matched inside the dark pools are required to be submitted to ToSTNeT (off-exchange trade execution service offered by the Tokyo Stock Exchange) for trade execution. Based on the statistics released by Fidessa[34], trades executed through ToSTNeT amounted to 9.2% of total trades by value for the final week of 2010; although block trades are also included in this statistic, it can be inferred that dark pool trades are no longer insignificant. In Hong Kong, dark pools are mainly brokers' internal crossing systems/processes which account for about 1-4% of the total market turnover. In Singapore, dark pools account for less than 0.5% of the total market turnover.

The Technical Committee notes, however, that the same drivers of dark pool growth in the United States and Europe (i.e. innovative execution platforms and the search for low-cost, low-impact executions) could also drive growth in Canada, Australia and Asia.[35]

Many of the jurisdictions that allow dark pools to operate also permit dark orders to be submitted in regulated markets, ATSs and MTFs.[36] For the European jurisdictions governed by MiFID, dark orders on transparent regulated markets and MTFs may be able to receive a pre-trade transparency waiver/exemption when they are above a certain size or meet the definition of a *negotiated trade*.[37] In other jurisdictions, the provision of dark orders is governed by the rules of the exchange or ATS. No figures are available outlining the extent to which dark orders are used.

2. Purpose of Dark Pools

As noted in the introduction, non-transparent pools of liquidity are not a new phenomenon. They have existed for many years, for example, on the floors of manual exchanges and in the upstairs market, where dealers negotiate the execution of large block trades between clients and through the use of their own capital. Dark liquidity has long been used as a way for traders to preserve anonymity and execute orders with minimal market impact. What is new is the automation of dark pools, the widespread availability and the evolution of their use (e.g. for smaller orders at least in some jurisdictions).

Industry respondents to the SC2 surveys indentified a variety of reasons why traders may use dark pools. These include:

- to minimise information leakage;

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34 Fidessa Fragmentation Index - http://fragmentation.fidessa.com/

35 Water Asia Report, *Leapfrogging Dark Pools*, June 2008, available at http://db.riskwaters.com/public/showPage.html?page=796008.

36 These jurisdictions include Australia, Canada, France, Germany, Italy, Netherlands, Spain and the United States.

37 Possible pre-trade transparency waivers include those based on large-scale transactions and negotiated trades (Article 20 and Article 18.1.b respectively of the MiFID Implementing Regulation).

- to minimise market impact costs;[38]
- to facilitate the execution of large blocks which may be difficult to achieve on transparent markets due to a lack of depth in the orderbook;
- to ensure better control of an order;
- to protect proprietary trading information;
- to manage interaction with algorithms or programs that seek to identify or *sniff* out dark orders used in transparent markets;
- to take advantage of the possibility of price improvement; and
- to minimise transaction costs.[39]

3. How Dark Pools Operate

The operation of dark pools varies widely both across and within jurisdictions. Dark pools can be differentiated based upon a number of characteristics, including access rights, the structure of dark pools, the types of orders that may be permitted, how orders are entered, and how prices are referenced and executed. Table 1 below provides an indication of some of these characteristics. It should be noted that not all of these characteristics will be available for all dark pools. Factors such as the status (e.g. ATS or MTF) and the regulatory environment in which they operate may provide different degrees of flexibility for a dark pool.

Table 1: Potential Characteristics of Dark Pools

Characteristics of Dark Pools	Potential Examples of Specific Dark Pool Characteristics
Access	Access to dark pools generally differs depending on the operator and structure of the dark pool. As such, access may be provided to: • clients of the participant only; • institutional investors only; • large broker-dealers only; • other trading venues; or • a combination of any of the above.
Permitted order types	Common order types which can be entered into dark pools include:

38 CSA/IIROC Consultation Paper 23-404 noted on page 2 that "Market impact costs occur when the execution of an order moves the price of that security above the target price for a buy order (or below the target price for a sell order). When information is leaked about a large order before it is executed, these costs can increase significantly."

39 Ibid.

	• market; • limit; • pegged; • midpoint; • immediate or cancel; and • minimum order quantity (e.g. large-size orders).
Order submission	Orders maybe submitted either: • directly via a market participant; • indirectly as a result of electronic order routing; or • the dark pool may sweep client orders that have been submitted into a broker-dealer's orderbook.
Price determination	Prices within dark pools are often referenced to those on the main displayed markets within one or more jurisdictions. Specifically, the execution price may be determined with reference to: • the best bid or offer (BBO); • the midpoint of the BBO; • within the current volume-weighted spread of the BBO; or • within the time-weighted average price of the BBO
Order execution	Orders may be executed within a dark pool: • on a continuous basis; • during a call auction; or • pursuant to the negotiation by the buying and selling parties of the terms of a trade (e.g. price, volume and settlement date).
Other	Other miscellaneous characteristics of dark pools include: • operational model / structure of a dark pool;[40] • agency vs principal trading; • crossing systems/processes where the broker-dealer is at risk; and • allowance of IOIs.

[40] Different types of dark pools exist, including those operated by exchanges, block trading dark pools and internal crossing systems/processes.

Chapter 4 The Regulatory Environment

1. Current Regulatory Approaches to Dark Pool Operators and Dark Orders

(a) Regulation of Dark Pool Operators

Dark pool operators are regulated in a variety of ways across jurisdictions. Some are operated and regulated as exchanges, whilst some have the option of operating and being regulated as a facility of an exchange, in which case the requirements applicable to exchanges apply.[41] Conversely, in many jurisdictions, dark pools may be ATSs, MTFs or crossing systems/processes.[42]

In Japan, dark pool trades are undertaken by securities firms as internal order matchings, and then routed to the exchange for matched orders to be executed, as required by the supervisory guideline.[43] Furthermore, securities firms operating dark pools must be registered as Type I Financial Instruments Businesses and are regulated accordingly.

In Europe, dark pools may be regulated as and operated by regulated markets, or be regulated as an MTF that must apply for regulatory waivers from pre-trade transparency requirements.[44] MTFs may be operated either by an exchange or by an intermediary. Requirements applicable to MTF dark pools operated by exchanges and intermediaries are broadly similar.[45]

In Canada, dark pools are generally regulated as ATSs and are subject to requirements including registration as an investment dealer and membership in a self-regulatory organisation. Dark pools may also be operated as facilities of an exchange and if so, are subject to the exchange requirements. In the United States, a dark pool could be either an ATS or a dealer trading system. Either system must be registered as a broker-dealer, and thus is subject to the laws and regulations applicable to broker-dealers, including, where appropriate, Regulation ATS.

In Australia, dark pools can operate either as a licensed financial market or within the framework of a licensed financial market. When operating within the framework of a licensed entity, trades are registered under the operating rules of the licensed entity. In this instance, the dark pool operator must hold an intermediary licence.[46]

Switzerland regulates its dark pool as part of the national securities exchange and requires an operator to be licensed as an exchange.

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41 Australia and Switzerland.

42 Canada, Europe, Hong Kong and the United States.

43 Otherwise known as "Comprehensive Guidelines for Supervision of Financial Instruments Business Operators, etc."

44 France, Germany, Italy, Netherlands, and Spain, referencing Articles 18(1) and 19 of the MiFID Implementing Regulation.

45 Ibid.

46 Licensed entities are required to hold an Australian market licence (AML) to operate a financial market. Similarly, entities that provide intermediary services are required to hold an Australian financial services licence (AFSL).

Dark pool operators in Singapore are generally regulated as recognised market operators and must restrict trading access to institutional investors. All trades in Singapore securities must be reported to the national securities exchange.

(b) Regulation of Dark Orders and IOIs

Dark orders are typically subject to the same regulations as displayed orders, with the major exception being that they are not subject to pre-trade transparency requirements.

With respect to all orders (which might include IOIs), several jurisdictions stated that market conduct rules applicable to intermediaries, including best execution, would apply.[47] Two jurisdictions noted that regulation in this area may depend on when an IOI becomes an order, since, at that point, regulations regarding orders would apply.[48] In its technical advice to the EC, CESR has recommended that MiFID be amended so as to clarify that an actionable IOI be considered as an order and subject to pre-trade transparency which was also incorporated in the EC consultation.[49] These requirements would include the transparency requirements applicable to orders.[50]

2. Transparency

All regulators consider transparency, both of current trading interest and recently completed trades, to be a core element in ensuring that markets operate in a fair, orderly and efficient manner. This facilitates market participants', as well as issuers', understanding of both volumes and prices. It also enables them to assess the relative quality of execution they have obtained.

The way in which regulators seek to ensure that a market operates with transparency may vary, however, depending on the manner in which equity securities are traded as well as the way in which markets and the regulatory structure in their countries have evolved.[51] In broad terms, regulators approach transparency arrangements by establishing principles, setting rules and/or by approving trading platform's individual arrangements. Often, the approach adopts several or all of these elements.

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47 Canada and the United States. In the United States, whether something is considered an order for such purposes will depend on the definition of a "bid" or "offer." See footnote 54, *infra*.

48 Canada and the United States.

49 CESR technical advice ref: CESR/10-802, page 17 and EC consultation, page 23.

50 Refer to the discussion on current approaches to pre-trade transparency. In the United States, if an IOI is priced, then the price must comply with Regulation NMS Rule 612, which governs the numerical increments in which an IOI may be expressed (although this rule only applies to exchanges and broker-dealers). The sender of an IOI is free to send the IOI to whomever it chooses. Priced IOIs may be quotes under the Quote Rule (see footnote 54, *infra*). The recipient of the IOI would, if it wishes to trade with the order underlying the IOI, send an actionable order to the sender of the IOI, with the expectation that the first marketable response would trade with the underlying order.

51 For example, the nature of pre-trade information published in order-driven markets will differ from that made available in quote-driven markets. The type of participant may also be a factor in determining how much transparency is desirable.

Several jurisdictions allow for the intermingling of dark orders with displayed orders on an otherwise transparent market.[52] In both Canada and the United States, transparent orders currently receive time priority over dark orders at the same price level within a trading venue. In addition, both jurisdictions have rules requiring better priced, visible, immediately accessible limit orders to be executed ahead of inferior priced limit orders (i.e. order protection rules). This "trade-through"[53] protection is only applicable to publicly displayed orders. In Europe, only orders above a certain size are able to remain dark on a transparent market.

(a) Current Approaches to Pre-trade Transparency

Regulators have traditionally attached considerable importance to ensuring that equity markets have high levels of pre-trade transparency. In the EU, for example, MiFID sets out an overarching pre-trade transparency principle. Nevertheless, under certain circumstances, MiFID also provides for *waivers* to pre-trade transparency.

It is important for regulators to ensure that pre-trade information is available, where necessary, on markets in a fair, orderly and efficient manner. This is especially true given the increasingly fragmented and complex nature of markets. At the same time, regulators must also keep in mind the trading interests of professional (i.e. non-retail) investors, who are primarily concerned about the costs of pre-trade transparency as they typically trade in very large sizes. It is these trading interests of professional investors that are often cited as one of the major reasons for the current interest in dark pools and dark orders.

Most regulators do not prohibit dark pools or the execution of dark orders on otherwise transparent markets.[54] Various features are common amongst jurisdictions where dark trading is permitted, for example regulators:

- do not generally restrict the type of trading venue that may operate a dark pool. Most dark trading takes place within ATSs, MTFs or investment firms;

- may impose conditions upon the operator of the dark pool and/or the execution of dark orders. For example, a trading venue may be permitted to offer dark trading opportunities, but those opportunities might nonetheless be subject to post-trade transparency requirements; and
- may impose limitations on the way in which dark trading, or the execution of dark orders, may take place.

In the United States, any bid or offer[55] communicated on an exchange by one member to another, or communicated in the OTC market by a market maker, must be displayed.[56] In

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52 Canada and the United States.

53 A "trade through" is a transaction at a price that is inferior to a bid or offer that is displayed and immediately accessible in another market. The prohibition on trade throughs applies only during regular market hours. For further details, see Regulation NMS Rules 600 and 611.

54 Exceptions to this include Brazil, India and Mexico.

55 Regulation NMS Rule 600(b)(8) currently defines "bid" or "offer" as "the bid price or the offer price communicated by a member of a national securities exchange or member of a national securities association to any broker or dealer, or to any customer, at which it is willing to buy or sell one or more round lots of an NMS security, as either principal or agent, but shall not include indications of

addition, any order held by an ATS that is communicated to more than one other person (i.e. to two or more persons) must be displayed if a pre-determined threshold is executed.[57] Finally, customer orders held by an exchange or OTC market maker must generally be displayed unless the order is of a large size or the customer has specifically requested non-display.[58]

MiFID requires all European trading venues (i.e. regulated markets and MTFs) to provide full pre-trade transparency, with limited exemptions available via a *waiver* process. The regulatory regime applies irrespective of any trading thresholds.[59] No pre-trade transparency requirement currently exists for OTC transactions, with a very limited exception for Systemic Internalisers.[60]

In Canada, all orders (defined as a "firm willingness to buy or sell") are required to be provided to, and disseminated by, the information processor, unless that order is shown to only the employees of an exchange or ATS, or a person or company retained to assist with operating the exchange or ATS. In addition, most of the dark pool participants and dark orders are subject to an "order exposure rule" which requires dealers to enter client orders of a certain value or size on a transparent venue unless, among other exceptions, the dealer provides price improvement to the displayed order.[61]

(b) Current Approaches to Post-Trade Transparency

In general, information about trades (including volume, symbol, price, time, and in some jurisdictions, market-place identifier) executed in dark pools must be published immediately. In some specific circumstances, publication of the information may be deferred for large transactions.[62]

In Australia, if a dark pool operator is a member of the national exchange, all trades are disclosed under the rules of the exchange. In Hong Kong, there are similar requirements, but

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interest." The SEC has proposed, however, to amend the definition of "bid" or "offer" to apply expressly to IOIs that are in fact actionable and transmitted by dark pools and other trading venues to selected market participants. The proposed definition would exclude, however, IOIs for large sizes that are transmitted in the context of a targeted size discovery mechanism. See SEC Release no. 34-60997, *Regulation of Non-Public Trading Interest*, November.2009, available at http://www.sec.gov/rules/proposed/2009/34-60997.pdf.

56 Regulation NMS Rule 602.

57 Regulation ATS.

58 Regulation NMS Rule 604.

59 The Technical Committee notes that internal crossing systems/processes operated by investment firms currently do not fall within the definition of a trading venue under MiFID. However, according to the EC consultation, BCS would be classified as a sub-category of OTFs and be required to apply pre-trade transparency after having converted to an MTF by exceeding a certain threshold. See also EC consultation, pages 9 - 10.

60 Article 4.1.7 of the MiFID Implementing Regulation defines a systemic internaliser as an investment firm which, on an organised, frequent and systemic basis, deals on its own account by executing client orders outside a regulated market or an MTF.

61 IIROC Universal Market Integrity Rule (UMIR) 6.3.

62 France, Germany, Italy, Netherlands, and Spain.

the trades concluded at participants' dark pools are specifically identified when they are reported to the exchange, thus distinguishing them from other off-exchange trades reported to the exchange. However, the trades concluded on dark pools are disclosed by the exchange to the public together with other off-exchange trades. In Australia, trades are published to the market either immediately through data vendors, or with a 20 minute delay via a website. Furthermore, large trades may qualify for a reporting or publication delay. In Japan and Singapore, owing to the requirement for dark pools operators to send the matched orders into the exchange for trades to be executed, all trades are disclosed under the rules of the exchange.

In Canada, all trades executed on a dark pool are required to be disseminated to the information processor for inclusion in consolidated information in real-time. Trade information is also disseminated by data vendors.

In the United States, all dark pools must report their trades to the Financial Industry Regulatory Authority (FINRA)[63] within 30 seconds of execution.[64] A dark pool is not required to disclose any trading information directly to the public. The information collected by FINRA includes the name of the parties to the trade, although neither counterparty nor execution venue is publicly disseminated.[65] All trading information is made public by FINRA subject to a national market system plan approved by the SEC.

In Europe, under MiFID, all trades executed on a dark pool are required to be made public by the operator of the dark pool in real-time. Deferred publication is only available in the EU for transactions above a certain size and where the transaction is between an intermediary dealing for its own account and a client account.

Finally, in Switzerland, where the dark pool is an exchange participant, the exchange publishes trade information immediately after the transaction.

The nature of the information that is disseminated to the public also varies across jurisdictions. In one jurisdiction, exchange trade information is disseminated to the public, although actual dark pool volumes are not released to the public.[66] In Canada, the public is provided with information about trades executed on dark pools, which includes the specific identifier of the platform. In the EU, where a dark pool is operated by a dedicated dark pool platform, the publication of trades executed on that dark pool includes the specific identifier of the platform. In the United States, all trades (including volume) are made public, although the specific venue identifier for OTC trades is reported only to FINRA.

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63 FINRA is a self-regulatory organisation that has a statutory obligation to regulate the over-the-counter market.

64 *See* SEC release no. 34-61819, March 2010, available at http://www.sec.gov/rules/sro/finra/2010/34-61819.pdf.

65 Trades that take place on an exchange are publicly reported by the exchange pursuant to its own rules. In addition, all exchanges and FINRA are parties to two "effective transaction reporting plans" that govern the collection, consolidation and dissemination of transaction reports in all NMS securities. Transaction reporting plans are joint plans of SROs filed with and approved by the SEC under SEC Rule 608.

66 Singapore.

3. Reporting to the Regulator

A requirement that trades executed on dark pools be reported to regulators is common across jurisdictions, although the nature of the information that is reported varies. In some jurisdictions, if a dark pool operator is a member of an exchange, or if trades are executed on a national exchange, post-trade information must be provided to the regulator soon after the trade is executed, although exceptions may exist for large-volume transactions. For example, reporting from the exchange to the securities commission is done on a real-time basis in one jurisdiction,[67] while in another jurisdiction, trading information from dark pools is provided to the regulator in real-time.[68] In EU countries, information about transactions as well as the specific identifier of the trading platform is reported soon after the trade is executed (by the end of the next trading day) to the applicable regulator by the investment firm or the trading venue. In other jurisdictions, dark pools must submit quarterly reports regarding trade information to the regulator.[69] In one jurisdiction, that information forms part of the total exchange trade information, which is disseminated to the public; however dark volumes are not specifically provided to the public.[70]

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67 Hong Kong.

68 Canada.

69 Canada, Singapore and the United States (for ATSs only).

70 United States.

Chapter 5 Regulatory Concerns

The Technical Committee has identified a number of issues surrounding the use of dark pools and dark orders in transparent markets,[71] many of which are not unique to these types of orders. These issues surround:

- the impact on the price discovery process where there is a substantial number of dark orders and/or orders submitted into dark pools which may or may not be published;
- the impact of potential fragmentation on information and liquidity searches; and
- the impact on market integrity due to possible differences in access to markets and information.

1. Price Discovery

Price discovery is the process through which the current market price for a security is established for, among other things, effecting an execution or valuing an existing holding. The discovery of a security's market price is derived from the supply of and demand for the security, which indicates a participant's willingness to transact at a given price, and information about transactions which have actually occurred. The more interest that is being expressed, the more accurate the market price is likely to be.

The ability to trade without publicly quoting orders is not a new phenomenon. However, there is the potential that the development of dark pools and use of dark orders could inhibit price discovery if orders that otherwise might have been publicly displayed become dark. The Technical Committee considers pre-trade transparency to be a key element of the price discovery process. If enough orders are not transparent to participants, or there is unequal or incomplete information about transparent orders, there may be insufficient information about prices for market participants to identify trading opportunities. Because dark orders and dark pools do not contribute to pre-trade price discovery, there may also be concerns about whether they free-ride on the revealed intentions of other participants in the market.

Regulators indicated in their responses to the TCSC2 survey on dark liquidity that they have polices or regulatory frameworks that are aimed at protecting the integrity of the price discovery process. This may be achieved through, for example:

- ensuring transparent orders receive execution priority over dark orders at the same price within a trading venue;[72]
- ensuring dark pools provide price improvement over the National Best Bid/Offer (NBBO) to small orders;

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[71] Different jurisdictions may use different terminology to describe whether information is available in the market. For example, some jurisdictions refer to 'transparent' and 'non-transparent' markets whereas others use terminology such as 'displayed' and 'non-displayed' markets.

[72] Canada and the United States.

- ensuring limited scope for waivers to pre-trade transparency;
- referencing prices within the dark pools to those of the national securities exchange;[73] and
- trade through protection.[74]

The Technical Committee also considers post-trade transparency to be an important element of the price discovery process. However, the dissemination of information regarding executed trades on a dark pool is not universal. In response to the TCSC2 survey, regulators in a number of jurisdictions[75] indicated that total trade volume (including executions resulting from dark orders) is published by exchanges; however, such executions are often not explicitly identified as resulting from dark orders.

As indicated above in Chapter 4, regulators generally receive information about trades executed through dark pools, be it as a result of real-time or periodic trade reporting the dark pool operators must perform, or due to unique identifiers of the trading platforms being allocated to such trades.[76] Despite this access to information, it was felt that some regulatory initiatives may be needed to improve the accuracy of information available.

2. Potential Fragmentation of Information & Liquidity

Another important issue that arises with respect to dark pools is the potential fragmentation of information and liquidity when there are many different dark pools in operation. It should be recognised, however, that there are other potential causes of market fragmentation, wholly unrelated to dark pools; indeed it is an issue in any jurisdiction where multiple markets exist. The growing number of separately organised dark pools poses liquidity search challenges for market participants. In addition to the basic logistical task and cost of establishing connectivity or access to many different venues, multiple dark pools may pose specific information fragmentation problems due to their lack of pre-trade transparency, and the possibility that post-trade information may not, in some jurisdictions, be consolidated with post-trade information from other venues.

In general, unless a trader is able to send and receive an IOI, the only way to know whether a dark pool has liquidity is to route an order to the dark pool. This leads to potentially higher search costs associated with finding hidden fragmented liquidity, resulting in a possible impact on market efficiency with participants having to 'ping' multiple dark pools as a means to assess liquidity.

3. Fairness & Market Integrity

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73 Singapore.

74 Canada and the United States.

75 Australia, Canada, Hong Kong, Japan, Singapore and the United States.

76 Canada, Netherlands, Singapore and the United States.

IOSCO has previously noted that one of the three core objectives of securities regulation is to ensure that markets are fair, efficient and transparent.[77] In respect of this objective, IOSCO previously made the following statements:[78]

- The fairness of markets is closely linked to investor protection and, in particular, to the prevention of improper trading practices. Market structures should not unduly favour some market users over others;

- Regulation should aim to ensure that investors are given fair access to market facilities and market or price information. Regulation should also promote market practices that ensure fair treatment of orders and a price formation process that is reliable; and

- In an efficient market, the dissemination of relevant information is timely and widespread and is reflected in the price formation process.

(a) Fair Access to the Market

The Technical Committee has considered access to trading previously, and concluded that "[w]hile access to information across all trading venues in an instrument should assist investors in obtaining good quality execution and facilitate efficient pricing more generally, access to information is only of limited assistance if it is not also possible to access the trading opportunity."[79] Furthermore, the Technical Committee noted in Section 13.3 (Securities Exchanges and Trading Systems) of IOSCO's February 2008 Objectives and Principles of Securities Regulation report that "[t]he regulator should ensure that access to the system or exchange is fair and objective. The regulator should oversee the related admission criteria and procedures."[80]

With respect to dark pools, regulators may need to address concerns relating to fair access to the market, i.e., whether market participants are offered reasonable terms on which to become members of, or to route orders to, the market or trading venue. Concerns arise if certain participants are unfairly denied access to a market. This concern is exacerbated where a dark

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77 *Objectives and Principles of Securities Regulation*, Report of the Executive Committee of IOSCO, February 2008, page i, available at http://www.iosco.org/library/pubdocs/pdf/IOSCOPD265.pdf. While the Technical Committee notes that a revised version of the *Objectives and Principles of Securities Regulation* was released in June 2010, we note that the commentary surrounding the principles in the February 2008 document remain current.

78 IOSCO Objectives and Principles of Securities Regulation report, February 2008, page 6.

79 IOSCO Transparency Report, page 16. IOSCO further stated in its Transparency Report that "A particular benefit of some new trading centers is that they open up wider direct access to trade execution (e.g. to institutional investors) than has often been the case with traditional exchanges; and this may sometimes encourage greater exposure of trading interest. But not all trading systems are designed to offer wide access. The degree to which a regulator may wish, or be legally empowered, to require a market center (especially a non-exchange) to provide open access varies across jurisdictions, but regulators should seek to ensure that access to significant centers of price-formation should normally not be denied on any discriminatory basis and examine closely both the motivations and implications of any venue wishing to restrict access."

80 IOSCO Objectives and Principles of Securities Regulation report, February 2008, page 42.

pool has a significant market share and participants cannot access the liquidity within the dark pool.[81]

As stated earlier, access to darks pools may differ depending on the operator and structure of the dark pool. Generally, access to some crossing systems/processes is restricted to the clients of those systems. Whilst access to exchanges, MTFs and ATSs is restricted to participants or members of the platform, the important issue concerns how these exchanges and platforms select, or restrict, access. For instance, exchanges and/or regulatory authorities may require participants to hold certain licences/registrations as well as meet stringent financial requirements. For clients, however, the ability to trade on exchanges, MTFs, and ATSs can be achieved through their broker-dealers or through direct electronic access.

(b) Fair Access to Information

The Technical Committee seeks to encourage the display of trading interest on a fair and non-discriminatory basis as a key component of price discovery, while recognising that different jurisdictions have taken different approaches to deal with pre-trade transparency. The Technical Committee believes that regulators should verify that all similarly situated market participants have equitable access to trading information on a reasonable and non-discriminatory basis. In other words, any differential access to such information should not unfairly disadvantage specific categories of participants.[82]

Regulatory concerns with respect to dark pools also arise where access to information regarding the liquidity on dark pools would be provided to a subset of market participants. This would create a two-tiered market which disadvantages those participants that do not receive the information.

This concern is raised in the context of the dissemination of IOIs that contain information about a participant's order in a dark pool. The information contained in an IOI gives the recipients of the IOI information about trading opportunities not possessed by the public. Depending on how much information is disseminated through the use of IOIs, the IOI information may also be used by the recipient to game or trade ahead of the order in the dark pool, as the recipients of an IOI are generally under no obligation to trade against the investor's order. As noted in Chapter 4 of this report, CESR has recommended to the EC that MiFID be amended so as to clarify that an actionable IOI be considered as an order and subject to pre-trade transparency which was incorporated into the EC consultation.[83]

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81 In Canada, the approach that has been adopted to deal with this concern is the "fair access" provision that prohibits a marketplace from unreasonably prohibiting, limiting or conditioning access to its services from the time a dark pool commences operation. In the United States, dark pools must provide fair access only when a threshold market share is reached. In Europe, according to Article 42 paragraph 1 of MiFID, regulated markets are required to establish and maintain transparent and non-discriminatory rules, based on objective criteria, governing access to or membership of the regulated market. For dark pools operating as a MTF, Article 14 paragraph 4 of MiFID requires that investment firms or market operators operating a MTF establish and maintain transparent rules, based on objective criteria, governing access to its facility.

82 IOSCO Objectives and Principles of Securities Regulation report, February 2008, page 43.

83 EC consultation, page 23.

(c) Disclosure & Rules of Conduct

Some commentators have raised concerns about the degree to which market participants understand how dark pools and dark orders in transparent markets function. Lack of information about the operations of dark pools and dark orders may result in market participants making uninformed decisions regarding whether or how to trade within a dark pool or using a dark order. This could result in a lack of confidence in the operation or efficiency of the market or the regulatory framework, should the participant not understand the "rules of the game."

The following types of information could be useful for market participants:

- execution allocation (e.g. if the facility is a call market, is the allocation pro rata or based on time priority);
- the interaction between dark and light orders;
- types of participants;
- where IOIs are permitted in a jurisdiction, what information is provided and to whom; and
- whether a participant can opt out of having IOIs sent regarding its own orders.

Chapter 6 Principles to Address Regulatory Concerns

The Technical Committee believes that it would be appropriate for member jurisdictions to consider the principles set forth below regarding the regulation of their markets, including the regulation of dark pools and dark orders. Two of the principles relate to transparency of trading activity to the public, with a further four principles also warranting consideration by regulators: priority of transparent orders, reporting of trade information to regulators, information available to market participants and the regulation of the development of dark pools and dark orders.

In general, the principles are designed to:

- minimise the adverse impact of the increased use of dark pools and dark orders in transparent markets on the price discovery process by generally promoting pre-trade and post-trade transparency and encouraging the priority of transparent orders;

- mitigate the effect of any potential fragmentation of information and liquidity by generally promoting pre-trade and post-trade transparency and consolidation of such information;

- help to ensure that regulators have access to adequate information to monitor the use of dark pools and dark orders for market monitoring/surveillance purposes and to enable an appropriate regulatory response to market developments; and

- help to ensure that market participants have sufficient information so that they are able to understand the manner in which orders will be handled and executed.

Despite the concept of dark pools differing across jurisdictions, the Technical Committee notes that the following principles provide a starting point for consideration and analysis by regulators. The Technical Committee also recognises that some jurisdictions are reviewing their regulatory regimes surrounding dark pools and dark orders. Consistent with its statement in the Transparency Report that the same approach may not be suited to all platforms or types of trading,[84] the Technical Committee notes that implementation of the principles may vary according to the type of trading and platform.

Topic 1: Transparency to Market Participants and Issuers

Principle 35 of IOSCO's June 2010 Objectives and Principles of Securities Regulation report states that "Regulation should promote transparency of trading"[85] Section 13.5 (Transparency of Trading) of IOSCO's February 2008 Objectives and Principles of Securities Regulation report stated:[86]

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84 IOSCO Transparency Report, page 13.

85 *Objectives and Principles of Securities Regulation*, Report of the Executive Committee of IOSCO, June 2010, page 12, available at http://www.iosco.org/library/pubdocs/pdf/IOSCOPD323.pdf.

86 IOSCO Objectives and Principles of Securities Regulation report, February 2008, page 42.

- Ensuring timely access to information is a key to the regulation of secondary trading. Timely access to relevant information about secondary trading allows investors to better look after their own interests and reduces the risk of manipulative or other unfair trading practices;

- Where a market permits some derogation from the objective of real-time transparency, the conditions need to be clearly defined;

- The market authority (being either or both of the exchange operator and the regulator) should, in any such event, have access to the complete information to be able to assess the need for derogation and, if necessary, to prescribe alternatives.

Furthermore, the Transparency Report noted:[87]

- The more complete and more widely available is trading information, the more efficient the price discovery process should be, and the greater the public's confidence in its fairness; and

- The interest of individual market participants and their customers in transparency levels varies and regulators need to assess the appropriate level of transparency in any particular product market with considerable care.

(a) Pre-trade transparency

Principle 1: The price and volume of firm orders should generally be transparent to the public. However, regulators may choose not to require pre-trade transparency for certain types of market structures and orders. In these circumstances, they should consider the impact of doing so on price discovery, fragmentation, fairness and overall market quality.

Pre-trade transparency involves a market participant making a bid or offer (e.g., price and volume), thereby giving information to the market. The cost of taking the risk and providing information to the market is offset by the possibility of finding a contra-side and, in the case of maker/taker exchanges, by monetary compensation when an order is executed.

Pre-trade transparency plays an important role in mitigating the potentially adverse impact of market fragmentation (which, as noted previously, is a natural result of broader market developments rather than a direct consequence of dark trading) as well as in promoting the efficiency of the overall price formation process and providing information to market participants to enable them to obtain the best terms of execution.[88] Pre-trade transparency provides a further role by providing information to market participants of trading opportunities that they may be able to utilise.

With regard to dark pools and dark orders, regulators need to clarify the types of orders that

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87 IOSCO Transparency Report, pages 4 - 5.

88 CESR report ref CESR/09-355, *Impact of MiFID on Equity Secondary Markets Functioning*, June 2009, pages 22 & 29, available at http://www.cesr-eu.org/popup2.php?id=5771.

will be considered firm orders. For example, actionable IOIs[89] are intended to attract immediately executable order flow to the trading venue and present a unique issue that regulators should examine. Regulators should consider treating actionable IOIs as firm public quotes, which should as such be displayed.

With respect to pre-trade transparency, the Technical Committee:

- notes that, although dark liquidity has long existed as a way for traders to preserve anonymity and execute orders with minimal market impact, the automation of dark pools and their widespread availability are a more recent phenomenon; moreover, the business strategies behind the use of dark liquidity have changed (e.g., some users of dark pools break-up large orders into smaller ones);

- recognises that different market segments have different trading needs depending on the type of order (e.g. large orders may incur market impact costs if subject to full pre-trade transparency obligations);

- acknowledges these needs, and therefore suggests that it may be appropriate to have different levels of pre-trade transparency apply to different market structures or different order types; and

- recognises that pre-trade transparency is an issue under review in many jurisdictions.

Regulators may not require pre-trade transparency for certain types of market structures (e.g. call markets, reference-pricing venues) or certain types of orders (e.g. large orders of institutional investors that do not wish such orders to be displayed), taking into account the impact on price discovery, fragmentation, fairness and overall market quality considering in particular the relative overall proportion of dark trading compared to lit trading.[90]

In general, however, regulators seek to promote a trading system that fosters order interaction, takes into account the costs and benefits to investors of limited pre-trade disclosure and seeks to ensure that all investors, in particular retail investors, receive best execution. Regulators should thus continually monitor the use of dark pools and dark orders in transparent markets to consider whether there are potential risks to the price discovery process.

(b) Post-trade transparency

Principle 2: Information regarding trades, including those executed in dark pools or as a result of dark orders entered in transparent markets, should be transparent to the public. With respect to the specific information that should be made transparent, regulators should

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89 IOIs are deemed to be actionable when they explicitly or implicitly inform the recipient about available trading interest within a dark pool with the best quoted prices or better.

90 Some regulatory regimes may permit investors to keep their trading interest to themselves and not compel them to quote it publicly, as long as they do not share it.

consider both the positive and negative impact of identifying a dark venue and/or the fact that the trade resulted from a dark order.

Post-trade transparency is the dissemination of information about trades to the public after the trade has occurred. As stated earlier, post-trade transparency is important for the price discovery process and the efficient functioning of markets. For example, reduced information asymmetries provide investors a better informed view of the market, improve the price discovery process and have a potentially positive effect on market liquidity, thus enhancing market confidence. Post-trade transparency can play a role in mitigating the potential negative impact of market fragmentation[91] by revealing which market has offered the best price.

The Technical Committee noted in section 13.3 (Securities Exchanges and Trading Systems) of IOSCO's February 2008 Objectives and Principles of Securities Regulation report that "Information on completed transactions should be provided on the same basis to all participants. Full documentation and an audit trail must be available"[92] Whilst this reference was made in relation to exchanges primarily, it is equally applicable to other types of trading platforms. As noted above, the importance of providing such information aids in the price discovery process.

The Technical Committee notes that dark pools in many jurisdictions are already required to publicly disclose information about executed trades. This information does not, however, necessarily identify the trading venue on which the trade was executed. Regulators should consider whether it is appropriate to require the identity of the dark pool operator to be revealed and, if so, how (e.g. trade by trade and real time; trade by trade and end of day; or end of day and aggregate volumes in individual stocks).

In this context, clear reporting rules and standards, including certainty about which party to a trade should report the trade, may assist regulators in ensuring post-trade information is accurate, complete and comparable. In addition, regulators should consider the benefits of having a consolidated tape to report all trades from all venues, both lit and dark.

Topic 2: Priority of Transparent Orders

Principle 3: In those jurisdictions where dark trading is generally permitted, regulators should take steps to support the use of transparent orders rather than dark orders executed on transparent markets or orders submitted into dark pools. Transparent orders should have priority over dark orders at the same price within a trading venue.

Regulators that generally permit dark trading in their jurisdiction should look at ways to incentivize market participants within the regulatory framework to use transparent orders. The phrase in the principle, *rather than dark orders*, does not necessarily mean that dark orders in all cases should be discouraged. Rather, the key interest is in taking steps to ensure that there are *adequate transparent orders* in the marketplace. This might be facilitated, for example, by providing for trade through protection for transparent orders. Dark orders that

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91 Comments earlier in the Final Report regarding fragmentation being a natural result of broader market developments are equally applicable in relation to the discussion of post-trade transparency here.

92 IOSCO Objectives and Principles of Securities Regulation report, February 2008, page 43.

interact with the open orderbook should generally match with other undisplayed and displayed orders according to the price-visibility-time priority. The promotion of transparent orders helps to ensure that sufficient liquidity remains in transparent markets to support the price formation process and the orderly overall functioning of equity markets.

In determining whether incentives for displayed orders are appropriate, regulators should take into account the nature of the equities market and its operating rules and the pre- and post-trade transparency regime. Regulators may also wish to consider the interaction of orders between and within venues. Thus, for example, rather than incentivising the use of transparent orders on transparent markets, regulators may choose to have limited exceptions to pre-trade transparency (e.g. by limiting waivers in those jurisdictions in which they are available).

Topic 3: Reporting to Regulators

Principle 4: Regulators should have a reporting regime and/or means of accessing information regarding orders and trade information in venues that offer trading in dark pools or dark orders.

In order to understand the market structure issues posed by dark pools and to monitor trends in trading and trading behaviour for regulatory purposes, it is important that regulators have access to accurate, timely and detailed information regarding trades executed through dark pools, as well as dark orders traded on transparent markets. Important objectives include (1) seeking to ensure the ability of a regulator to monitor and detect trading activity across markets and products that may give rise to market integrity issues; and (2) seeking to ensure that the regulator possesses a sufficient level of detail and aggregation of order and trading data across markets/products so that it can reliably identify the nature of the trading activity and market developments and properly monitor the development of dark pools and dark orders in their jurisdictions. Key information would include the price, symbol, volume, parties to the trade and the venue upon which the trade was executed. The Technical Committee notes that in general, regulators already have the authority to request information regarding trades conducted in dark pools or resulting from dark orders.

It is particularly important for regulators to have access to accurate information regarding the volume of trading that occurs in dark pools as well as the volume of trading that occurs as a result of dark orders executed on transparent markets. In many cases, dark pool operators make public volume statistics that may be misleading as they may include routed orders to other trading centres or other forms of "double counting." Accurate reporting to regulators or access of regulators to information should help to discourage such misleading practices.

Regulators should therefore require that information recorded and provided to them accurately reflects the trading conducted in dark pools and dark orders in transparent markets, and that trading facilities provide such information in a timely fashion and using common conventions (e.g., how to treat orders that are routed away for execution).

Regulators may wish to use this information for a number of purposes, including assisting in tracing orders for market monitoring/surveillance purposes.

The Technical Committee notes that these regulatory purposes may be achieved by different ways. For example, information could be provided to regulators on an ongoing basis or upon

request. In determining the appropriate regime, regulators should consider the nature of the particular market and the applicable pre- and post-trade transparency regime.

Topic 4: Information Available to Market Participants about Dark Pools and Dark Orders

Principle 5: Dark pools and transparent markets that offer dark orders should provide market participants with sufficient information so that they are able to understand the manner in which their orders are handled and executed.

It is important that market participants understand the way in which dark pools and dark orders in transparent markets operate.

In its February 2008 Objectives and Principles of Securities Regulation report, the Technical Committee noted, in relation to order routing and trade execution, that "[t]he system's order routing procedures must be clearly disclosed to the regulator and market participants. They must be applied fairly and should not be inconsistent with relevant securities regulation (e.g. client precedence or prohibition of front running or trading ahead of customers). The order execution rules must be disclosed to the regulator and to market participants. They must be fairly applied to all participants... The rules and operating procedure governing these matters should be available to market participants"[93]

Dark pools or transparent markets offering dark orders should ensure that market participants are provided with detailed explanations of:

- how trading occurs;[94]
- how dark orders interact with transparent orders;
- which orders have priority;
- whether IOIs are disseminated, what information they include and to whom they are disseminated; and
- policies and procedures that are intended to facilitate the management and disclosure of conflicts of interest and that provide clarity around who has access to information about the dark pool and/or dark orders.

This information should be provided to market participants so that every participant has the tools necessary to understand the nature and risks of trading in that market. This will

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93 IOSCO Objectives and Principles of Securities Regulation report, February 2008, page 44.

94 For example, trading facilities should be clear about the level of anonymity given to the participant's orders, whether anti-gaming controls are in place, whether IOIs are allowed and the types of information contained in the IOI, what type of order flow populates the dark pool and the nature of the interaction between client and proprietary order flow. Comprehensive lists of questions are contained in a number of publications, for example, Greenwich Associates, *The Top Ten Questions for Dark Pool Providers*, July 2008; ITG, *Are You Playing in a Toxic Dark Pool? A Guide to Preventing Information Leakage*, June 2008; Aité Group, *Dark Pools 2009, Not so Dark Anymore*, September 2009; and TABB Group, *Trading in the Dark in Europe: Choice and Complexity on the Cusp of Change*, October 2009.

facilitate informed decision making regarding potential trades. It will also help to ensure that trading is conducted in a fair, orderly and efficient manner. Such information should be provided in trading manuals, policies and procedures and rulebooks for trading facilities that offer dark orders and dark pools.[95]

Regulators should consider requiring better disclosure of information to market participants by dark pool operators and operators of transparent markets that offer dark orders. Furthermore, regulators should consider whether to examine/inspect such operators (periodically or on a *for cause* basis) concerning the disclosure to market participants of material information as described above.

Topic 5: Regulation of the Development of Dark Pools and Dark Orders

Principle 6: Regulators should periodically monitor the development of dark pools and dark orders in their jurisdictions to seek to ensure that such developments do not adversely affect the efficiency of the price formation process, and take appropriate action as needed.

In its 2006 report entitled *Regulatory Issues Arising from Exchange Evolution*,[96] the IOSCO Technical Committee noted that:

- Regulatory authorities should have adequate arrangements to keep the changing market environment under review and to identify emerging issues in a timely fashion;

- Regulatory authorities should assess whether the changes being made by exchanges require any adjustments to the regulatory framework for an individual exchange or for exchanges generally, and should address any such need for changes promptly; and

- Regulatory authorities should carefully assess the impact on resources of any changes to the regulatory model for exchanges, and ensure that the core regulatory obligations and operational functions of exchanges are appropriately organised and sufficiently resourced.[97]

Whilst these comments were originally made in relation to competing exchanges, they equally apply to dark pools and orders. As more dark pools evolve and equity market structures continually change, it is important that regulators monitor the development of dark pools to ensure that they do not adversely impact on the price discovery process. Moreover, as discussed in topic 3, it is important for regulators to monitor the level of trading being

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95 The Technical Committee recognises that it is equally important for a market participant to understand their intermediary's smart order routing logic, since it may direct customer orders to one or more dark pools, or may direct dark orders. Thus, although it is beyond the scope of this project and the remit of SC2, it is good practice for regulators to consider appropriate intermediary disclosure obligations to market participants regarding how and when orders, placed by the intermediary on behalf of its customers, may be handled (manually or electronically), including when their orders may be dark or directed to dark pools.

96 *Regulatory Issues Arising from Exchange Evolution*, Final Report, Report of the Technical Committee of IOSCO, November 2006, available at http://www.iosco.org/library/pubdocs/pdf/IOSCOPD225.pdf.

97 Ibid. at page 31.

executed through dark pools along with the volume of dark orders being executed on transparent markets to help ensure that sufficient liquidity is being displayed on transparent markets. Where regulators are concerned that the development of dark trading may adversely impact the price discovery process, they should take appropriate action to address such a distortion. Such steps could include a review of the regulatory framework under which the execution of dark orders may take place with the goal of increasing pre-trade transparency. This could lead, in some jurisdictions, to a reduction of such dark orders.