ASIC
Australian Securities & Investments Commission

CONSULTATION PAPER 168

Australian equity market structure: Further proposals

October 2011

About this paper

This consultation paper is for market operators and market participants, as well as investors, intermediaries and issuers of products quoted on the Australian Securities Exchange (ASX).

It proposes ASIC market integrity rules to address regulatory issues resulting from recent market developments in Australia. It focuses on issues relating to:

- the automated trading environment, including high-frequency trading;
- volatility controls for extreme price movements;
- enhanced data for market surveillance;
- the product scope for best execution; and
- pre-trade transparency and price formation in the market.

Many of these issues were canvassed in Consultation Paper 145 *Australian equity market structure: Proposals* (CP 145). This paper builds on these issues for further consultation.

About ASIC regulatory documents

In administering legislation ASIC issues the following types of regulatory documents.

Consultation papers: seek feedback from stakeholders on matters ASIC is considering, such as proposed relief or proposed regulatory guidance.

Regulatory guides: give guidance to regulated entities by:

- explaining when and how ASIC will exercise specific powers under legislation (primarily the Corporations Act)
- explaining how ASIC interprets the law
- describing the principles underlying ASIC's approach
- giving practical guidance (e.g. describing the steps of a process such as applying for a licence or giving practical examples of how regulated entities may decide to meet their obligations).

Information sheets: provide concise guidance on a specific process or compliance issue or an overview of detailed guidance.

Reports: describe ASIC compliance or relief activity or the results of a research project.

Document history

This paper was issued on 20 October 2011 and is based on the Corporations Act as at that date.

Disclaimer

The proposals, explanations and examples in this paper do not constitute legal advice. They are also at a preliminary stage only. Our conclusions and views may change as a result of the comments we receive or as other circumstances change.

Contents

The consultation process

You are invited to comment on the proposals in this paper, which are only an indication of the approach we may take and are not our final policy.

As well as responding to the specific proposals and questions, we also ask you to describe any alternative approaches you think would achieve our objectives.

We are keen to fully understand and assess the financial and other impacts of our proposals and any alternative approaches. Therefore, we ask you to comment on:

- the likely compliance costs;
- the likely effect on competition; and
- other impacts, costs and benefits.

Where possible, we are seeking both quantitative and qualitative information.

We are also keen to hear from you on any other issues you consider important.

Your comments will help us develop our policy on market structure. In particular, any information about compliance costs, impacts on competition and other impacts, costs and benefits will be taken into account if we prepare a Regulation Impact Statement: see Section H, 'Regulatory and financial impact'.

Making a submission

All information (including name and address details) contained in submissions will be made available to the public on the ASIC website unless you indicate that you would like all or part of your submission (including any financial information) to remain in confidence. Automatically generated confidentiality statements in emails do not suffice for this purpose. Respondents who would like part of their submission to remain in confidence should provide this information marked as such in a separate attachment. Legal requirements, such as those imposed by the *Freedom of Information Act 1982*, may affect the confidentiality of your submission.

We would be grateful if you can nominate a point of contact in your submission so we may contact you further if necessary.

Comments should be sent by 10 February 2012 to:

Antonia Fong
Market & Participant Supervision
Australian Securities and Investments Commission
Level 5, 100 Market Street
Sydney NSW 2000
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What will happen next?

Stage 1	20 October 2011	ASIC consultation paper released with proposed draft market integrity rules
Stage 2	10 February 2012	Comments due on the consultation paper
Stage 3	April–May 2012	Regulatory guide released ASIC market integrity rules are made

Note: The deadline for comment was extended from 20 January 2012 to 10 February 2012 on 8 December 2011.

ASIC will make an assessment in the first quarter of 2012 whether there needs to be further public consultation on any revised draft market integrity rules. If so, this may affect the timing of the regulatory guide and final market integrity rules.

Making of the proposed market integrity rules is subject to Ministerial consent under s798G of the Corporations Act.

PART 1: OVERVIEW

Part 1 provides an overview of this consultation paper and includes:

- a section called ‘About this consultation paper’, which describes the purpose and structure of the paper (see Section A); and
- a ‘Summary of market developments and proposals’, which includes an update on regulatory developments, a summary of how we consider equity markets are evolving, and our proposals to respond to these developments (see Section B).

A About this consultation paper

Key points

This consultation paper takes forward some of the issues raised in Consultation Paper 145 *Australian equity market structure: Proposals* (CP 145) in 2010. We are proposing a number of changes and additions to ASIC market integrity rules that we consider are necessary to keep pace with technological developments and global financial market trends.

Purpose of this consultation paper

1 This consultation paper builds on some of the issues raised in Consultation Paper 145 *Australian equity market structure: Proposals* (CP 145) in 2010.[1] We are proposing a number of changes and additions to the ASIC Market Integrity Rules (ASX Market) 2010, ASIC Market Integrity Rules (Chi-X Australia Market) 2011 and ASIC Market Integrity Rules (Competition in Exchange Markets) 2011 that we consider are necessary to keep pace with technological developments and global financial market trends. These proposals are increasingly important in an environment with competing exchange markets.

> Note: In this paper 'ASIC Market Integrity Rules (ASX)' refers to ASIC Market Integrity Rules (ASX Market) 2010, 'ASIC Market Integrity Rules (Chi-X)' refers to ASIC Market Integrity Rules (Chi-X Australia Market) 2011 and 'ASIC Market Integrity Rules (Competition)' refers to ASIC Market Integrity Rules (Competition in Exchange Markets) 2011.

Outcome of CP 145—Further consultation and new issues

2 On 4 November 2010, ASIC released a consultation package on enhancing the regulation of Australia's equity markets, including the rules necessary to address the risks associated with the introduction of competition between exchange markets and the issues arising from recent market developments. The consultation package included:

(a) CP 145;

(b) Report 215 *Australian equity market structure* (REP 215); and

(c) *Australian equity market structure: Draft market integrity rules*.

3 Report 237 *Response to submissions on CP 145 Australian equity market structure: Proposals* (REP 237) contains detailed information about the

[1] This paper does not discuss issues relating to post-trade infrastructure, such as clearing and settlement.

responses to specific proposals in CP 145. Copies of non-confidential submissions to CP 145 are available on the ASIC website at www.asic.gov.au/cp under CP 145.

4 Respondents were generally appreciative of our holistic approach to consulting on the market structure framework. There was widespread support for ASIC to focus on the rules necessary to enable the commencement of competition and allow industry more time to engage with the remaining proposals. We stated that we intended to consult further on these important issues. This paper is that consultation.

5 On 29 April 2011, ASIC released new market integrity rules for competition in exchange markets: see ASIC Market Integrity Rules (Competition) and Regulatory Guide 223 *Guidance on ASIC market integrity rules for competition in exchange markets* (RG 223). Consistent with messages from industry, only those market integrity rules strictly necessary for the introduction of competition were implemented. The majority of these rules commence operation on 31 October 2011, the earliest date that competition can commence. These rules provide a robust, minimum regulatory framework to enable the introduction of competition and are intended to manage existing regulatory issues such as price formation and extreme price movements.

6 Since that time, ASIC has been monitoring the development of these and other emerging issues and events in the domestic and global context. This paper proposes enhancements to supplement the robust regime that is already in place. We believe that these changes maximise opportunities for innovation while maintaining market integrity and mitigating the risks to price formation.

Draft market integrity rules

7 We have set out in a separate document, *Australian equity market structure: Further draft market integrity rules*, our proposed amendments to the ASIC Market Integrity Rules (ASX), ASIC Market Integrity Rules (Chi-X) and ASIC Market Integrity Rules (Competition) as marked-up draft versions of the relevant sections of the existing rules. We will consider re-consulting briefly (i.e. for three weeks) on a revised draft version of each set of rules before making them.

Who should read this consultation paper

8 The proposals in this consultation paper apply to:

(a) holders of an Australian market licence (market operators); and

(b) domestic and foreign participants of market operators.

9 Most of these proposals are limited to trading in products that are quoted on ASX (including those that will be available for trading on Chi-X), but we are interested in your views on the extension of the proposals to other equity markets and futures markets: see paragraph 13.

10 Three of the proposals apply to trading of products more broadly than those quoted on ASX.[2]

Scope of proposals

11 The proposals in this consultation paper apply to activities or conduct of persons in relation to the products outlined in Table 1.

Table 1: Scope of the proposals

Subject of proposal	Scope
Automated trading environment (Section C)	All products quoted on ASX
Extreme price movements (Section D)	S&P/ASX 200 products, associated domestic index exchange-traded funds (ETFs) and the ASX SPI 200 Index Future (SPI Future)
Enhanced data for market surveillance (Section E)	All products quoted on ASX
Best execution (Section F)	ASX-quoted interest rate securities, options, warrants and AQUA products
Pre-trade transparency and price formation (Section G)	Shares, managed investment schemes and CHESS Depository Interests (CDIs) admitted to quotation on ASX (collectively referred to as 'equity market products')

Who will be affected by the proposals?

12 We expect that the proposals in this consultation paper will affect:

(a) market participants and market operators, because the proposals apply to them directly;

(b) persons who access exchange markets through a market participant's infrastructure, because certain proposals relate to the relationship between them and market participants, including the way they access exchange markets; and

[2] Proposal C5, which aims to clarify guidance for market operator systems and controls, applies to all operators of Australian domestic licensed markets; and Proposals D2 (1) and D2 (2), which relate to a volatility control and anomalous order entry controls for the ASX SPI 200 Index Future, apply to the operator of ASX 24.

(c) frequent investors in and issuers of products quoted on ASX—the proposals relate to how markets in Australia will function, including protections for investors and the efficiency of the price formation process on exchange markets, which will have a potential impact on asset valuation and capital raising.

Future expansion of scope (e.g. futures markets)

13 We intend at a future time to expand the proposals in this paper to a wider scope of products (e.g. products quoted on ASX 24 (formerly Sydney Futures Exchange (SFE)) and other Australian domestic licensed financial markets) and seek your feedback on any significant issues that stakeholders may have in principle with such an expansion. These developments will be considered in ASIC's market integrity rule harmonisation process (see paragraph 21) and will be consulted on in a separate process.

Feedback sought

14 We are seeking feedback on:

(a) our specific proposals for amending the ASIC Market Integrity Rules (ASX), ASIC Market Integrity Rules (Chi-X) and ASIC Market Integrity Rules (Competition)—identified as 'proposals';

(b) the draft amendments to the ASIC Market Integrity Rules (ASX), ASIC Market Integrity Rules (Chi-X) and ASIC Market Integrity Rules (Competition) that reflect the proposals in this paper (see the separate document, *Australian equity market structure: Further draft market integrity rules*); and

(c) issues that require further consideration—identified as 'issues'. We note that, if we develop proposals to address some of these issues, legislative amendments may be required with further consultation.

B Summary of market developments and proposals

Key points

This section provides an update on recent regulatory developments and summarises the recent developments in the Australian market. For more detailed information, see REP 215 and Section B of CP 145.

This section also provides a summary of the regulatory proposals set out in this consultation paper to build on the robust regulatory framework already in place: see Table 2.

We intend to set maximum penalties which can be imposed for contravention of each of the proposed market integrity rules. We are seeking your feedback on the appropriate maximum penalty for contravention of each of the rules.

15 In this section, we outline the context in which the proposals in this consultation paper are made. We describe some of the regulatory developments surrounding this consultation that may affect the outcomes of this process. We also describe the recent developments in the Australian market that provide the impetus for our proposals.

16 A summary of the regulatory proposals set out in this consultation paper is provided in Table 2.

Recent regulatory developments

Competition in exchange markets

17 On 4 May 2011, the Australian Government granted a licence under s795B(1) of the *Corporations Act 2001* (Corporations Act) to Chi-X Australia Pty Limited (Chi-X) to operate an Australian financial market.[3]

18 This followed ASIC's release of new market integrity rules for competition in exchange markets on 29 April 2011—the ASIC Market Integrity Rules (Competition): see paragraph 5. These rules are intended to mitigate the regulatory issues resulting from the introduction of competition in exchange markets for trading in equity market products: see also RG 223.

[3] Subject to Chi-X meeting certain conditions.

19 The earliest date that competition in trading of ASX-listed securities can commence is 31 October 2011. This is the date that the majority of the ASIC Market Integrity Rules (Competition) commence.

> Note: Some of the ASIC Market Integrity Rules (Competition) will have an impact from 31 October 2011, whether or not competition commences on that date (e.g. the implementation of anomalous order thresholds and extreme cancellation ranges in Chapter 2 of those rules).

20 On 17 October 2011, ASIC confirmed Chi-X had satisfied its licence pre-conditions before it could commence operations. On the same day, Chi-X announced that it intended to commence its market with a 'soft launch' on 31 October 2011.

Market integrity rule harmonisation

21 In Consultation Paper 131 *Proposed ASIC Market Integrity Rules: ASX and SFE markets* (CP 131), we stated our intention to conduct a harmonisation exercise so that only one set of ASIC market integrity rules applies to all like markets. We intend to begin consideration of this process from the second quarter of 2012—that is, once feedback on this consultation paper has been consolidated and the ASIC Market Integrity Rules (Competition), ASIC Market Integrity Rules (ASX) and ASIC Market Integrity Rules (Chi-X) are finalised.

22 We will review existing market integrity rules to make any adjustments required as a result of our experience in administering the rules, the developments in the market, and the international regulatory environment. We will consider, in this process, which existing rules and principles (including those that underlie the proposals in this paper) can be harmonised across trading on other domestic licensed markets in Australia (e.g. ASX 24, the National Stock Exchange, SIM Venture Securities Exchange and the Australia Pacific Exchange).

ASIC conversion of ASX and SFE guidance

23 Consultation Paper 152 *ASIC's conversion of ASX and SFE guidance: General operational obligations* (CP 152) was released in March 2011 and began our process of converting the substance of pre-existing ASX and SFE guidance, as appropriate, into ASIC regulatory guides. This process will continue, taking into account any future work on market integrity rule harmonisation: see paragraph 21.

Recent market developments

24 This section summarises the recent developments in the Australian market. For more detailed information, see REP 215 and Section B of CP 145.

Growth in automated trading

25 Equity markets globally are undergoing considerable change. They are now overwhelmingly electronic, and predominantly automated. Technology has increased the speed, capacity, automation and sophistication of trading for market operators and market participants. It has also opened the door for new types of market participants with innovative trading strategies.

26 High-frequency traders (HFTs) are becoming more prevalent. Feedback ASIC has received from the industry and comments in the press suggest that HFTs may now account for 15–25% of equity market turnover in Australia. This is up from the 3–4% estimated by market participants in 2009 and reported in ASX's February 2010 review, *Algorithmic trading and market access arrangements*[4] (ASX Review). We anticipate this figure will grow, with the expected introduction, in the fourth quarter of 2011, of Chi-X and ASX's PureMatch order book, as well as the ASX's new data centre with enhanced co-location facilities. This is because HFT strategies are most successful in a low-latency multimarket environment.

27 It is generally understood that these trends are driving market practice, irrespective of whether competition between market operators is introduced. However, the introduction of competition in exchange markets will provide greater impetus for these changes.

28 Growth in automated trading has contributed to greater efficiency of trading, but it has also introduced new risks to market integrity. In analysing the 6 May 2010 'flash crash' in the United States, the Securities and Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC) identified a triggering event and a subsequent confluence of market conditions and trading strategies as the cause of the market disruption.[5]

29 According to the SEC and CFTC, an automated execution of a large sell order in the E-mini (an equity-based index future traded on the Chicago Mercantile Exchange (CME)) was the trigger for additional trading by HFTs and other traders in the futures market, as well as cross-market arbitrageurs (thereby affecting the equities markets).

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[4] ASX Review, *Algorithmic trading and market access arrangements*, ASX Limited, 8 February 2010, www.asxgroup.com.au/media/PDFs/20100211_review_algorithmic_trading_and_market_access.pdf.
[5] Joint CFTC–SEC Report, *Findings regarding the market events of May 6, 2010*, CFTC and SEC, 30 September 2010, www.sec.gov/news/studies/2010/marketevents-report.pdf.

Growth in number of execution venues and fragmentation of order flow

30 The growth of new execution venues and dark trading in North America and Europe has resulted in significant fragmentation of order flow: see paragraphs 77–78 of CP 145 for a summary of overseas experience where there is competition for trading services. In Australia, the number of crossing systems has trebled since 2009[6] to 15: see Table 25 in Appendix 2. Competing exchange markets will mean that market information will fragment between markets, which may result in the erosion of liquidity in pre-trade transparent markets and magnify surveillance challenges.

Expansion of trading in products accessible to retail clients

31 The retail market in Australia for trading in options, warrants and AQUA products is reasonably large and liquid. Trading in interest rate securities is intended to become more accessible to retail clients, particularly due to the intended introduction of a retail market in Commonwealth Government Securities (CGS).[7] While competition for trading in these additional products may not occur in the immediate term, we expect that there will be increased interest in quoting these products on other markets over time.

ASIC's proposed regulatory approach

32 In responding to these issues, we are guided by two of ASIC's three priorities to ensure:

(a) confident and informed investors and financial consumers; and

(b) fair and efficient financial markets.[8]

33 We are committed to ensuring that the Australian equity market has effective price formation and provides fair, orderly and transparent trading of financial products for fundamental investors,[9] both small and large. This will in turn facilitate efficient capital raising for companies. By focusing on market integrity, we aim to ensure that:

(a) prices are available;

(b) consumers receive fair prices (best execution);

(c) markets operate efficiently and in an orderly way, even when there is volatility; and

(d) the public market continues to be liquid and efficient.

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[6] The number of crossing systems in 2009 was derived from the reports made to ASIC under Rule 4.3.1 of the ASIC Market Integrity Rules (Competition) since May 2011. These reports indicated the time at which each crossing system commenced.
[7] Deputy Prime Minister and Treasurer, Media Release No. 091, *A competitive and sustainable banking system*, 12 December 2010, http://ministers.treasury.gov.au/DisplayDocs.aspx?doc=pressreleases/2010/091.htm&pageID=003&min=wms&Year=&DocType.
[8] ASIC, *Our role*, www.asic.gov.au/asic/ASIC.NSF/byHeadline/Our%20role.
[9] A fundamental investor is a person that buys or sells a security based on an assessment of the intrinsic value of the security.

34 We are proposing a regulatory approach to reflect the changes in market structure, including competition in exchange markets, to build on the robust regime already in place. We aim to maximise market efficiency and opportunities for innovation, while mitigating risks to price formation and delivering the best outcome for investors. We will continue to focus on the interests of listed companies, fundamental investors and Australia's competitiveness as a regional financial centre.

35 We have looked closely at arrangements overseas, including the lessons learned from events like the 'flash crash' of 6 May 2010 in the United States. We want to build on the strengths of the Australian market, such as its existing whole-of-market supervisory arrangements and its history of sound operation. Many overseas regulators have focused on issues relating to price formation in fragmented markets, electronic trading and controls to prevent extreme price movements.[10] We continue to closely monitor developments overseas as we develop a regulatory approach in Australia to mitigate the challenges of a competitive, electronic marketplace.

36 ASIC's market surveillance duties have expanded since August 2010, when we commenced market supervision and real-time surveillance of trading. We ensure that Australian financial markets are efficient and fair through surveillance of the market and by taking pre-emptive action to prevent possible market misconduct. In addition to our focus on insider trading and market manipulation, matters concerning order management, including problematic algorithms, have been identified. We are continuing to work with market participants and their clients to reduce the risk of algorithms having a negative impact on market integrity. We aim to implement a regulatory approach that supports our supervisory function and keeps pace with market developments.

37 Table 2 summarises the regulatory proposals set out in this consultation paper and related matters.

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[10] ESMA Consultation Paper, *Guidelines on systems and controls in a highly automated trading environment for trading platforms, investment firms and competent authorities* (ESMA/2011/224), ESMA, 20 July 2011; IOSCO Consultation Report, *Regulatory issues raised by the impact of technological changes on market integrity and efficiency* (IOSCOPD354), Technical Committee of IOSCO, 7 July 2011; CFTC Technology Advisory Committee Report, *Recommendations on pre-trade practices for trading firms, clearing firms and exchanges involved in direct market access*, CFTC Pre-Trade Functionality Sub-committee, 1 March 2011, www.cftc.gov/ucm/groups/public/@swaps/documents/dfsubmission/tacpresentation030111_ptfs2.pdf; Joint CFTC–SEC Report, *Recommendations regarding regulatory responses to the market events of May 6, 2010*, Joint CFTC–SEC Advisory Committee on Emerging Regulatory Issues, 18 February 2011, www.cftc.gov/ucm/groups/public/@aboutcftc/documents/file/jacreport_021811.pdf; IIROC News Release, *IIROC publishes and seeks comment on proposed amendments regarding regulation of short sales and failed trades*, IIROC, 25 February 2011, http://docs.ieiroc.ca/DisplayDocument.aspx?DocumentID=C969BBCD8A824437A30B775855B1DFD1&Language=en; IIROC Notice, *Proposed guidance on regulatory intervention for the variation or cancellation of trades* (10-0331), IIROC, 15 December 2010; European Commission Press Release, *Financial services: improving European rules for a more robust framework for all financial instruments (MiFID II)* (IP/10/1677), European Commission, 8 December 2010; Joint CSA–IIROC Position Paper, *Dark liquidity in the Canadian market* (23-405), 19 November 2010.

Table 2: Summary of regulatory proposals

Issue	Original proposal in CP 145	Revised proposal in this CP	Scope	Timing for implementation[11]
Automated trading environment Note 1: This includes access to markets via the connection of a market participant. Note 2: In part a response to the 'flash crash' of 6 May 2010.	We proposed that a market participant must ensure that all systems used to generate orders by it and its clients are: • appropriately tested; • monitored continuously during use; and • able to be immediately disabled. Note: This proposal was not implemented.	A market participant must: • test algorithms before use and before implementing material changes; • have direct and immediate control over all its trading messages, including pre-trade controls (e.g. the ability to prevent trading messages), real-time monitoring and post-trade analysis; • annually review systems and connectivity, and provide an attestation to ASIC that it has done so; and • have in place adequate business continuity arrangements.	All products quoted on ASX	6 months from commencement of the market integrity rules (except for the obligation to annually review systems and provide attestations to ASIC, which begins from 31 October 2012)
	We proposed that a market participant must: • ensure that its direct electronic access (DEA) clients meet certain standards and have a client contract in place; and • have adequate controls (e.g. pre-trade filters) and the ability to immediately disable client access. Note: This proposal was not implemented.	A market participant must: • understand the nature of its automated order processing (AOP)[12] client's business and the nature of any proposed delegation of this access before granting the client access; • ensure the AOP client has adequate procedures to monitor all trading through its order management system; • ensure all persons who use AOP understand the order management system and the requirements of the dealing rules and the market operator; • ensure the AOP client's order management system is tested before use and before implementing material changes; • ensure any algorithms used through the AOP are tested before use and before implementing material changes; and • ensure the AOP client has the required adequate financial resources to meet its obligations to the market participant. A market participant must have a legally binding agreement with each AOP client that is an Australian financial services (AFS) licensee.	All products quoted on ASX	6 months from commencement of the market integrity rules

[11] Our proposed timing for implementation relates to the commencement of the specific market integrity rules proposed in this paper, which apply as new or amended rules of the ASIC Market Integrity Rules (ASX), ASIC Market Integrity Rules (Chi-X) and ASIC Market Integrity Rules (Competition).

[12] The proposals in Section C of this paper are described as applying to AOP, which we referred to in CP 145 as DEA. In this paper, AOP is intended to include DEA activity. The AOP proposals in this section do not apply to access by retail clients through online broking services. This is because access arrangements differ and because, in circumstances where retail clients access online broking services, the market participant is providing the order management system to the client online under the DEA arrangement.

Issue	Original proposal in CP 145	Revised proposal in this CP	Scope	Timing for implementation[11]
	We asked whether ASIC should supplement the rules and existing guidance relating to a market operator's systems and controls to better reflect the increasingly automated and high-speed nature of markets.	We propose to clarify through guidance our expectations for market operator systems and controls.	All domestic licensed markets	On release of guidance
Extreme price movements Note: In part a response to the 'flash crash'.	We proposed that a market operator must have: • the capability to immediately and automatically suspend trading in all exchange-traded products; Note: This proposal was not implemented.	A market operator must have: • the capability to immediately and automatically prevent trades from occurring outside a specified price band for 1 minute in a specific product if the price of the specific product moves by 15% in a 5-minute time period (and then resume trading with an auction if equilibrium is not restored). This would apply to S&P/ASX 200 products and the associated exchange-traded funds (ETFs), and would be based on a dynamic reference price; and • the capability to immediately and automatically prevent trades in the ASX SPI 200 Index Future (SPI Future) from occurring outside a specified price band for 1 minute if the index moves by 250 points in a 5-minute time period.	S&P/ASX 200 products (i.e. products traded on multiple markets) Associated domestic index ETFs SPI Future	6 months from commencement of the market integrity rules
	• pre-trade controls to prevent the entry of anomalous orders; and • transparent and predictable trade cancellation policies. Note: These proposals were implemented in Chapter 2 of ASIC Market Integrity Rules (Competition) to apply from 31 October 2011.	This may require consequential changes to existing market integrity rules to market operator order entry controls and trade cancellation ranges to reflect the dynamic volatility control.		Corresponds with implementation of volatility control (above)

Issue	Original proposal in CP 145	Revised proposal in this CP	Scope	Timing for implementation[11]
Enhanced data for market surveillance Note: In part a response to the 'flash crash'.	We stated our intention to require market participants to submit order and trade reports with unique identifiers for surveillance purposes, including: • unique DEA client codes; • unique codes for algorithms; • unique client identifiers; and • unique execution venue identifiers. Note: This was not implemented.	A market participant must ensure that orders and trade reports, submitted to market operators and ASIC only, identify for surveillance purposes: • the execution venue (e.g. dark pools, ASX's Centre Point); • the category of client (e.g. principal, wholesale client, or retail client); • the origin of the order, including the client account identifier allocated by the participant, and the AFS licensed intermediary acting for the client, if applicable; and • the algorithm that generated the order, if applicable.	All products quoted on ASX	6–12 months from commencement of the market integrity rules
		A market participant must ensure that orders and trade reports, submitted to market operators and ASIC only, contain for surveillance purposes specific forms of unique market-wide client identifiers.	All products quoted on ASX	12–18 months from commencement of the market integrity rules
	We proposed that a market operator must synchronise its trading system clock to the Coordinated Universal Time (UTC(AUS)) with accuracy of +/– 20 milliseconds. Note: This proposal was implemented in Part 6.3 of ASIC Market Integrity Rules (Competition) to apply from 31 October 2011.	A market operator must synchronise its trading, compliance monitoring and reporting system clock to the UTC(AUS) with a precision of 1 microsecond, and accuracy of +/– 1 millisecond.	Market operators ASX and Chi-X	12 months from commencement of the market integrity rules
	We stated our intention to set a clock for market participant systems to synchronise to at a future time. Note: This was not implemented.	A market participant must synchronise its trading, compliance monitoring and reporting system clock to the UTC(AUS) with a precision of 1 millisecond, and accuracy of +/– 20 milliseconds, or, where the systems are co-located, with a precision of 1 microsecond and accuracy of +/– 1 millisecond.	Participants of ASX or Chi-X	12 months from commencement of the market integrity rules

Issue	Original proposal in CP 145	Revised proposal in this CP	Scope	Timing for implementation[11]
	We proposed (in CP 152) that a market participant must provide transaction data requested by ASIC under s912E of the Corporations Act in a standard format, and containing standardised information in a specified order. Note: This proposal was not implemented.	A market participant must provide transaction data requested by ASIC under the Corporations Act or ASIC Act, in a standard format, and containing a revised set of standardised information in a specified order.	Participants of ASX or Chi-X	6 months from commencement of the market integrity rules
Best execution	We proposed that a market participant must achieve best execution for trading in equity market products. Note: This proposal was implemented in Chapter 3 of ASIC Market Integrity Rules (Competition) to apply from 31 October 2011.	The scope of the best execution rule has been expanded to apply to products quoted on ASX (including equity market products, options, warrants and interest rate securities).	ASX-quoted interest rate securities, options, warrants and AQUA products	12 months from commencement of the market integrity rules
Pre-trade transparency	We proposed that market participants must display orders on a pre-trade transparent market, subject to exceptions for: • *blocks*—replacing the $1 million threshold for blocks with a tiered model; and Note: This proposal was not implemented. We harmonised the existing $1 million threshold across all markets in Rule 4.2.1 (Competition) to apply from 31 October 2011. • *price improvement* and *minimum size for dark orders*—orders above $20,000 executed with price improvement.	The exceptions to the requirement for a market participant to display orders on a pre-trade transparent market have been amended (as a package) as follows: • *blocks*—replacing the $1 million threshold for blocks with a tiered model; • *meaningful price improvement*—modifying the 'at or within the spread' exception to require meaningful price improvement (improvement of one tick or trade at midpoint); • *minimum size for passive dark orders*—increasing the minimum trade size for passive dark orders from $0 to $50,000 if there is a significant shift of liquidity into dark forms of liquidity (i.e. if the value of dark liquidity below block size increases by 50% over 3 years or less from July 2011);[13] and • reviewing other pre-trade transparency exceptions.	Equity market products	The package will apply 6 months from commencement of the market integrity rules. (This position will apply on release of guidance.)[14]

[13] We will make changes to the relevant rules to set the threshold to $50,000 only if the value of dark liquidity below block size increases by 50% over three years or less from July 2011.
[14] In the form of a regulatory guide or in a newsletter, published on ASIC's website.

Issue	Original proposal in CP 145	Revised proposal in this CP	Scope	Timing for implementation[11]
	Note: This proposal was not implemented. A $0 threshold was implemented in Rule 4.2.3 (Competition), without price improvement. We proposed that pre-trade transparent orders must take time priority over hidden orders. Note: This proposal was implemented in Rule 4.1.7 (Competition) to apply from 31 October 2011. We proposed that dark pool operators must periodically report to ASIC on the nature and activity of trading on the pool. Note: This proposal was implemented in Part 4.3 (Competition) to apply from 5 May 2011.			
	We proposed that a market operator must ensure that all post-trade information is and remains complete, accurate and up-to-date. Note: This proposal was implemented in Rule 5.1.4 (Competition) to apply from 31 October 2011.	The obligation to ensure post-trade information is complete, accurate and up-to-date has been expanded by requiring: • market participants and market operators to have in place systems and controls to ensure that they validate and verify that trades executed in reliance of a pre-trade transparency exception meet the criteria for the exception; and • market participants to keep for seven years records that demonstrate that they were entitled to rely on a pre-trade transparency exception.	Equity market products	From the commencement of the market integrity rules
		We propose to clarify that non-discretionary client orders should be executed immediately or displayed on an order book.	Equity market products	On release of guidance[15]

[15] In the form of a regulatory guide or in a newsletter, published on ASIC's website.

Penalties

38 This consultation paper does not propose specific penalties for contravention of the proposed ASIC market integrity rules. Where the proposal will require an amendment to an existing market integrity rule, consistent penalties will apply. We intend to discuss possible penalties for each market integrity rule with market participants and market operators during the consultation process.

39 For proposals that will require new market integrity rules, we are seeking feedback on the appropriate maximum penalty to be set for contravention of each proposed market integrity rule. The maximum penalty amount must not exceed $1 million.

40 We are proposing that each market integrity rule that includes a penalty amount will be categorised as Tier 1, Tier 2 or Tier 3. This is consistent with the existing penalty ranges under the ASIC Market Integrity Rules (ASX), ASIC Market Integrity Rules (Chi-X) and ASIC Market Integrity Rules (Competition). The maximum penalty amounts for each tier are set out in Table 3.

Table 3: Penalty amounts for ASIC market integrity rules

	Penalty amount set for the rule	Maximum pecuniary penalty that the court may order a person to pay	Maximum penalty that a person may pay under an infringement notice
Tier 1	$20,000	$20,000	$12,000
Tier 2	$100,000	$100,000	$60,000
Tier 3	$1,000,000	$1,000,000	$600,000

Proposal

B1 We propose to set a maximum penalty for contravention of each market integrity rule, depending on the nature of the rule.

Your feedback

B1Q1 What are your views on an appropriate maximum penalty for each of the proposed market integrity rules in this paper?

PART 2: RESPONSE TO CHANGES IN MARKET STRUCTURE

Part 2 details the regulatory proposals that we consider are necessary to address the issues in response to market structure changes. Part 2 addresses the following issues:

- *automated trading environment*—it is important that there are appropriate systems and controls in place to mitigate against disorderly trading conditions (see Section C);
- *extreme price movements*—such as those experienced on 6 May 2010 in the United States (see Section D);
- *enhanced data for market surveillance*—to monitor new trading developments and help to maintain the integrity of the Australian market (see Section E);
- *best execution*—market participants already have choice in where and how to execute client orders, and these decisions should be based on the best interests of clients for all products traded on more than one execution venue (see Section F); and
- *pre-trade transparency and price formation*—to protect the price formation process on-market and reward investors for posting limit orders (see Section G).

C Automated trading environment

Key points

We propose to build on existing ASIC Market Integrity Rules (ASX) and ASIC Market Integrity Rules (Chi-X) with requirements for automated order processing (AOP) and algorithmic programs, including:

- testing of systems;
- direct and immediate control over all market participant trading messages (e.g. oversight and monitoring of systems and the ability to prevent trading messages via methods such as a 'kill switch');
- adequate business continuity arrangements; and
- amendments to the certification process for AOP systems.

For direct electronic access (DEA), we propose minimum controls, including:

- setting minimum standards for relationships between market participants and DEA clients; and
- a legally binding agreement between market participants and DEA clients that are AFS licensees.

We propose to clarify through guidance our expectations for market operators' systems and controls in relation to testing arrangements, business continuity, management of capacity requirements, security, and introducing changes to the market appropriately.

We seek your feedback on market making in the Australian cash equity market, including whether there is a basis for providing short selling relief.

41 This section is in six parts:

C1: Overview of automated electronic trading;

C2: Trading behaviour of concern;

C3: Algorithmic programs and automated order processing;

C4: Direct electronic access;

C5: Market operator systems and controls; and

C6: Market making in the cash equity market.

Scope

42 The proposals in this section apply to activities or conduct of persons in relation to all products quoted on ASX (including those that will be available for trading on Chi-X).

Note: For convenience, we restate the scope at each proposal.

C1: Overview of automated electronic trading

43 One of the most significant recent developments in Australian and global markets has been the dramatic growth in automated electronic trading. A growing number of market participants offer AOP[16] to their clients (through DEA systems). Technology has increased the speed, automation and sophistication of trading for market participants. It has also opened the door to:

(a) automated (algorithmic) trading strategies that are becoming increasingly complex;

(b) new types of high-frequency traders (HFTs); and

(c) the advancement of mechanisms for accessing markets without becoming a direct participant of a market.

44 These developments have contributed to greater efficiency of trading, but they have also introduced new risks to market integrity. For example, the speed and complexity of trading during the 6 May 2010 'flash crash' in the United States was a reminder of the need for a greater focus on controls.

45 There are already robust controls in the Australian equity market to mitigate some of the risks from automated electronic trading: see 'Existing rule framework' at paragraphs 47–48. However, we consider there are a number of necessary enhancements to these controls to more fully address emerging risks as well as to align our regime with the International Organization of Securities Commissions (IOSCO) principles[17] and international best practice.

46 There are many terms for the different steps, processes and components of the electronic trading cycle. In this section, we refer to algorithmic programs, AOP and DEA. These terms are defined in Table 4 and are illustrated in Figure 1.

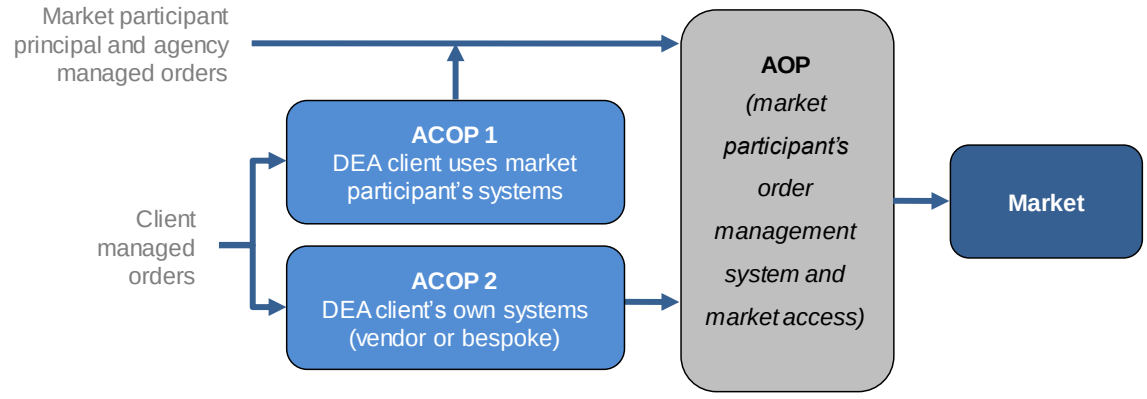
[16] Approximately 75% of market participants have AOP certification as at August 2011, compared with 42% in 2006: ASIC data. See also ASX Review, *Algorithmic trading and market access arrangements*, ASX Limited, 8 February 2010, www.asxgroup.com.au/media/PDFs/20100211_review_algorithmic_trading_and_market_access.pdf.

[17] IOSCO Report, *Principles for direct electronic access to markets* (IOSCOPD332), Technical Committee of IOSCO, 12 August 2010.

Table 4: An explanation of the terms we use to describe features of electronic trading

Algorithmic programs	Automated strategies using programmable logic/system-generated orders (rather than human-generated orders) based on a set of predetermined parameters, logic rules and conditions. These include algorithmic trading, automated order generation and high-frequency trading (HFT).
Automated order processing (AOP)	AOP is an existing concept in the Australian market. It is the process by which orders are registered in a market participant's system, which connects it to a market. Client or principal orders are submitted to an order book without being manually keyed in by an individual (referred in the rules as a DTR).[18] It is through AOP systems that algorithmic programs access our markets. Where AOP is used by clients, the process is defined in the ASIC Market Integrity Rules (ASX) and ASIC Market Integrity Rules (Chi-X) as 'automated client order processing' (ACOP). This same process is commonly referred to by IOSCO as direct electronic access (DEA). Note: In this paper, we will refer to this process as DEA.
Direct electronic access (DEA)—also known as automated client order processing (ACOP) in Australia[19]	DEA is the process by which an order is submitted by a client, agent or participant representative, into a market participant's AOP system directly without human intervention. Clients may either use the market participant's order management system and algorithmic programs to manage and generate orders, or their own systems or programs that are connected to the participant's AOP system. DEA enables a client to access a market without being a direct market participant and without being directly bound by the operating rules of the market they are accessing.

Figure 1: Automated order processing and direct electronic access



Source: ASIC

[18] 'DTR' is defined in Rule 1.4.3 of the ASIC Market Integrity Rules (ASX) and Rule 1.4.3 of the ASIC Market Integrity Rules (Chi-X) to mean a representative of the trading participant who has been authorised by the trading participant to submit trading messages to the trading platform on behalf of the trading participant.

[19] The DEA proposals in this section do not apply to access by retail clients through online broking services. This is because access arrangements differ and because, in circumstances where retail clients access online broking services, the market participant is providing the order management system to the client online under the DEA arrangement.

Existing rule framework

47 Among other obligations, Parts 5.6, 5.7 and 5.9 of the ASIC Market Integrity Rules (ASX) and ASIC Market Integrity Rules (Chi-X) require a market participant to ensure that all orders that are submitted through AOP systems to ASX or Chi-X are appropriately filtered, do not to interfere with the efficiency and integrity of the market, and do not result in manipulative trading. ASX Market Rules Guidance Notes 19, 21 and 22 outline ASX's previous and—since the transfer of market supervision from ASX to ASIC in August 2010—ASIC's current expectations of market participants in relation to AOP.

> Note: In this paper 'Chapter 6 (ASX) and (Chi-X)', 'Part 5.6 (ASX) and (Chi-X)' or 'Rule 5.6.3 (ASX) and (Chi-X)' (for example) refer to a particular chapter, part or rule of the ASIC Market Integrity Rules (ASX) and ASIC Market Integrity Rules (Chi-X).

48 Market participants are responsible for identifying and implementing controls to manage their risks, including maintaining organisational and technical resources to comply with the market integrity rules. We propose a number of changes that clarify the minimum standards of controls required in this environment. These proposals take into account the feedback we received on CP 145 and are in line with IOSCO's principles for DEA,[20] taking into account the distinguishing features of the Australian market.

Previous consultation and feedback

49 In CP 145 we proposed enhanced controls for algorithmic programs and DEA to minimise the inherent risks that electronic trading poses to market integrity, and sought feedback on the impact of HFT in the Australian market. Respondents requested that we consult further on these issues.

50 Some respondents to CP 145 suggested that the DEA proposals were out of step with international regulatory requirements and, therefore, would make Australia less competitive.

Recent international regulatory responses

51 Since CP 145 was released, there have been various initiatives overseas in relation to automated trading:

(a) IOSCO and European regulators have been consulting on requirements and guidance on automated trading;[21]

[20] IOSCO Report, *Principles for direct electronic access to markets* (IOSCOPD332), Technical Committee of IOSCO, 12 August 2010.
[21] IOSCO Consultation Report, *Regulatory issues raised by the impact of technological changes on market integrity and efficiency* (IOSCOPD354), Technical Committee of IOSCO, 7 July 2011; ESMA Consultation Paper, *Guidelines on systems and controls in a highly automated trading environment for trading platforms, investment firms and competent authorities* (ESMA/2011/224), ESMA, 20 July 2011; European Commission Consultation Paper, *Review of the Markets in Financial Instruments Directive (MiFID)*, European Commission, 8 December 2010.

(b) IOSCO has settled its principles for DEA;[22]

(c) Canadian regulators have consulted on draft rules on market access;[23] and

(d) the US SEC has approved its rule changes relating to market access.[24]

52 These initiatives are summarised in Table 18 in Appendix 1. The proposals in this section are consistent with these regulatory developments.

53 In considering the implications of automated electronic trading in the Australian market and the proposals in this section, we have closely reviewed the IOSCO principles for DEA[25] and initiatives in other jurisdictions. We have been mindful to minimise the possibility for cross-border regulatory arbitrage. A comparison of the proposals contained in this section with the IOSCO principles for DEA, the CP 145 proposals and the existing requirements can be found in Table 19 in Appendix 1.

Algorithmic programs

54 There are many different types of algorithmic programs, which can be broadly categorised into three functions:

(a) *trade execution*—used by market participants, institutional investors and HFTs. For institutional investors, they can be used to minimise the price impact of large orders by 'slicing' orders into smaller parcels and slowly releasing them into the market;

(b) *strategy implementation*—used by market participants, institutional investors and HFTs to read real-time market data and formulate trading signals. This may involve automatically rebalancing portfolios when certain pre-specified tolerance levels are exceeded, searching for arbitrage opportunities, automatic quoting and hedging in a market maker-like role, and producing trading signals from technical analysis; and

(c) *'directional' or liquidity detection*—used by some HFTs to take advantage of the price movement caused when large trades are filled, and also to detect and outperform strategies of other algorithmic programs.

55 For further discussion on HFT in the Australian market, see paragraphs 61–79.

[22] IOSCO Report, *Principles for direct electronic access to markets* (IOSCOPD332), Technical Committee of IOSCO, 12 August 2010.
[23] OSC, *Notice of proposed National Instrument 23-103 Electronic trading and direct electronic access to marketplaces*, 8 April 2011, www.osc.gov.on.ca/en/SecuritiesLaw_ni_20110408_23-103_pro-electronic-trading.htm.
[24] SEC Rule, *Rule 15c3-5: Risk management controls for brokers or dealers with market access*, (Release No. 34-63241); SEC, November 2010.
[25] IOSCO Report, *Principles for direct electronic access to markets* (IOSCOPD332), Technical Committee of IOSCO, 12 August 2010.

56 While algorithmic programs have been used in trading for many years, their breadth and complexity have evolved considerably over recent years. They are now able to process information from multiple markets (including across multiple jurisdictions) relating to various asset classes and can use this information to implement high-speed, multi-asset trading strategies to transmit numerous interrelated orders within minute fractions of a second.[26]

57 The life of any one algorithmic program or strategy may be very short because of the need to adapt to market developments and information, and often also because of the need to respond to opportunities and discrepancies in the market. We understand from industry feedback that some programs may have a life of only a matter of days or weeks, while others dynamically adapt themselves to changing market conditions.

58 The use of algorithmic programs in Australia has grown rapidly over recent years and we expect the growth to continue. Although it is not possible to measure directly, ASX reported in February 2010 that market participants estimated that algorithms accounted for approximately 30–40% of ASX cash equity turnover.[27] We expect that the use of algorithmic programs in Australia has increased since this figure was released.

59 Since ASIC commenced market supervision and real-time surveillance of trading on 1 August 2010, we have identified numerous matters concerning order management, including problematic algorithms. We are continuing to work with market participants and their clients to reduce the risk of algorithms having a negative impact on market integrity.

60 For further details about algorithmic programs and their purposes, see REP 215, paragraphs 122–126. See also Report 243 *ASIC supervision of markets and participants: January to June 2011* (REP 243) for details about the outcomes of ASIC's market and supervisory functions.

HFT algorithmic programs

61 Algorithmic program trading technologies have led to the emergence of a new form of trader—high-frequency traders (HFTs)—who use algorithms intensively. While there is not a commonly agreed definition of the type of activity that HFTs engage in, IOSCO characterised HFT in its July 2011 consultation report, *Regulatory issues raised by the impact of technological changes on market integrity and efficiency*[28] (IOSCO Technological Change Report), as:

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[26] AFM Report, *High frequency trading: the application of advanced trading technology in the European marketplace*, AFM, November 2010, www.afm.nl/layouts/afm/default.aspx~/media/files/rapport/2010/hft-report-engels.ashx.
[27] ASX Review, *Algorithmic trading and market access arrangements*, ASX Limited, 8 February 2010, www.asxgroup.com.au/media/PDFs/20100211_review_algorithmic_trading_and_market_access.pdf.
[28] IOSCO Consultation Report, *Regulatory issues raised by the impact of technological changes on market integrity and efficiency* (IOSCOPD354), Technical Committee of IOSCO, 7 July 2011.

(a) the use of sophisticated technological tools for pursuing a number of different strategies, ranging from market making to arbitrage;

(b) a highly quantitative tool that employs algorithms along the whole investment chain, including analysis of market data, deployment of appropriate trading strategies, minimisation of trading costs and execution of trades;

(c) a high daily portfolio turnover and order-to-trade ratio (i.e. a large number of orders are cancelled in comparison to trades executed);

(d) usually ending the day with flat or near-flat positions, meaning that little or no risk is carried overnight. Positions are often held for as little as seconds or even fractions of a second;

(e) mostly employed by proprietary trading firms or desks; and

(f) latency sensitive. The implementation and execution of successful strategies depend crucially on the ability to be faster than competitors and to take advantage of services such as DEA and co-location.

62 Another common characteristic of HFT is that the trades are executed in typically small sizes during normal trading conditions. Markets that have considerable HFT participation, such as Chi-X and BATS in Europe, see average trade sizes of around €5,500–6,000 (around A$7,500–8,200).[29]

Common strategies of HFT algorithmic programs

63 HFT is not a single strategy but, rather, 'a set of technological arrangements and tools employed in a wide number of strategies, each one having a different market impact and hence raising different regulatory issues'.[30] There are many different strategies. The IOSCO Technological Change Report groups them into the three most commonly used strategies (summarised in Table 5).

64 There is a more detailed discussion about HFT and associated strategies, and the impact they may have on market efficiency and quality, in paragraphs 127–172 of REP 215.

[29] BATS Report, *Pan European tick size pilot: An analysis of results*, BATS Trading Limited, 1 July 2009, Table 2.
[30] IOSCO Consultation Report, *Regulatory issues raised by the impact of technological changes on market integrity and efficiency* (IOSCOPD354), Technical Committee of IOSCO, 7 July 2011.

Table 5: Common strategies of high-speed algorithmic programs

Name	Description of strategy
Liquidity provision	This strategy involves continuously posting passive limit orders on both sides of the order book to offer liquidity to other market participants and, in this way, earning the spread. Unlike in some markets where there are registered market makers, electronic liquidity providers (ELPs) currently have no formal market-making obligations in the Australian equities market. They typically enter and exit their positions over a very short time horizon (e.g. over seconds, milliseconds or even microseconds). Low latency is of the utmost importance for this strategy to minimise the period in which risky positions are held. Market risk is minimised by rapidly adjusting prices to reflect the arrival of new information or to adjust inventory. As a consequence, the ratio of orders to trades and the number of cancelled orders are very high when this strategy is used.
Arbitrage	These strategies take advantage of pricing discrepancies between related products or markets. Some forms of arbitrage look at statistical deviations from long-term, historical statistical relationships among products and markets. For example, they may look for changes in correlations between companies in the same industry ('pairs trading'), or a derivative and its underlying asset ('cross-asset arbitrage'), or they may look for discrepancies in a portfolio of stocks, such as the price of an ETF and the underlying basket of stocks comprising the ETF. Arbitrage strategies can improve price efficiency by eliminating inconsistencies between prices. They also tend to consume rather than provide liquidity to the market, as the short-lived nature of arbitrage opportunities makes rapid execution of trades critical.
Directional	These strategies involve positions being carried for some (albeit often short) periods of time, in anticipation of lasting price changes. Trading decisions are often based on past patterns or expected price changes triggered by the release of news that affects market prices. Another directional strategy is liquidity detection, which involves searching for hidden demand for liquidity in the market. The strategy profits by moving the price against large hidden interest. Some liquidity detection strategies are described as 'predatory' in nature.

Prevalence of HFT algorithmic programs

65 Feedback that we have received from the industry and comments in the press suggest HFT may now account for 15–25% of equity market turnover in Australia. This is up from the estimated 3–4% reported in the ASX Review.[31] We anticipate this figure will grow with the expected introduction

[31] ASX Review, *Algorithmic trading and market access arrangements*, ASX Limited, 8 February 2010, www.asxgroup.com.au/media/PDFs/20100211_review_algorithmic_trading_and_market_access.pdf.

in the fourth quarter of 2011 of ASX's new data centre with enhanced co-location facilities, and the commencement of Chi-X and ASX's PureMatch order book. This is because HFT strategies are most successful in a low-latency multimarket environment.

66 Overseas, HFT in equities is estimated to represent:

(a) 56% in the United States in 2010, up from 21% in 2005;

(b) 38% in Europe in 2010, up from 9% in 2007; and

(c) 10–30% in major Asia–Pacific markets in 2010. We expect this figure to increase as faster trading and connectivity systems and alternative execution venues emerge in Asian markets.[32]

Regulatory issues with HFT algorithmic programs

67 The activities of HFTs have sparked considerable interest in their impact on market efficiency and integrity. Events like the 6 May 2010 'flash crash', where prices of US stocks experienced an extreme price decline before suddenly bouncing back again, have contributed to putting HFT on the policy agenda.

68 Academic research[33] and anecdotal evidence suggest that some strategies employed by HFTs add to market efficiency by providing liquidity, tightening spreads and keeping prices similar between venues. However, some parts of the market have raised concerns about the broader impact of HFT on the market system. Regulators globally are considering these concerns. For example, Andrew Haldane, Executive Director of the Bank of England, notes that it is unclear whether the technological race will have a winner, stating: 'If it raises systemic risks, it is possible capital markets could be the loser'.[34] A number of potential risks were also raised in the IOSCO Technological Change Report.

69 We raised a number of concerns in CP 145 and REP 215. Table 20 in Appendix 1 summarises the issues we raised, along with a number of other concerns, and our proposed approach in addressing the issues. These issues include:

(a) *market volatility*—algorithmic programs may overreact to market events, creating unnecessary volatility and risk of contagion to other products;

[32] IOSCO Consultation Report, *Regulatory issues raised by the impact of technological changes on market integrity and efficiency* (IOSCOPD354), Technical Committee of IOSCO, 7 July 2011.
[33] J Brogaard, 'High frequency trading and its impact on market quality', Paper given at 5th Annual Conference on Empirical Legal Studies, 22 November 2010; T Hendershott, C M Jones & A J Menkveld, 'Does algorithmic trading improve liquidity?', *Journal of Finance*, vol. 66, 2011, pp. 1–33; A J Menkveld, 'High frequency trading and the new market-makers', Working Paper, VU University, Amsterdam, 2010.
[34] A Haldane, 'The race to zero', Speech by the Executive Director of the Bank of England to the International Economic Association Sixteenth World Congress, China, 8 July 2011.

(b) *surveillance of market manipulation*—algorithmic program strategies being used to manipulate trading;

(c) *enforcement actions over foreign market participants*;

(d) *message traffic*—pressure on entire system to cope with large volumes of orders or cancellations;

(e) *price formation*—impact of message traffic on price formation and the depth and quality of trading interest in the order book. Another issue is the incentives created by HFT for institutional investors to trade away from pre-trade transparent markets;

(f) *market-making obligations*—whether HFTs should be required to have some 'skin in the game' similar to market maker obligations applied in equity markets in overseas jurisdictions;

(g) *maker–taker pricing*—impact of this pricing model on the integrity of markets, and whether rebates should be capped; and

(h) *co-location*—there should be fair and equal access to co-location services for all who want access.

70 Respondents to CP 145 had mixed and differing views on these issues, including that:

(a) HFT benefits liquidity and price formation, tightens spreads and does not pose problems for the Australian market;

(b) HFT does not support price formation and increases intra-day volatility, particularly for less liquid products;

(c) HFT increases volume but not liquidity in the market; and

(d) it is too early to judge the impact of HFT on price formation, depth and quality of trading.

71 There was no agreement on whether traders adopting HFT strategies should be exempt from the short selling ban and subject to formal obligations.

72 For further details on these responses, see paragraphs 59–64 of REP 237. This feedback is consistent with the views being expressed overseas, including those raised in the IOSCO Technological Change Report.

C2: Trading behaviour of concern

73 Market participants are required under Parts 5.7 and 5.9 (ASX) and (Chi-X) and Part 7.10 of the Corporations Act:

(a) not to take advantage of a breakdown or malfunction;

(b) not to engage in manipulative trading practices (e.g. creating a false or misleading appearance of active trading); and

(c) to consider the legitimacy and commercial circumstances of an order, or series of orders, and the effect it can have on the market.

74 These provisions apply equally to activity initiated by individuals as well as activity generated by systems.

75 Regulators around the world are actively looking at how technology may be used to facilitate new forms of misconduct. In CP 145, we sought feedback on the impact of automated trading strategies on equity market functioning and market integrity. We asked about the effectiveness of the market manipulation provisions in the ASIC market integrity rules and the Corporations Act. The feedback we received about automated trading strategies did not specifically address these issues.

Issue

C2 We do not propose to make any changes to existing rules on market manipulation or disorderly trading. We are closely monitoring trading behaviours that may raise concerns for the fair and orderly operation of the market. We will use our powers to enforce the existing rules, where necessary, and will keep the manipulation and disorderly trading provisions under review.

We consider that other proposals in this paper will help to manage, and deliver more efficient analysis and detection of, trading behaviours of concern, including:

(a) supplementing market participant requirements relating to AOP (see Proposal C3 (2) on control over a trading message or a series of messages, and Proposal C4 (1) on minimum standards for DEA); and

(b) enhancing requirements relating to market data (see our proposals in Section E, 'Enhanced data for market surveillance').

Your feedback

C2Q1 Do you agree with our approach to not propose changes to the market manipulation and orderly trading provisions at this stage? Please provide reasons.

Rationale

76 As noted in paragraph 63, rather than regarding HFT as a particular trading strategy, we consider it to be the use of high-speed technology to execute many different strategies. Provided that the technology is used for legitimate purposes, we do not consider HFT in itself to be manipulative or detrimental to the market. This is also the view taken by some other regulators, such as the Dutch securities regulator.[35]

77 However, with the introduction of a multimarket environment and the expected increase in automated HFT strategies, we are concerned about this technology being misused to create a false or misleading appearance about the supply and demand, or price, of a financial product (i.e. to manipulate the market or to ignore the effect of orders submitted to the market).

78 In particular, we have concerns about the appropriateness of specific instances of the following behaviours:

(a) *momentum ignition*—high-speed entry of multiple orders and/or trades, with no legitimate price-driving event, to start or exacerbate a short-term trend in the hope that trend followers will perpetuate the trend and offer an opportunity to unwind the position (e.g. orders intended to trigger stop-loss orders);

(b) *layering the book or spoofing*—submission of multiple orders at different prices on one side of the order book, slightly away from the best bid or offer, while another order is placed on the other side of the order book (reflecting the trader's true intention). Following the execution of the latter order, the former multiple orders are rapidly removed from the book;

(c) *quote stuffing*—entry of small variations of a position in the order book to generate excessive volumes of messages, creating uncertainty for other market participants and slowing down their process, while hiding their own strategy; and

(d) *order pinging*—entry of a small quantity of orders aimed at triggering a reaction by other traders and discovering additional information about other traders' positions and expectations.

79 We currently monitor instances of these behaviours closely. We emphasise that we have no tolerance for any form of market misconduct, irrespective of whether it originates from HFTs, other algorithmic programs or other market participant trading strategies.

[35] AFM Report, *High frequency trading: The application of advanced trading technology in the European marketplace*, November 2010, www.afm.nl/layouts/afm/default.aspx~/media/files/rapport/2010/hft-report-engels.ashx.

C3: Algorithmic programs and automated order processing

Testing of systems before connection

Proposal (1)

C3 We propose a new market integrity rule to require a market participant to ensure that, before using for the first time (or before implementing a material change to) an algorithm that generates trading messages, it is tested to ensure that it will function in compliance with the ASIC market integrity rules and all applicable market operating rules.

See draft new Rule 5.6.3B(1) (ASX) and (Chi-X).

This proposal applies to activities or conduct of persons in relation to all products quoted on ASX.

We propose that this would apply six months from the commencement of the rules.

Your feedback

C3Q1 Do you think our proposal is adequate to supplement the existing regime and meet the outcomes we are trying to achieve (see 'Rationale')?

C3Q2 Will compliance with the proposal require changes to systems and procedures? What are the likely costs of such changes (where possible, please identify the nature of these costs, quantify the estimated costs and indicate whether such costs will be one-off or ongoing)?

C3Q3 What are your views on the proposed transition period? Please provide details on why you consider this timeframe is, or is not, achievable.

C3Q4 We are considering extending this proposal to trading on markets other than ASX or Chi-X. Are there any practical issues with extending the proposal to other markets and products?

Rationale

80 In today's interconnected and fast-moving market environment, algorithmic programs can very quickly generate trading errors and cause market impact. ASIC has observed many instances of algorithms creating unwarranted volatility in an individual stock. We have encouraged market participants to better test their systems and algorithms, and we have also referred some instances for further investigation.

81 We consider it imperative that algorithmic programs are appropriately tested before use, and when there are material changes, to ensure compliance with the ASIC market integrity rules and market operating rules. The current ASIC Market Integrity Rules (ASX) and ASIC Market Integrity Rules (Chi-X) do not explicitly require this.

82 We consider that during the development of algorithmic programs, they should be tested in such a way as to:

(a) ensure compliance with the ASIC market integrity rules (e.g. Rules 5.6.1 and 5.9.1 (ASX) and (Chi-X)) and all applicable market operating rules; and

(b) have regard to their impact on the market, including the potential flow-on effects, such as where the algorithm generates orders that trigger other algorithms to submit orders, resulting in prices cascading away from the fair value of the products. This is often exacerbated by the triggering of stop-loss orders, which perpetuate the movement. This domino effect was experienced on 6 May 2010 in the United States and saw some shares, for example, that usually trade at US$40 falling to as low as US$0.01.

83 To fulfil this obligation, we expect market participants to have in place test plans and test scripts for each new algorithmic program, and for each material change to an algorithmic program.

84 Respondents to CP 145 highlighted the constraints on market participants' ability to test their clients' systems. Accordingly, we do not expect market participants to test their clients' algorithmic programs. We do, however, expect market participants to require their AOP clients to undertake adequate testing (including of order management systems and of algorithms, both before use and when a material change is made) before accessing the market participant's infrastructure: see Proposal C4 (1).

Control over messages and monitoring

Proposal (2)

C3 We propose a new market integrity rule to require a market participant to have direct and immediate control over all trading messages submitted through a market participant's system, including:

(a) *pre-trade controls*—appropriate automated filters and/or controls to prevent a trading message or a series of messages that may interfere with the efficiency and integrity of the market or the proper functioning of a trading platform from entering the market (e.g. a kill switch);

(b) *real-time monitoring*—of all trading messages to identify and prevent or cancel a trading message or a series of messages that may interfere with the efficiency and integrity of the market, or the proper functioning of a trading platform once it has, or they have, entered the market; and

(c) *post-trade monitoring*—of all transactions executed for the purposes of identifying a series of trading messages that may have created, or have been intended to create, a false or misleading appearance of active trading in any product—or in relation to the

market for, or the price of, any product—and prevent a series of trading messages of that kind entering the market in future.

See draft new Rule 5.6.3A (ASX) and (Chi-X).

This proposal applies to activities or conduct of persons in relation to products quoted on ASX.

We propose that this would apply six months from commencement of the rules.

Your feedback

C3Q5 Will compliance with the proposal require changes to your systems and procedures? What are the likely costs of such changes (where possible, please identify the nature of these costs, quantify the estimated costs and indicate whether such costs will be one-off or ongoing)?

C3Q6 What are your views on the proposed transition period? Please provide details on why you consider this timeframe is, or is not, achievable.

C3Q7 We are considering extending this proposal to trading on markets other than ASX or Chi-X. Are there any practical issues with the extension of this proposal to other markets and products?

Rationale

85 This proposal builds on Parts 5.5, 5.6 and 5.7 (ASX) and (Chi-X), which relate to a market participant's infrastructure and require market participants not to create a false or misleading appearance of trading and to consider the circumstances of an order and its impact on the market.

86 Rules 5.5.1 and 5.5.3 (ASX) and (Chi-X) deem that all trading messages submitted under a market participant's unique identifier are executed by or with the knowledge of the participant, and require a market participant to be able to determine the origin of all orders and trading messages.

Direct and immediate control

87 Currently, market participants are required to have in place organisational and technical resources to enable trading messages to be submitted to the trading platform without interfering with the efficiency and integrity of the market or the proper functioning of the trading platform: Rule 5.6.3 (ASX) and (Chi-X). We propose to build on this by requiring a market participant to have direct and immediate control over all messages, including an ability to stop an order—or series of orders, or connectivity to an exchange (effectively, a kill switch). This clarifies our existing position that unfiltered access is prohibited, and helps to mitigate erroneous order entry and aberrant algorithmic programs. This is also consistent with IOSCO DEA Principle 3,

which emphasises that a market participant should retain 'ultimate responsibility' for all orders under its authority.[36]

88 Regulators overseas are considering the appropriateness of new variations of DEA service offerings in the market—for example, the provision of third-party systems by market participants, where the risk management controls and supervisory procedures are developed and tailored by the AOP client (or its affiliates).

89 Other than the proposed changes in this section, we do not intend to change the current rule settings for the provision of DEA services at this time, but will focus on ensuring robust compliance by market participants with the ASIC market integrity rules in relation to AOP system requirements. We believe that the proposed requirement for market participants to have direct and immediate control of all messages complements the existing AOP requirements in Part 5.6 (ASX) and (Chi-X) to ensure that any access through DEA systems does not compromise the integrity of the Australian market.

Pre-trade controls

90 Market participants are required to use pre-trade controls, including automated pre-trade filters, to limit the nature of trading messages that can be transmitted through its AOP and DEA systems—for example, to limit trading messages that could interfere with the efficiency and integrity of the market or the proper functioning of the trading platform, such as erroneous orders.

91 We propose extending this requirement to apply to a series of trading messages. For example, clients and their staff or systems of the market participant should not be able to submit a series of trading messages that could interfere with the orderly functioning of the market. Our proposal further confirms that market participants must not perpetuate or exacerbate an existing disruption in the market, including what is generally known as 'momentum ignition'.

Real-time monitoring and post-trade reporting

92 While there are existing market integrity rules requiring market participants to monitor all of their own and their clients' trading (Rules 5.5.3 and 5.6.3 (ASX) and (Chi-X)), we propose to clarify that this monitoring should occur in real time. This will enable market participants to more quickly identify and respond to issues as they occur. This is particularly important given the speed and volume of messages in the current market environment.

[36] IOSCO Report, *Principles for direct electronic access to markets* (IOSCOPD332), Technical Committee of IOSCO, 12 August 2010.

93 We consider that post-trade reporting and analysis is important for identifying manipulative trading practices and for assessing whether pre-trade controls are adequate to prevent such practices. This will complement post-trade analysis that will be conducted when suspicious activity reporting requirements are introduced into the Australian market.[37]

Business continuity planning and annual review of systems and connectivity

Proposal (3)

C3 We propose a new market integrity rule to require a market participant that uses its system for AOP to:

(a) have in place adequate business continuity arrangements to ensure that connectivity to the trading platform is maintained (and there are adequate alternative arrangements when connectivity cannot be maintained); and

(b) be able to recover its normal business operations as soon as practicable after an emergency or other significant disruption to its business (taking into account the nature, scale and complexity of the business of the market participant).

Where we have reason to believe that a market participant's business continuity arrangements may be inadequate, we may require the participant to test those arrangements.

See draft new Rule 5.6.3C (ASX) and (Chi-X).

This proposal applies to activities or conduct of persons in relation to products quoted on ASX.

We propose that this would apply six months from commencement of the rules.

Proposal (4)

C3 We propose to:

(a) amend Rule 5.6.6 (ASX) and (Chi-X) to remove the requirement for a market participant to receive written confirmation from ASIC that the participant's AOP certification is in the prescribed form before using its system for AOP; and

(b) remove the requirements in Rules 5.6.7, 5.6.9 and 5.6.10 (ASX) and (Chi-X), and Rule 5.6.6A (Chi-X), to provide confirmation or further certification to ASIC each time the market participant makes a material change to its AOP system.

[37] We are currently intending to make further rule amendments requiring market participants to report to ASIC suspected market misconduct. This supplements the current suspicious transaction reporting obligation for anti-money laundering purposes. This obligation is consistent with the requirements in other major jurisdictions, such as the United Kingdom, where early identification and reporting of suspected market misconduct by market participants have proved to be an important source of investigations by the regulators: see S Tregillis, *ASIC's agenda for market integrity*, a speech by Shane Tregillis, Commissioner, ASIC at 2011 Supreme Court Corporate Law Conference, Sydney, 23 August 2011.

We propose instead to require a market participant to:

(c) continue to perform material change reviews under Rule 5.6.8 (ASX) and (Chi-X) before implementing material changes, and confirm that its AOP system will continue to comply with Part 5.6 (ASX) and (Chi-X) after the material change is made;

(d) annually review each of its AOP systems, including material changes to each AOP system; and

(e) provide ASIC with an annual attestation that it has conducted the review and that its AOP systems comply with Part 5.6 (ASX) and (Chi-X).

See draft amended Rules 5.6.6 and 5.6.8 (ASX) and (Chi-X), amended Rule 5.6.6A (Chi-X), removed Rules 5.6.7, 5.6.9 and 5.6.10 (ASX) and (Chi-X) and new Rules 5.6.10A and 5.6.10B (ASX) and (Chi-X).

This proposal applies to activities or conduct of persons in relation to products quoted on ASX.

We propose that this would apply from 31 October 2012 (i.e. the first attestation of the annual review would be submitted to ASIC on 31 October 2012).

Your feedback

C3Q8 Do you agree that an annual attestation by market participants, and the removal of the requirement for ASIC to acknowledge certifications and confirmations, will improve the efficiency of the certification process without affecting market integrity? If not, what alternative should be considered?

C3Q9 Will compliance with the proposals require changes to your systems and procedures? What are the likely costs of such changes (where possible, please identify the nature of these costs, quantify the estimated costs and indicate whether such costs will be one-off or ongoing)?

C3Q10 What are your views on the proposed transition periods? Please provide details on why you consider these timeframes are, or are not, achievable.

C3Q11 We are considering extending these proposals to trading on markets other than ASX and Chi-X. Are there any practical issues with the extension of these proposals to other markets and products?

Rationale

94 As a matter of good practice and governance, we expect that a market participant should have reasonable business continuity and disaster recovery plans for its AOP systems. This will ensure that any failures can be quickly identified and rectified. This expectation is outlined within ASX Market Rules Guidance Note 22 (which is taken into account by ASIC since the transfer of market supervision). We propose to incorporate this guidance into a market integrity rule.

95 Where we identify or have reason to believe that there may be potential risks to market efficiency and integrity from electronic trading (i.e. if the market participant's business continuity arrangements for connectivity and recovery are inadequate), we may request that a market participant test its AOP connections and order generation systems (algorithms) to ensure that they do not interfere with the integrity of the market. This is important because the use of electronic trading mechanisms can quickly result in disorderly trading conditions: see paragraph 44.

96 An important existing control for electronic trading is the requirement in Rules 5.6.6 and 5.6.7 (ASX) and (Chi-X) for market participants that use AOP systems to certify any new systems, as well as existing systems when there are material changes to those systems. These certifications are currently submitted to ASIC for confirmation that they comply with the ASIC market integrity rules.

97 Our proposal does not change the requirement for market participants to certify new systems and material changes, but we propose to remove the requirement for ASIC to confirm such certifications. This means that market participants would continue to be required to submit their initial certification to us, but we have removed the requirement for ASIC to confirm the initial certification. If there is a material change, market participants would continue to be required to certify or confirm these changes internally, but would not be required to notify us of the material change or submit the certification or confirmation to us.

98 This will speed up deployment of systems and is consistent with the principles in the ASIC market integrity rules that a market participant is responsible for the messages submitted by it to the market, including through its AOP systems.

99 We also propose a new requirement for market participants to review their AOP systems annually, regardless of whether there has been a material change to the system, to ensure that they meet the requirements in Part 5.6 (ASX) and (Chi-X), and to attest to ASIC that they are compliant with Part 5.6. Given the speed at which technology is evolving, we consider it important for market participants to keep their systems under review. In our review of the existing AOP regime, we have seen numerous examples of systems that have not been reviewed for many years (in some cases for more than five years).

C4: Direct electronic access

Minimum standards for direct electronic access

Proposal (1)

C4 We propose new market integrity rules to require a market participant, before permitting an AOP client to submit trading messages into the market participant's system, to ensure that:

(a) the market participant knows and understands:

(i) the nature of the AOP client's business, including the proposed nature of the AOP client's trading; and

(ii) the proposed nature of any delegation by the AOP client of its access to a third party;

(b) the AOP client:

(i) has demonstrated the required financial resources to meet its obligations to the market participant in relation to its trading;

(ii) has adequate procedures in place to ensure that each person that uses the AOP facility has knowledge of the order management system of the AOP client and the requirements of the market operator; and

(iii) has adequate procedures in place to ensure that it monitors all trading through its order management system;

(c) the AOP client's order management system and the market participant's system is tested:

(i) before use; and

(ii) when there is a material change to the AOP client's order management system,

to ensure that the use of the order management system will not interfere with the efficiency and integrity of the market or the proper functioning of any trading platform; and

(d) the market participant takes reasonable steps—consistent with Proposal C3 (1)—to ensure that, before an AOP client uses an algorithm to generate trading messages, or makes a material change to such an algorithm, the algorithm is tested to ensure it will function in compliance with the market integrity rules and all applicable market operating rules.

See draft new Rules 5.6.2A and 5.6.3B(2) (ASX) and (Chi-X).

This proposal applies to activities or conduct of persons in relation to products quoted on ASX.

We propose that this would apply six months from commencement of the rules.

Legally binding agreement with AFS licensees

Proposal (2)

C4 We propose new market integrity rules that require a market participant to have a legally binding agreement with a DEA client that is an AFS licensee, the nature and detail of which should be appropriate to the nature of the service provided at all times. The agreement should at least require that the DEA client:

(a) meets the minimum standards for a DEA client (as set out in Proposal C4 (1)); and

(b) ensures that any person to whom the DEA client delegates access meets the same minimum standards required of DEA clients.

See draft new Rule 5.6.2B (ASX) and (Chi-X).

This proposal applies to activities or conduct of persons in relation to products quoted on ASX.

We propose that this would apply six months from commencement of the rules.

Your feedback

C4Q1 Are there other controls that we should consider to achieve the outcomes proposed in paragraph 102? If so, what are they and why are they preferable?

C4Q2 Will compliance with the proposals require changes to your systems and procedures? What are the likely costs of such changes (where possible, please identify the nature of these costs, quantify the estimated costs and indicate whether such costs will be one-off or ongoing)?

C4Q3 What are your views on the proposed transition period? Please provide details on why you consider this timeframe is, or is not, achievable.

C4Q4 We are considering extending these proposals to trading on markets other than ASX or Chi-X. Are there any practical issues with extending these proposals to other markets and products?

Rationale

100 Direct electronic access to a market is attractive because it enables clients to transmit their orders directly to a market, giving them greater control over their trading decisions and reducing latency. However, it has the potential to compromise market participants' traditional risk management approaches and may make compliance and monitoring more difficult.

101 DEA can also challenge the ability of market operators to maintain fair and orderly trading conditions. Table 21 in Appendix 1 details some of the

challenges, taking into account those outlined in the IOSCO principles for DEA.[38] These include:

(a) trading and regulatory risk;

(b) credit risk;

(c) reputational risk;

(d) system risk; and

(e) market integrity risk.

102 We consider that it is important that AOP clients have adequate systems and processes, are financially capable of funding their trading, and have adequate arrangements to monitor trading. This proposal is designed to address the risk posed by clients accessing the market outside the market participant's traditional risk management infrastructure and controls.

103 Existing controls for DEA[39] require a market participant that uses its system for DEA to have procedures in place to ensure that clients have knowledge of the order entry system and of the relevant dealing rules and directions, decisions and requirements of the market operator: Rule 5.6.2 (ASX) and (Chi-X). However, the rules do not set the standards we are proposing.

104 We propose that, where a DEA client uses an algorithm to generate trading messages, the market participant must take reasonable steps—consistent with Proposal C3 (1)—to ensure that the algorithm is tested in such a way as to:

(a) ensure compliance with the ASIC market integrity rules (e.g. Rules 5.6.1 and 5.9.1 (ASX) and (Chi-X)) and all applicable market operating rules; and

(b) have regard to their impact on the market, including the potential flow-on effects, such as where the algorithm generates orders that trigger other algorithms to submit orders, resulting in prices cascading away from the fair value of the products.

105 To fulfil this obligation, we expect market participants to require its DEA clients to have in place test plans and test scripts for each new algorithmic program, or material change to an algorithmic program. Examples may include legally binding written agreements, agreed protocols around testing and test scripts, terms of business, and memoranda of understanding.

[38] IOSCO Report, *Principles for direct electronic access to markets* (IOSCOPD332), Technical Committee of IOSCO, 12 August 2010.
[39] Existing controls for DEA are embodied in the ACOP rules in the ASIC Market Integrity Rules (ASX) and ASIC Market Integrity Rules (Chi-X).

106 Imposing minimum standards for DEA is consistent with the intent of IOSCO DEA Principle 2, which states that these types of outcomes should be achieved through a legally binding agreement with a client.[40]

107 We consulted on many aspects of this proposal in CP 145 and suggested it should be delivered through a contractual arrangement with all clients. Respondents described some of the complexities in incorporating these outcomes into a written agreement, particularly for market participants that operate with global agreements. While we prefer that a written agreement is used between a market participant and all DEA clients, we acknowledge that there are other mechanisms available—such as terms and conditions, terms of business, or memoranda of understanding—through which a market participant may be able to set enforceable standards of conduct with DEA clients.

Provision of DEA to an AFS licensee

108 We consider that it is particularly important that the respective rights, obligations and responsibilities of a market participant and an AFS licensee client that obtains DEA access through that participant should be reflected in a written agreement. We believe this relationship is different from the relationship between a market participant and a DEA client that is not an AFS licensee, and justifies the need for a written agreement in all such cases. The contract will complement market participants' existing requirements—and does not obviate a market participant's responsibilities under the ASIC market integrity rules. As stated in paragraphs 87–88, our regime does not permit unfiltered access, and Chapter 5 (ASX) and (Chi-X)—together with the proposals in this section—ensure that any access through DEA systems does not compromise the integrity of the Australian market.

109 Regulators and market supervisors overseas are considering requiring clarity between participants and DEA clients over the rights and obligations of the respective parties—in particular, where a range of different forms of DEA services are provided:

(a) in the United States, the SEC approved a Nasdaq rule in January 2010 that requires broker–dealers offering DEA to the Nasdaq market to establish controls regarding the associated financial and regulatory risks, and to obtain a variety of contractual commitments from sponsored access customers;[41]

[40] IOSCO Report, *Principles for direct electronic access to markets* (IOSCOPD332), Technical Committee of IOSCO, 12 August 2010.

[41] Contractual commitments are required where sponsored access is provided. 'Sponsored access' in the NASDAQ Stock Market Rules refers to the practice, by a member, of providing access to Nasdaq to another person, firm or customer (sponsored participant) whereby the sponsored participant enters orders into Nasdaq using a sponsored access system but the orders do not pass through a member system prior to reaching Nasdaq: see NASDAQ Stock Market Rule 4611. See also SEC Rule, *Rule 15c3-5: Risk management controls for brokers or dealers with market access* (Release No. 34-63241), SEC, November 2010, p. 7.

(b) the Canadian Securities Administrators (CSA) published a proposed rule in April 2011 to provide a regulatory regime for DEA. The proposed rule states that DEA can only be provided to a marketplace participant that is a registered investment dealer and member of the Investment Industry Regulatory Organization of Canada (IIROC), or is a portfolio manager. The proposed rule requires participants to set minimum standards that their clients must meet before providing them with DEA, and also that they enter into a written agreement with each DEA client;[42] and

(c) European Securities and Markets Authority (ESMA) has stated that, where sponsored access services are provided, there should be clarity over the responsibility of the respective parties and that they should record what they understand to be their respective rights and responsibilities.[43] It states in draft guidelines that the policies and procedures covering the activities of sponsored access clients should at least include, among other things, documentation of the rights and obligations of both parties in relation to the sponsored access service.[44]

C5: Market operator systems and controls

110 Market operators are required, to the extent it is reasonably practicable to do so, to do all things necessary to ensure that the market they operate is fair, orderly and transparent: s792A(a) of the Corporations Act. Under s792A(d), market operators also have a general obligation to ensure that they maintain sufficient resources (including financial, technological and human resources) to operate the market properly. These requirements are similar to those in place overseas. There is further guidance on these requirements in Regulatory Guide 172 *Australian market licences: Australian operators* (RG 172).

111 As discussed in paragraph 43, markets have become increasingly electronic and high speed, and the volumes of orders and transactions are increasing substantially. We asked in CP 145 whether ASIC should supplement the rules and existing guidance relating to a market operator's systems and controls to better reflect the increasingly automated and high-speed nature of markets.

112 In April 2011, we implemented requirements in Chapter 2 (Competition) (see paragraph 5) for market operator level order entry controls and a

[42] See OSC, *Notice of proposed National Instrument 23-103 Electronic trading and direct electronic access to marketplaces*, 8 April 2011, www.osc.gov.on.ca/en/SecuritiesLaw_ni_20110408_23-103_pro-electronic-trading.htm.
[43] ESMA defines 'sponsored access' as an arrangement where an intermediary, who is a market member, may permit its customers to use its member ID (mnemonic) to electronically transmit orders for execution directly to the market without using the intermediary's infrastructure. See ESMA Consultation Paper, *Guidelines on systems and controls in a highly automated trading environment for trading platforms, investment firms and competent authorities* (ESMA/2011/224), ESMA, 20 July 2011, pp. 39, 78.
[44] See ESMA Consultation Paper, *Guidelines on systems and controls in a highly automated trading environment for trading platforms, investment firms and competent authorities* (ESMA/2011/224), ESMA, 20 July 2011, Guideline 8: Organisational requirements for investment firms that provide direct market access and/or sponsored access, p. 111.

harmonised trade cancellation policy in the event of an extreme price movement, but we did not implement further rules or guidance about market operator systems and controls generally.

> Note: In this paper 'Chapter 2 (Competition)', 'Part 2.2 (Competition)' or 'Rule 6.5.1 (Competition)' (for example) refer to a particular chapter, part or rule of the ASIC Market Integrity Rules (Competition).

113 The responses we received to CP 145 on this issue included:

(a) market participants—generally agreed that there should be clear requirements for market operators to have reasonable business continuity and disaster recovery plans, to conduct capacity stress tests and to review the vulnerability of systems to internal and external threats. One association stated that this issue should be part of a broader public policy review of the market licensing provisions of the Corporations Act; and

(b) market operators—one market operator stated that it already had such arrangements in place. Another stated that additional rules were unnecessary.

114 Since CP 145, there has been greater regulatory focus globally on market operator systems and the controls around these systems. For example, ESMA is consulting on guidelines for systems and controls for a highly automated trading environment.[45] As noted in Table 18 in Appendix 1, ESMA is proposing a number of minimum controls for market operators, including requirements relating to system capacity, messaging traffic, testing arrangements, monitoring and reviewing of arrangements, skilled staff, and circuit breakers.

115 In the IOSCO Technological Change Report, IOSCO comments on market operator controls and asks whether market operators should be required to provide testing environments to enable market participants to stress test their algorithms.

Proposal

C5 We propose to clarify through guidance our expectations for market operators providing facilities for trading under the existing obligations in s792A(a) and (d) of the Corporations Act to maintain a fair, orderly and transparent market and to have sufficient resources in relation to their systems and controls to ensure they are appropriate for the increasingly automated and high-speed nature of the market.

In particular, we propose to clarify that a market operator should:

(a) have appropriate testing arrangements to enable connectivity testing, conformance testing, functional testing and regression testing, including in multimarket scenarios (e.g. order routing,

[45] ESMA Consultation Paper, *Guidelines on systems and controls in a highly automated trading environment for trading platforms, investment firms and competent authorities* (ESMA/2011/224), ESMA, 20 July 2011.

trading suspensions and other market-wide scenarios). There should be sufficient capacity to enable market participants to adequately stress test their algorithmic programs (i.e. in a low-latency, high-message volume, volatile environment);

(b) have adequate business continuity, back-up and disaster recovery plans for each of its systems that support order entry, order routing, execution, market data, trade reporting and trade comparison;

(c) keep capacity requirements under review and conduct capacity stress tests. These systems should adapt to manage trading behaviours such as quote-stuffing and elevated order/trade messaging;

(d) have adequate security to protect systems, and the premises where systems are housed, from misuse or unauthorised access;

(e) monitor and review the above arrangements periodically;

(f) have appropriate processes in place to communicate release management plans to stakeholders (being clear about the difference(s) between mandatory versus optional releases and allowing sufficient time for stakeholders to adapt) and to assess stakeholder readiness (e.g. stakeholder attestations); and

Note: We intend to reach a protocol with industry to promote the orderly implementation of market changes where there are systems implications for industry.

(g) notify ASIC of material system changes in sufficient time prior to the changes occurring. The notification should outline the approach to managing the change, including the approach to risk management and communication to the market. We may request that an independent third party verify the changes.

We also propose to clarify through guidance that all market participants seeking access to a market operator's systems or services (including co-location services) should have access on fair, non-discriminatory terms.

We propose that this guidance would apply to all market operators (and not be limited to ASX and Chi-X).

We propose that this would apply on release of the guidance.

Your feedback

C5Q1 What information should market operators publish (and by when) about their testing arrangements and capacity?

C5Q2 Are there any reasons why this guidance should not be extended to all market operators (including in futures and other equity markets)?

C5Q3 Is it necessary that some or all of these expectations should be set out in market integrity rules? If so, why?

Rationale

116 While there are general obligations for market operators to ensure that they maintain sufficient resources (including appropriate technological resources), and to operate their market properly under s792A(d) of the Corporations Act, we believe that it is appropriate to supplement our guidance to reflect recent market developments and initiatives in overseas jurisdictions. It is important in an increasingly technology-driven and competitive market environment that our expectations are clear and applied consistently to all market operators dealing in the same products.

117 Systems should be robust and appropriate for the business that takes place through them, including having sufficient capacity to cater for spikes in the volume of messaging traffic. Testing is a crucial part of ensuring that trading and other key systems function as they are intended to.

118 Our expectation is that market operators will notify ASIC of material system changes, which will enable us to consider market integrity issues associated with system changes and releases, both for our own surveillance function and for the wider market. When assessing these changes, we will consider the impact on the wider market, and expect market operators to take into account the impact of their initiatives on market integrity. We intend to discuss with market participants and market operators the management of changes in the market, where there are systems implications for ASIC surveillance, market participants and market operators. We propose to reach protocols under which market changes can occur to ensure that these are managed appropriately and in an orderly manner.

C6: Market making in the cash equity market

119 There is a tradition in some marketplaces for ‘market makers’ to provide liquidity when it is generally absent or weak, and to manage short-term imbalances in supply and demand. Market makers have not traditionally formed part of the Australian cash equity market. With the increasingly low-latency trading environment in Australia and the introduction of competition in exchange markets, we expect that electronic liquidity providers (ELPs)—a form of high-frequency trader that is usually not formally registered as a market maker—will become more prevalent in the Australian equity market.

120 In this section, we discuss the role of market makers and seek your feedback on whether the introduction of recognised market makers could add to the efficiency of the Australian cash equity market and whether ASIC should promote their involvement in the market.

Role of market makers

121 In other jurisdictions, both registered market makers and ELPs play a role in providing liquidity in markets when it is generally absent or weak.

Registered market makers

122 Market makers in other jurisdictions are typically regarded as market participants that continuously post passive limit orders on both sides of the order book hoping to make a profit on the bid–ask spread. It is common practice overseas for market makers to be formally registered with the relevant market operator to perform this function, and to be subject to specific obligations, with a corresponding entitlement to specific benefits.

123 Examples of obligations that registered market makers in overseas markets often must comply with include:

(a) providing two-sided quotes in the products that they cover:

(i) in a minimum order value;

(ii) with a maximum spread, depending on liquidity and the price of the product (e.g. one tick for a liquid, low-priced product); and

(iii) for a specified minimum period of the day (e.g. 80% of the day); and

(b) not to knowingly contribute to, or exacerbate, extreme price movements.

124 Examples of the benefits that registered market makers overseas may receive for taking on inventory risk from market fluctuations, and information risk from adverse selection, include:

(a) the ability to naked short sell a product (i.e. selling a product without owning it, or borrowing it in advance of the sale);

(b) informational advantages; and

(c) reduced fees or, in some cases, receipt of rebates.

125 Registered market-making models have been in place in many equity markets since products were traded on the trading floor. The specialists that started on the New York Stock Exchange trading floor were a form of market maker. Market makers have also played an important role on Nasdaq and the London Stock Exchange.

126 In Australia, while market makers have played a role in supporting the launch of new derivative contracts, there has not been an adoption of similar market-making models in the Australian cash equity market.

127 Contracted market makers have formed part of the ASX 24 (formerly SFE) market for many years. The ASX has had formal market makers for options

and warrants since their inception, both of which are reflected within the market operating rules (but with the specific options market-making obligations now subject to contract). Since January 2009, ASX has contracted market makers to support the issue of new ETFs. The six registered ETF market makers are contracted to quote in sizes of $5,000 to $50,000 (depending on the ETF), at no more than a prescribed maximum spread for 80% of the day.[46]

Electronic liquidity providers

128 A key difference between a market maker and an ELP is that an ELP performs the activity without committing to contracted market-making obligations (see paragraph 122) and may not be subject to the same level of regulatory oversight. A second difference is that an ELP does not gain the benefits on offer to registered market makers (see paragraph 124).

129 In recent years, ELPs have become more prevalent globally in response to increasingly low-latency, multimarket trading environments. A low-latency environment is important to ELPs because it enables them to rapidly adjust orders to reflect new information, and by doing so, reduce the risk from holding inventory positions. A multiple market environment is attractive to ELPs because it creates arbitrage opportunities.

130 We are already seeing growth in the number of ELPs in Australia and anticipate that they will gain greater market share following the introduction of ASX's enhanced co-location facilities, the commencement of Chi-X, and ASX's PureMatch order book (all of which are expected to be introduced in the fourth quarter of 2011).

Licensing of a person who 'makes a market' in Australia

131 Under s766D of the Corporations Act, the concept of a person who 'makes a market' for a financial product is broader than that described above at paragraphs 121–129. It includes traditional market makers formally contracted by a market operator and ELPs informally making markets, and can include other activity where market participants are only placing one-sided quotes: see paragraphs 144–149 for further details on licensing requirements.

[46] ASX Schedule, *ETF/ETC market making*, ASX, 8 July 2011, www.asx.com.au/documents/products/etf_etc_market_making.pdf.

Contribution to market efficiency

132 There is evidence[47] that registered market makers (and some ELPs) that provide two-sided quotes can contribute to market efficiency, including by:

(a) filling imbalances of supply and demand and, in doing so, reduce price volatility and lowering investors' price risk of a delayed trade;

(b) reducing trading costs by narrowing spreads; and

(c) potentially curtailing the recent decline in average trade size (see paragraph 62) where they commit to quote in specified sizes.

133 However, there is also commentary questioning the nature and quality of liquidity provision by ELPs in market conditions of significant volatility, and whether ELP conduct may exacerbate the volatility.[48] The evidence that suggests ELPs provide a positive contribution to market efficiency also suggests that market makers provide informative pricing and liquidity in less liquid products and new products where imbalances between supply and demand may occur frequently. They provide less benefit in more liquid products where the bid–offer spread is typically already at the minimum tick size for most of the day (i.e. where there is less opportunity to improve the price).[49]

134 However, even in the most liquid stocks, market makers may contribute to efficiency by adding liquidity outside the best bid and offer and quoting in size. Table 6 shows the average volume at the bid or offer throughout the day for the top 500 stocks listed on ASX for May 2011. The average volume at the bid or offer of the top 100 stocks is $320,958 to $693,922. To constructively add value to the best bid and offer, market makers would need to quote in significant size. They are likely to add more value to the best bid and offer of stocks in the remainder of the All Ordinaries Index where the average volume is under $100,000.

[47] A Anand, C Tanggaard & D Weaver, 'Paying for market quality', *Journal of Financial and Quantitative Analysis*, vol. 44, 2009, pp. 1427–57; K Venkataraman & A Waisburd, 'The value of the designated market maker', *Journal of Financial and Quantitative Analysis*, vol. 42, 2007, pp. 735–58.

[48] See A Haldane, 'The race to zero', Speech by the Executive Director of the Bank of England to the International Economic Association Sixteenth World Congress, China, 8 July 2011.

[49] For example, 56 of the 58 S&P/ASX 200 stocks that are priced between $2 and $5 trade at an average spread of less than 1.2 cents, which indicates that the minimum tick size constrains further reductions in spreads for these stocks: ASIC data.

Table 6: Average volume at the best bid and offer[50]

Group	Average volume at best bid/offer ($)	Average best bid volume ($)	Average best offer volume ($)
ASX 20	693,922	695,098	692,747
ASX 21–50	320,958	321,986	319,930
ASX 51–100	338,017	364,205	311,829
ASX 101–200	85,594	93,781	77,408
All Ords ex ASX 200*	67,173	87,153	47,193

* Excluding EDT Retail Trust (EDT), Sphere Minerals Limited (SPH), Riversdale Mining Ltd (RIV)
Source: ASIC

Should ASIC promote market making in the Australian cash equity market?

135 Representations have been made to ASIC that market makers contribute significantly to market efficiency and should, accordingly, be entitled to certain benefits, specifically short selling relief.

136 We are considering whether we should promote this activity where there is a significant quantifiable contribution to market efficiency. We are conscious not to unfairly disadvantage other traders who may not be entitled to the benefits and to avoid unnecessarily exacerbating some of the regulatory risks outlined in 'Regulatory issues with HFT algorithmic programs' at paragraphs 67–72.

Short selling relief

137 An issue relevant to promoting market integrity is to consider whether exemptions from the short selling prohibitions should be afforded to market makers.

138 Under s1020B(2) of the Corporations Act, a person can only sell certain financial products to a buyer if, at the time of sale, the person has (or if acting on behalf of another person, the other person has), or believes on reasonable grounds that the person has, a presently exercisable and unconditional right to vest those financial products in the buyer. Under s1020F, ASIC has the power to provide relief from this short selling prohibition.

[50] The order book was sampled every 10 minutes during trading hours for May 2011. A monthly average value was calculated for each stock and then an equal-weighted average was calculated across each group of stocks. We have excluded EDT, SPH and RIV as they were subject to a takeover during the sample period. We note that Telstra (in the ASX 20) and Qantas (in the ASX 21–50) have considerable liquidity at the best prices—approximately $10 million and $1.1 million respectively: ASIC data.

139 Naked short selling is prohibited because it may add additional selling pressure to 'long' sales during market events where there is a loss of market confidence—potentially bringing about disorderly markets. Naked short selling can also create settlement disruption.

140 The IOSCO principles for short selling[51] suggest that short selling regulation should allow appropriate exceptions for certain types of transactions when it is critical to the market to enable efficient market functioning and development. The report notes that an exception for market makers engaging in certain market activities might be appropriate '… so that they can short sell the relevant shares immediately to accommodate temporary investor buying demand and also to hedge the risk arising from their market making activities. This flexibility allows these market activities to be carried out with more efficiency and at lower cost'.

141 In Regulatory Guide 196 *Short selling* (RG 196), we state that relief will generally only be given to facilitate the orderly operation of markets: see RG 196.40. For example, ASIC has given relief under [CO 09/774] for hedging purposes, which requires the person to hold an Australian financial services (AFS) licence or to be exempt from holding an AFS licence.

Nature of commitments

142 The factors that we consider may result in a market maker materially contributing to market efficiency include:

(a) making quotes that contribute meaningfully to improving prices and the depth of an order book—for example, making two-sided quotes in a range of products, including in products other than those that are most liquid (i.e. where there is a capacity to narrow the spread);

(b) quoting in a meaningful minimum order value;

(c) quoting within a maximum spread;

(d) quoting for most of any trading day; and

(e) not knowingly contributing to, or exacerbating, extreme price movements.

143 Regulators overseas are also considering the nature of market-making commitments, including whether ELPs should be licensed and be required to provide liquidity on an ongoing basis.[52]

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[51] IOSCO Report, *Regulation of short selling* (IOSCOPD292), Technical Committee of IOSCO, June 2009.
[52] See, for example: European Commission Consultation Paper, *Review of the Markets in Financial Instruments Directive (MiFID)*, European Commission, 8 December 2010, http://ec.europa.eu/internal_market/consultations/docs/2010/mifid/consultation_paper_en.pdf; ML Schapiro, *Remarks before the Investment Company Institute's general membership meeting*, Address by SEC Chairman, Washington D.C., 6 May 2011, www.sec.gov/news/speech/2011/spch050611mls.htm.

Issue (1)

C6 We are interested in your feedback on the efficiencies that market makers may contribute to the cash equity market in Australia and whether ASIC should promote this activity.

Your feedback

C6Q1 Do market makers add to market efficiency and on what basis? Please provide real life examples.

C6Q2 Should ASIC consider providing short selling relief to persons licensed, or exempt from holding a licence, under the Corporations Act to make markets, and on what basis should the relief be provided?

C6Q3 Should we only consider short selling relief for entities that are also formally registered as a market maker with a market operator? What should be the minimum characteristics of a registered market-making model?

Licensing of a person who makes a market in Australia

144 Section 766D of the Corporations Act sets out the meaning of 'makes a market', which includes traditional market makers formally registered with a market operator and ELPs informally making markets, and can include other activity where market participants are only placing one-sided quotes. Further guidance on the definition of 'makes a market' is available in ASIC QFS 122[53] *What guidance can ASIC give me about when I 'make a market'?*

145 A market participant making a market within the meaning given in s766D is subject to both the licensing requirements in Ch 7 of the Corporations Act and the ASIC market integrity rules for the relevant market.

146 Where a market participant is formally registered as a market maker with a market operator, and is required to meet prescribed obligations as well as being entitled to the benefits for performing the function, we consider that it is appropriate for the participant to hold an AFS licence in addition to being subject to the ASIC market integrity rules.

147 We are considering whether it is also necessary to apply the AFS licence requirements to ELPs that fall within the broader definition of market making in the Corporations Act (whether a market participant or an entity that accesses markets via the connection of a market participant) but are not formally recognised as such by a market operator (and, accordingly, are unable to access the benefits to which a formal market maker is entitled).

[53] ASIC, www.asic.gov.au/asic/asic.nsf/ASIC+FSR+FAQ+DisplayW?ReadForm&unid=BE2995DF7C6CC3DCCA256DB40007126B

148 Where a market maker is a participant of an Australian domestic licensed financial market, it is subject to the AFS licensing requirements and the ASIC market integrity rules.[54]

149 Where a market maker is not a market participant but has DEA via the connection of a market participant, the market maker is subject to the contractual relationship with the market participant, the market integrity rules relating to the market participant's conduct (including participant conduct with its clients), and the controls of the market operator.

150 We are seeking feedback on whether ASIC oversight of this latter category of market makers, through the current market integrity rule framework (and without the AFS licensing regime), ensures a sufficient, equivalent regulatory outcome as those subject to the AFS licensing regime in the former category, from the point of view of market integrity and systemic risk. For example, we are interested in your view on whether additional market integrity protection would be afforded by the requirement for informal market makers to hold an AFS licence, and whether your view would differ if they were subject to the ASIC market integrity rules.

151 We have recently sought feedback in Consultation Paper 166 *Market integrity rules for non-AFS licensee foreign participants and consequential amendments* (CP 166) on our proposed consequential amendments to the ASIC Market Integrity Rules (ASX) and ASIC Market Integrity Rules (Chi-X), and whether to impose minimum presence requirements on foreign market participants that do not hold an AFS licence to give effect to enforcement actions against those market participants. There are already minimum presence requirements in place to facilitate enforcement actions against market participants that are foreign entities and do hold an AFS licence.

152 Regulators internationally are currently considering issues surrounding the licensing of market makers in equity markets. For example, the European Commission, in its consultation paper, *Review of the Markets in Financial Instruments Directive* (Review of MiFID),[55] proposes that 'all persons involved in high-frequency trading over a specified minimum quantitative threshold would be authorised as investment firms. This would ensure that they are subject to organisational requirements…and to full regulatory oversight.'

[54] Following the transfer of supervision of domestic licensed financial markets from market operators to ASIC on 1 August 2010, the ASIC market integrity rules deal with activities and conduct in relation to licensed financial markets, including participants of those markets.

[55] European Commission Consultation Paper, *Review of the Markets in Financial Instruments Directive (MiFID)*, European Commission, 8 December 2010, http://ec.europa.eu/internal_market/consultations/docs/2010/mifid/consultation_paper_en.pdf.

Issue (2)

C6 We are interested in your feedback on the requirement to hold an AFS licence for ELPs in equity markets that informally make a market within the meaning of s766D of the Corporations Act.

Your feedback

C6Q4 Should ASIC continue to require all market participants that make a market within the broad meaning of s766D to hold an AFS licence?

C6Q5 Should ASIC consider providing relief from the requirement to hold an AFS licence for an ELP that:

(a) makes a market within the meaning of s766D; and

(b) is not formally recognised as a market maker by the market operator; and

(c) does not receive the benefit of ASIC short selling relief?

C6Q6 Would your view differ if these ELPs were subject to the ASIC market integrity rules?

C6Q7 If you answered yes to C6Q5, what should be the nature of the conditions of any such relief?

C6Q8 Are there any practical issues for a market participant if its client is also an AFS licensee?

D Extreme price movements

Key points

We propose new rules in the ASIC Market Integrity Rules (Competition) to require market operators to implement an automated limit up–limit down volatility control to prevent trades from occurring outside a specified price band:

- for S&P/ASX 200 products and associated domestic index ETFs—15% above and below the average price of the product over the preceding five-minute period; and
- for the ASX SPI 200 Index Future (SPI Future)—250 points above and below the average price of the index future over the preceding five-minute period.

In each case, if order book equilibrium is not restored in one minute, trading should pause for five minutes. We propose that limit prices would be determined by a dynamic reference price rather than a static reference price.

For the S&P/ASX 200 and the associated domestic index ETFs, there would need to be consequential changes to the trade cancellation ranges in Part 2.2 (Competition) to reflect the proposed automated volatility control. Consequential changes may also be required to the anomalous order thresholds requirement in Part 2.1 (Competition).

For the SPI Future, we propose market integrity rules to require market operators to implement anomalous order thresholds.

153 As noted in Section C, the increasingly electronic and high-speed nature of trading has introduced new risks to market integrity. In today's market, trading can have more widespread and immediate effects due to complex trading strategies and technologies.

154 For further discussion on the potential impact on market integrity of extreme price movements and the 6 May 2010 'flash crash' in the United States, see Section E of CP 145 and Section D of REP 215.

155 In this section, we propose automated volatility controls to limit the impact of extreme price movements. A volatility control can be defined as a post-order control that prevents a certain order from being matched. Volatility controls operate as a 'safety net' beyond order entry controls and can operate at an individual product level or market wide. For more detail about the role of volatility controls, see 'Automated volatility controls' at paragraph 162.

156 This section is in three parts:

D1: Controls for extreme price movements in equities;

D2: Controls for extreme price movements in futures index; and

D3: Order entry controls—Expansion of scope.

Scope

157 The proposals in this section apply to all products within the S&P/ASX 200, the associated domestic index ETFs and the ASX SPI 200 Index Future (SPI Future).

Previous consultation and feedback

158 In CP 145, we proposed that, in addition to market participant level controls, market operators have controls to minimise and mitigate the incidence of sudden extreme price movements. Submissions generally supported the proposal that market operators should have order entry controls that prevent anomalous orders from being entered and provide certainty and transparency around trade cancellations in the event of extreme market movements. These controls have been incorporated into Chapter 2 (Competition), which commences on 31 October 2011.

159 While there was general support for our proposal for automated volatility controls, there was no consensus on the form that the controls should take (i.e. a brief halt or limit up–limit down) and respondents requested more time to engage with the issue, given the significant potential impact on the market.

160 There were mixed views on whether broad index-based volatility controls, in addition to controls for individual products, were necessary. Other specific comments included:

(a) that volatility controls should not hamper legitimate market activity, such as price movements resulting from a product's fundamentals;

(b) that there should be consistent volatility controls between equities and derivatives products, provided that they are tailored to accommodate the differences between the specific markets and products;

(c) that thresholds should differentiate between auctions and continuous trading; and

(d) that volatility controls should only take into account orders and trades on pre-trade transparent order books, and not trade reports (i.e. executed off-order book) as their price can vary from contemporaneous market activity.

International regulatory responses

161 Regulators around the world have been actively discussing the use of automated volatility controls to promote confident and informed investor participation, including the implementation of trading interruptions followed by volatility auctions and/or trading limits or collars. International considerations of volatility controls are summarised in Table 22 in Appendix 1. These include:

(a) in the United States—the implementation of the SEC pilot program for single-stock circuit breakers (June 2010) and the proposed limit up–limit down control (April 2011);[56]

(b) in Canada—the IIROC proposal for single-stock circuit breakers (November 2010);[57]

(c) in Europe—ESMA's proposed guidelines for market operators to implement controls and arrangements to mitigate the risk of disorderly trading (July 2011);[58]

(d) in Singapore—the Singapore Exchange (SGX) proposal to introduce controls (July 2011);[59] and

(e) the IOSCO consultation on the impact of technological change and examination of a range of trading mechanisms that execution venues may have in place (July 2011).[60]

D1: Controls for extreme price movements in equities

Automated volatility controls

162 Unexpected and extreme price movements may undermine confidence in the market and discourage investor participation. To minimise the occurrence of such events, we consider there are four levels of controls: see Figure 2.

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[56] SEC Order, *Order approving proposed rule changes relating to expanding the pilot rule for trading pauses due to extraordinary market volatility to all NMS stocks* (Release No. 34-64735), SEC, 23 June 2011.
SEC Press Release, *SEC announces filing of limit up-limit down proposal to address extraordinary market volatility* (2011-84), SEC, 5 April 2011.

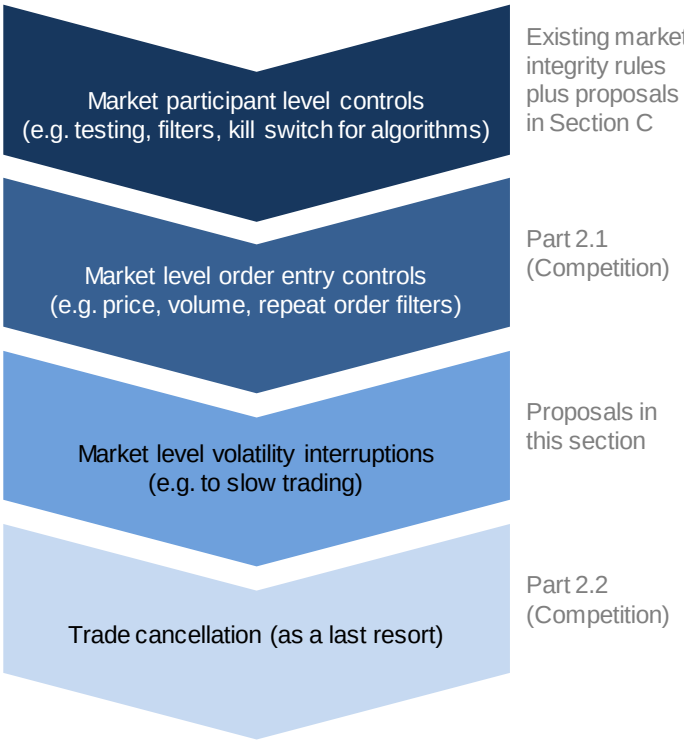
[57] IIROC News Release, *IIROC announces results of regulatory review of May 6 trading in Canadian equity marketplaces*, IIROC, 9 September 2010, http://docs.iiroc.ca/DisplayDocument.aspx?DocumentID=CDCE560F49DE4C80A20E12A158740039&Language=en.
IIROC Notice, *Proposed guidance respecting the implementation of single-stock circuit breakers* (10-0298), IIROC, 18 November 2010.

[58] ESMA Consultation Paper, *Guidelines on systems and controls in a highly automated trading environment for trading platforms, investment firms and competent authorities* (ESMA/2011/224), ESMA, 20 July 2011.

[59] SGX News Release, *Regulatory announcement—SGX proposes circuit breakers in securities market*, 7 July 2011, www.sgx.com/wps/wcm/connect/cp_en/site/press_room/news_releases/regulatory+announcement+-+sgx+proposes+circuit+breakers+in+securities+market?presentationtemplate=design_lib/PT_Printer_Friendly.

[60] IOSCO Consultation Report, *Regulatory issues raised by the impact of technological changes on market integrity and efficiency* (IOSCOPD354), Technical Committee of IOSCO, 7 July 2011, Annex 4.

Figure 2: Controls for extreme price movements



Source: ASIC

163 There are existing market integrity rules about market participant level controls and we propose enhancements to these controls in Section C of this paper. Order entry controls and extreme cancellation arrangements come into effect on 31 October 2011: see Chapter 2 (Competition).[61]

164 Currently, ASX and ASX 24 do not operate automated volatility controls. They do, however, have the power to halt trading where there is a risk to the fair, orderly and transparent operation of a market, and they have existing trade cancellation policies in place. ASIC also has the power to direct market operators to take certain action, including in disorderly trading conditions.

165 We consider that, in the current HFT environment, an automated control to respond to sudden and extreme price movements is necessary. The purpose of such controls is to maintain market integrity and investor confidence by inhibiting the possibility of unwarranted volatility in the market.

166 Before settlement of our policy position on automated volatility controls, there will be several controls in place to mitigate the risks of disorderly trading from extreme price movements. We understand that ASX will manually suspend trading where the price limit threshold approaches or

[61] ASX will have in place order entry controls from 1 December 2011 or the commencement of PureMatch (whichever is earlier). See ASIC Newsletter, *Market supervision update—Issue 13*, ASIC, August 2011, www.asic.gov.au/asic/asic.nsf/byheadline/ASIC-Market-Supervision-Update-issue-13?openDocument.

meets the extreme cancellation range,[62] and will have in place anomalous order thresholds from 28 November 2011 or the commencement of PureMatch (whichever is earlier).[63] From the commencement of operation in Australia, Chi-X intends to have in place automated anomalous order thresholds.[64]

Proposal

D1 We propose new market integrity rules to require a market operator to have an automated limit up–limit down volatility control that would prevent trades from occurring in any S&P/ASX 200 product and associated domestic index ETFs outside a specified price band when there is a significant price movement over a short period of time.
We propose:

(a) that a price movement either up or down of 15% (i.e. the limit) in an individual security in a five-minute period would trigger the control;

(b) a limit state for one minute where trading can occur at or within the limit but cannot proceed further in the same direction. If order book equilibrium is not restored (i.e. trading does not move back into the price range during the limit state), trading should pause for five minutes, after which trading should resume in accordance with the market's normal opening mechanism;

(c) a dynamic reference price (subsequent to a valid open price being the first reference price), which is determined to be the arithmetic mean of trades executed across all continuously trading markets in the previous five minutes (with a tolerance to eliminate excessive price band changes due to incrementally small variations); and

(d) that the control should apply during the periods of continuous trading on that market (e.g. if Chi-X is in continuous trading and ASX is in the open/close auction, only Chi-X's control will be in place. Once ASX is in continuous trading, both markets will have the control in place).

We propose new market integrity rules to require:

(e) market operators to establish systems, policies and procedures reasonably designed to prevent trades from occurring outside the price bands and to implement any resulting limit state and trading pause;

(f) the operator of the market on which the extreme price movement occurs to notify other market operators and ASIC of any limit state by reference to the best bid or best offer across all order books in the relevant product;

(g) on receiving a notification, as outlined in D1(f), all markets offering trading in the relevant product to institute a limit state in that product;

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[62] ASX Trade Technical Bulletin, *ASX trade production: Competition market integrity rules—Mandatory release—Information & schedule* (15/11), ASX, 29 August 2011.
[63] ASIC Newsletter, *Market supervision update—Issue 13, August 2011*, ASIC, August 2011, www.asic.gov.au/asic/asic.nsf/byheadline/ASIC-Market-Supervision-Update-issue-13?openDocument.
[64] Chi-X Australia Markets Operation Notice, *Anomalous order thresholds and extreme cancellation range* (0002/11), Chi-X Australia Pty Limited, 29 July 2011.

(h) if order book equilibrium is not restored, the listing market to notify other market operators and ASIC of a trading pause in the relevant product;

(i) on receiving such notification of a trading pause, all other market operators to pause trading in that product; and

(j) the listing market to notify ASIC and other market operators of the resumption of trading.

See draft new Part 2.4 (Competition).

This proposal applies to products in the S&P/ASX 200 and associated domestic index ETFs (described in paragraph 172).

We propose that this would apply six months from commencement of the rules. In the interim, the controls set out in Chapter 2 (Competition) will be in operation.

Your feedback

D1Q1 Is a limit band and timeframe of 15% in five minutes an appropriate parameter for S&P/ASX 200 products and associated ETFs?

D1Q2 Should the limit band be measured in price steps for lower-priced securities (e.g. those under $2.00)?

D1Q3 Is a limit state of one minute an appropriate time for order book recovery?

D1Q4 Is a trading pause of five minutes an appropriate time before resumption of trading? Should the volatility control bands be wider during the open and close, or should the control apply for a shorter period of the day when all markets are open for continuous trading (e.g. 10.15 am–3.45 pm)?

D1Q5 In calculating a reference price and best bid or best offer across all order books, we expect market operators will have their own consolidated view of all activity across order books. Would it be preferable to use a single source?

D1Q6 What systems changes are necessary for these proposals? What are the costs of these (where possible, please identify the nature of these costs, quantify the estimated costs and indicate whether such costs will be one-off or ongoing)?

D1Q7 We recognise that timing for implementation depends to a large degree on market operators' system vendors and development cycles. What are your views on the proposed transition period? Please provide details on why you consider this timeframe is, or is not, achievable.

D1Q8 Will this affect trading in related derivative products (see 'Derivative considerations' at paragraph 174), and how? How should this process be managed?

D1Q9 Should a volatility control be applied to a wider set of products than proposed?

D1Q11 Do you foresee unintended consequences of the proposed limit up–limit down approach? Please provide details.

D1Q12 Do you have any concerns about the notification process and the process of halting trading on other markets if the product is in a trading halt on one market? If so, what are your concerns and how can they be addressed?

Rationale

167 We consider that, in the current automated trading environment, an automated response to sudden price movements is necessary in addition to the other controls illustrated in Figure 2. This is because order entry controls may not screen out every order or series of orders that may have a disorderly effect on the market. In addition, market participants have confirmed that cancellation of trades should be minimised. Automated volatility controls will provide for a more immediate, transparent and fair response than relying on the exercise of human discretion, as is the case today. They also provide a level of certainty and comfort to investors that measures are in place to mitigate extreme price movements.

Why a limit up–limit down model?

168 In developing our proposals, we considered the benefits of a limit up–limit down model against the other common model—a circuit breaker: see Table 7.

Table 7: Comparison of limit up–limit down model versus circuit breaker

Limit up–limit down	Circuit breaker
Prevents further price movement in the same direction. The key benefit is that it limits the possibility for unwarranted volatility to affect market integrity by inhibiting large price movements. However, the Australian market is not currently experienced in dealing in a limit mechanism circumstance.	Immediately halts trading when triggered. No trading can occur during the halt period. Where a significant move in price is warranted (e.g. after a company announcement), a full trading pause can facilitate an orderly price discovery process that allows investors to assess the stock and collectively arrive at a new consensus price. However, circuit breakers permit a single erroneous trade to trigger a full trading phase.
If triggered on one market, it does not necessarily halt trading on any other market.	Halts trading immediately on *all* markets when triggered on *any* market.
Can use either a static or dynamic reference price.	Can use either a static or dynamic reference price.

Limit up–limit down	Circuit breaker
Complex—in terms of market understanding and implementation.	Simple—in terms of market understanding and implementation.

169 On balance, we consider the limit up–limit down model to be the preferable model for the Australian market because it is less disruptive in that it enables trading to continue during the limit state and provides an opportunity for order books to regain equilibrium before initiating a trading halt.

Products to which the limit up–limit down control should apply

170 Canada is proposing a market-wide circuit breaker, providing tiered trigger levels taking into account the need for a higher threshold for less liquid securities (10% and 20%).[65]

171 The United States initially implemented a circuit breaker pilot program covering securities in the S&P 500 and Russell 1000 and certain ETFs.[66] The primary objective in the United States was to prevent large swings in index levels resulting from temporary price dislocation among a small group of stocks. The United States is proposing to move to a market-wide limit up–limit down control, with securities in the current circuit breaker program set at a tighter threshold then the rest (5% for securities in the S&P 500 and Russell 1000 and 10% for the remainder).[67]

172 As in the United States, we believe the primary objective in implementing these volatility controls is to prevent large swings in index levels resulting from temporary price dislocation among a small group of stocks. Activity in Australia is primarily concentrated in S&P/ASX 200 products,[68] and these are the products that will be available for trading on more than one market. Therefore, we propose to apply the control to products in the S&P/ASX 200 and associated domestic index ETFs. This is intended to capture all ETFs comprising any subset of the S&P/ASX 200, where the ETF contains 15 or more S&P/ASX 200 stocks. We will keep the products we propose to be subject to a volatility control under review—in particular, to include all products that are traded on two or more execution venues.

173 The remainder of ASX listings are less liquid and display greater volatility, as demonstrated by the Capital Markets CRC Limited (CMCRC) research described at paragraph 177. These products will be covered by the extreme

[65] IIROC Notice, *Proposed guidance respecting the implementation of single-stock circuit breakers* (10-0298), 18 November 2010.
[66] IIROC Notice, *Proposed guidance respecting the implementation of single-stock circuit breakers* (10-0298), 18 November 2010.
[67] SEC Press Release, *SEC announces filing of limit up-limit down proposal to address extraordinary market volatility* (2011-84), SEC, 5 April 2011.
[68] We note that, even within the S&P/ASX 200 products, weighting remains disproportionate, with the top 20 accounting for about 60% index weighting and the top 50 accounting for about 80%.

cancellation range in Part 2.2 (Competition) from 31 October 2011. We consider that a volatility control for these securities would increase the potential for trading to be disrupted in unwarranted circumstances and, therefore, do not propose to apply the volatility control to these products—at least initially.

Derivative considerations

174 The current ASX procedure is that, when a security is placed in trading halt, any direct derivative of that security (warrant, option, or contract for difference (CFD)) is also placed in trading halt.

> Note 1: Trading in a derivative can resume under ASX rules, irrespective of whether the underlying product remains in halt, in order to facilitate such events as dividends, corporate actions and end-of-month expiries.
>
> Note 2: CFDs are traded on a separate platform to the cash equities market and are currently manually halted by ASX when required. As such, timing issues may make it impracticable to halt them in tandem with a limit state in the underlying product.

175 However, in a limit move situation, the relevant security may not be placed in halt—at least not immediately. This period of 'suspended animation' might affect market makers' ability to meet any obligations (the same would presumably apply to cash equity market makers, should they be introduced). We intend to discuss this issue with market makers and market operators.

176 In Australia, the currently dominant exchange operator for trading in equities—ASX—also manages trading in listed derivatives (unlike the situation in North America). This will facilitate the coordinated operation of these controls and trading across these products.

15% price movement over a five-minute period

177 ASIC commissioned CMCRC to undertake an analysis of intra-day abnormal security price movement on the entire ASX equities market, covering the period from 1 November 2005 to 31 October 2010. The analysis:

(a) aggregated the number of abnormal price movement instances (with velocity factors of 5%, 10%, 15% and 20% price movement over 5, 10 and 30-minute intervals) over the sample period for each security;

(b) ranked all securities by market capitalisation and on-market turnover; and

(c) aggregated the number of abnormal price movement instances over the sample period for all securities from each market capitalisation decile and on-market turnover decile.

178 The results for the top decile (by market capitalisation) of the study—S&P/ASX 200—are extracted in Table 8. Based on this CMCRC research, we consider that a 15% price movement in a five-minute velocity band

applied to the S&P/ASX 200 seems to be a reasonable parameter to accommodate price movements due to fundamental factors and the administration overhead of dealing with excessive alerts.

179 Over the 12-month period from 1 November 2009 to 31 October 2010, this would have triggered the volatility control 18 times. We note that anomalous order thresholds were not in place during this period.

Table 8: Number of alerts by market capitalisation decile 10 (S&P/ASX 200)

Panel J Market Capitalisation Decile 10					
Period-PChg Threshold	1/11/2005 ~ 31/10/ 2006	1/11/2006 ~ 31/10/ 2007	1/11/2007 ~ 31/10/ 2008	1/11/2008 ~ 31/10/ 2009	1/11/2009 ~ 31/10/ 2010
5 mins - 5%	55	165	1138	1777	129
5 mins - 10%	9	9	130	204	27
5 mins - 15%	4	3	44	60	18
5 mins - 20%	3	2	23	29	15
10 mins - 5%	82	267	1714	2576	186
10 mins - 10%	10	16	189	318	33
10 mins - 15%	4	5	57	88	19
10 mins - 20%	3	2	27	41	16
30 mins - 5%	122	526	3300	4721	347
30 mins - 10%	12	38	356	671	40
30 mins - 15%	5	7	90	189	21
30 mins - 20%	3	3	37	73	16

Source: CMCRC Limited, *A study of abnormal price movement on the ASX*, 9 December 2010, Panel J.

Note 1: PChg = price change.

Note 2: This CMCRC research was compiled over a period of time when market operator level anomalous order filters were not in operation. As such, parameters of narrowed price bands and/or timelines might comfortably be accommodated without causing unwarranted market volatility.

Limit state trigger

180 We propose that a limit state will be triggered when:

(a) the best available offer across all order books (national best offer) is equal to the lower limit of the band (i.e. 15% below the relevant reference price); or

(b) the best available bid across all order books (national best bid) is equal to the upper limit of the band (i.e. 15% above the relevant reference price).

181 All market operators will be required to have systems and procedures in place to identify these instances, according to their view of the national best bid and offer (NBBO). Where such an instance is identified, the market operator will be required to notify ASIC and other operators of markets offering trading in the relevant product of a limit state. On receiving such a notification, all market operators must contain trading in the relevant stock to within +/– 15% of the reference price for one minute.

Limit state for one minute

182 In the United States, the SEC limit up–limit down proposal contains a 15-second limit state because it is considered that this is sufficient time for venues dominated by highly automated trading activity to allow liquidity providers to refresh their quotations. The industry body representing broker–dealers argued for a five-second limit state, while the body representing institutional investors argued for a 30-second limit state.[69]

183 The degree of highly automated trading activity that exists in the United States is not yet reflected in the Australian market. In addition, the general feedback during preliminary discussions with industry after the 6 May 2010 'flash crash', and in response to CP 145, suggested that any limit or pause in the Australian market should at least be in minute intervals to allow time to respond to any sudden price move. As such, we propose a limit period of one minute to allow order books to regain a reasonable degree of equilibrium following a sudden significant price move.

Trading pause where order book equilibrium is not restored

184 If the imbalance between buy and sell orders does not abate within one minute, we propose that trading will pause (i.e. no trading be permitted) for five minutes before the market opens through its normal opening mechanism (e.g. auction or straight into continuous trading). This means that, if orders continue to exist at +/– 15% away from the reference price after the one minute limit state, trading in the relevant product will pause for five minutes.

185 The operator of the listing market will determine whether trading in the relevant product must pause for five minutes across all markets, notifying ASIC and other market operators offering trading in the relevant product.

Reference price

186 The reference price for determining a price band may be dynamic or static:

(a) a dynamic reference price—allows the limit band to move dynamically throughout the trading session, thus allowing more flexibility to accommodate fundamental price movement without undue disruption. Its calculation may be based on:

  (i) the last trade;

  (ii) an average price over a period of time; or

  (iii) the volume-weighted average price (VWAP) over a period of time; whereas,

[69] P Chapman, 'Thumbs up for limit up/limit down, but concerns remain (Part II)', *Traders Magazine Online News*, 22 July 2011, www.tradersmagazine.com/news/sec-limit-up-limit-down-flash-crash-107883-1.html.

(b) a static reference price—is set at the start of the day (e.g. based on the first trade of the day or first auction price) and does not adjust to reflect trading conditions.

187 Consistent with the SEC proposal for the limit up–limit down control in the United States, we propose a dynamic reference price, with its calculation based on the arithmetic mean of trades matched on all order books (i.e. it would not reflect off-order-book trades) in a continuous trading state over the immediately preceding five-minute period. We believe that the calculation of a reference price based on the arithmetic mean will produce a more stable reference price than one based on VWAP, since the calculation of VWAP is heavily influenced by the volume of a trade and is therefore likely to produce a more volatile reference price.

188 The first reference price each trading day would be the first valid opening price across all order books (in accordance with the rules and procedures for determining a valid opening price on the first market to open—for example, based on the first trade of the day or first auction price).

189 Subsequent reference prices during the remainder of the trading day would be calculated using the arithmetic mean of trades matched on all order books. The existing reference price remains the relevant reference price until the next calculation results in a new reference price that has moved by 1% or more from the existing reference price. This is to eliminate excessive price band changes due to incrementally small variations.

Example: When a reference price is updated

190 This example assumes that the opening auction price for Telstra of $3.02 at 10.00 am is the first valid opening price across all order books. The reference price at 10.00 am would be $3.02. Subsequently, the reference price would be calculated in different situations as follows:

(a) No transactions occur across all order books in Telstra between 10.00 am and 10.05 am. The reference price at 10.05 am would remain at $3.02.

(b) The next calculation results in a reference price of $3.04 at 10.05 am: $3.04 – $3.02 = $0.02, which represents a 0.66% change. As this does not move the existing reference price (set at 10.00 am) by 1% or more, the reference price at 10.05 am would remain at $3.02.

(c) The next calculation results in a reference price of $3.06 at 10.05 am: $3.06 – $3.02 = $0.04, which represents a 1.3% change. As this moves the existing reference price (set at 10.00 am) by 1% or more, the reference price at 10.05 am would be updated to become $3.06.

Part of the trading day to which the limit up–limit down control should apply

191 We propose to apply the volatility control to any continuous trading period on the relevant market. This means that it would apply on one market from the moment that market commences continuous trading, irrespective of the trading state on other markets. In practice, it would mean the control would be in operation on Chi-X (assuming it commences continuous trading at 10 am), while ASX is in an open auction state. This is consistent with the application of the order entry controls in the ASIC Market Integrity Rules (Competition) (i.e. the control would not apply during the opening, closing and intra-day auctions on that market).

192 As noted in Table 22, in the United States, the controls apply from the open until the close but the price band is doubled during the 15-minute open and close. We are interested in your feedback on whether the bands in our model should be wider during the open and close or whether the controls should not apply until all markets are open for continuous trading.

Some of the alternative elements of the model considered

193 Some of the alternative elements we considered when developing the limit up–limit down control are summarised in Table 9. The options are listed in order of ease or cost of implementation to sophistication of application and minimisation of adverse impact. In any of the scenarios, the issue of reference price mechanisms, pause/halt periods when a trigger parameter is activated, and trading restart mechanisms would subsequently need to be addressed in detail.

Table 9: Alternative elements considered in limit up–limit down model

Element	Advantages and disadvantages
1. Static price limit range with no reset of limits	Similar to the old-style futures markets mechanism, this would catch an immediate short-term movement, such as price stepping or cascading. However, it inhibits informed price formation in a more protracted timeframe (i.e. the mechanism can be triggered after three minutes or three hours and the result is the same—where trading cannot occur above or below the limit unless trading naturally moves back into the band range). If trading does not naturally move back into the band range, this control prevents any further trading until the next scheduled trading session (where the limit thresholds are recalculated based on the previous day's trading), potentially resulting in abnormal build-up of one-sided order pressure.

Element	Advantages and disadvantages
2. Static price limit range with reset of limits and trading restart	As in 1 above, but with the improvement that it mitigates to some extent the impact on informed price formation and diminishes the potential for the abnormal build-up of one-sided order pressure by allowing trading to continue in that trading session (implicit in the current market integrity rules in a circuit breaker type approach). This seems to be the common European model.[70]
3. Dynamic price limit range with trading restart	A further improvement on 2 above in that the continual determination of the price limit range takes into account all activity up until that point in the day and the impact on informed price formation is further diminished. Within this category, the limit move control is considered more elegant as it is deemed to have the least inhibitive impact; it also has the greatest overhead to implement.

Extreme cancellation range—Consequential amendments

194 Part 2.2 (Competition) introduces a new requirement for market operators offering equity market products to have in place cancellation policies and procedures that will result in the cancellation of all trades that occur in the extreme cancellation range, and that outline the circumstances in which transactions other than those in the extreme cancellation range may be cancelled.

195 This new regime for cancellations applies from 31 October 2011, with cancellation ranges corresponding to the price of the product traded. For products priced to 199.5 cents, trades will be cancelled if they occur at specified price steps (between 21 and 101 ticks), or more, away from the reference price. For products priced $2.00 and above, trades will be cancelled if they occur at a specified percentage (between 20.1% and 50.1%), or more, away from the reference price. The current extreme cancellation range can be found in Rule 2.2.1 (Competition) (see also Table 2 in RG 223), and is extracted below in Table 10.

Table 10: Extreme cancellation range for equity market products

Price	Tick	Cancellation range (ticks or %)
0.1–9.9 cents	0.1 cents	≥21 ticks
10–99.5 cents	0.5 cents	≥61 ticks
100–199.5 cents	0.5 cents	≥101 ticks
200–499 cents	1 cent	≥50.1%

[70] ESMA Consultation Paper, *Guidelines on systems and controls in a highly automated trading environment for trading platforms, investment firms and competent authorities* (ESMA/2011/224), ESMA, 20 July 2011, p. 22.

Price	Tick	Cancellation range (ticks or %)
500–699 cents	1 cent	≥40.1%
700–999 cents	1 cent	≥35.1%
1000–1999 cents	1 cent	≥30.1%
2000–4999 cents	1 cent	≥25.1%
≥5000 cents	1 cent	≥20.1%

196 The mechanism for calculating the extreme cancellation range is static, although it resets if there is an auction during the trading day.

197 We have also said in Table 4 in RG 233 that we expect market operators to have some ability for market participants to cancel or amend a transaction where there is mutual agreement from both parties. This was based on feedback received to CP 145 that this capability should be maintained in the short term to minimise change during the implementation of competition.

Issue

D1 If Proposal D1 is implemented, we consider that it may be necessary to amend the cancellation ranges and the reference prices for the affected products to reflect those outlined by the volatility control beyond the existing proposed amendments in Part 2.3 (Competition). For products that are not subject to a volatility control, the existing ranges and reference prices would not change.

We are interested in your feedback on any additional changes that may be necessary to Parts 2.2 or 2.3 (Competition).

We propose that this would apply at the same time as Proposal D1.

Your feedback

D1Q13 In your view, would the extreme cancellation ranges in Rule 2.2.1 (Competition) need to be amended if we implement the volatility control proposal? Please provide your reasons.

D1Q14 Should the reference price calculation be adapted to a dynamic calculation?

D1Q15 What systems changes are necessary for this proposal? What are the costs involved (where possible, please identify the nature of these costs, quantify the estimated costs and indicate whether such costs will be one-off or ongoing)?

D1Q16 What are your views on the proposed transition period? Please provide details on why you consider this timeframe is, or is not, achievable.

D1Q17 Should Part 2.2 (Competition) apply to products other than equity market products? Please state which other products it should apply to and the basis for your comments.

D2: Controls for extreme price movements in futures index

198 The primary objective in implementing controls for extreme price movements is to prevent large swings in index levels resulting from temporary price dislocation among a small group of stocks. We consider that a limit up–limit down volatility control and order entry controls for the SPI Future would minimise cross-market contagion.

Proposal (1)

D2 We propose new market integrity rules to require the operator of ASX 24 to have an automated limit up–limit down volatility control that would prevent trades from occurring in the SPI Future outside a specified price band when there is a significant price movement over a short period of time. We propose:

(a) that a price movement, either up or down, of 250 points (i.e. the limit) in a five-minute period would trigger the control;

(b) a limit state for one minute, where trading can occur at or within the limit but cannot proceed further in the same direction. If order book equilibrium is not restored (i.e. trading does not move back into the price range during the limit state), trading should pause for five minutes, after which trading should resume in accordance with the market's normal opening mechanism;

(c) a dynamic reference price (subsequent to a valid open price being the first reference price), which is determined to be the arithmetic mean of trades executed in the previous five minutes (with a tolerance to eliminate excessive price band changes due to incrementally small variations); and

(d) that the control should apply during the periods of continuous trading on that market.

See draft new Part 2.4 (Competition).

This proposal applies to the SPI Future.

We propose that this would apply six months from commencement of the rules.

Your feedback

D2Q1 Is a limit band and timeframe of 250 points in five minutes an appropriate parameter for the SPI Future?

D2Q2 Is it appropriate to retain the current threshold of 250 points applied to the SPI Future administered by ASX in its trade cancellation policy for ASX 24, or would it be more appropriate to adopt a percentage movement which remains constant irrespective of the level of the underlying index?

D2Q3 Is a limit state of one minute an appropriate time for order book recovery?

D2Q4 Is a trading pause of five minutes an appropriate time before resumption of trading?

D2Q5 What systems changes are necessary for this proposal? What are the costs of these (where possible, please identify the nature of these costs, quantify the estimated costs and indicate whether such costs will be one-off or ongoing)?

D2Q6 We recognise that timing for implementation depends to a large degree on market operators' system vendors and development cycles. What are your views on the proposed transition period? Please provide details on why you consider this timeframe is, or is not, achievable.

D2Q7 Do you foresee unintended consequences of the proposed limit up–limit down approach? Please provide details.

D2Q8 We do not intend to introduce a market-wide halt across the equities market, should the limit up–limit down control be triggered in the SPI Future. Do you consider that there should be such a market-wide halt parameter? If so, what would it be?

D2Q9 We consider that implementing a control in the S&P/ASX 200 products, associated domestic index ETFs and the SPI Future is sufficient, at this stage, to address cross-product and cross-market contagion. Should we also consider a market-wide control for the equities market, as exists in the United States?

Proposal (2)

D2 If a volatility control of the nature described in Proposal D2 (1) is implemented (i.e. for the SPI Future), we propose new market integrity rules to require the operator of ASX 24 to have anomalous order entry controls for the SPI Future.

See draft amended Part 2.1 (Competition).

We propose that this would apply at the same time as Proposal D2 (1).

Your feedback

D2Q10 What are your views on an order entry control for the SPI Future to supplement the limit up–limit down volatility control?

D2Q11 What systems changes are necessary for this proposal? What are the costs involved (where possible, please identify the nature of these costs, quantify the estimated costs and indicate whether such costs will be one-off or ongoing)?

D2Q12 What are your views on the proposed transition period? Please provide details on why you consider this timeframe is, or is not, achievable.

Rationale

199 In analysing the 6 May 2010 'flash crash' in the United States, the SEC and CFTC identified a triggering event and a subsequent confluence of market conditions and trading strategies as the cause of the market disruption.[71]

200 According to the SEC and CFTC, an automated execution of a large sell order in the E-mini (an equity-based index future traded on the Chicago Mercantile Exchange (CME)) was the trigger for additional trading by HFTs and other traders in the futures market, as well as cross-market arbitrageurs (thereby affecting the equities markets).

201 In Australia, activity in the equities market is highly correlated with the index future.

202 While there have been instances in Australia where our index future has experienced sudden and extreme movements (e.g. in December 2008—see Table 11 in REP 215), there have been no cross-market disruptions because the equities market was not open in those specific instances. However, because of the high correlation between activity in the Australian equities market and the index future,[72] we believe that, where a market disruption occurs in the index future, there is potential for this to cause disruptions in the underlying products in the equities market. The proposals in this section are designed to minimise this possibility of cross-market contagion. We have applied a limit up–limit down control to ETFs on the same basis.

250-point movement over a five-minute period

203 ASX currently manually administers the ASX 24 trade cancellation policy for the SPI Future—applicable where there is a 250-point move in index levels. Our proposal reflects this current threshold.

No market-wide trading halt

204 We do not intend to apply a market-wide trading halt across the cash equities market if the index future moves 250 points within five minutes.

205 In the United States, there is a market-wide halt mechanism applied to the cash equities market if the headline index moves 10%, irrespective of movements in the futures market. The SEC is currently seeking comment on proposed rule changes that revise the existing market-wide circuit breakers by, among other things, reducing the market decline percentage thresholds necessary to trigger a circuit breaker (from 10%, 20% and 30% to 7%, 13%

[71] Joint CFTC–SEC Report, *Findings regarding the market events of May 6, 2010*, CFTC and SEC, 30 September 2010, www.sec.gov/news/studies/2010/marketevents-report.pdf.

[72] We understand that there is cross-product hedging as well as active index arbitrage between the index future and the underlying products in the equities market, demonstrated by the closely correlated activity and volumes in the quarterly SPI Future index arbitrage expiry and rollover.

and 20%, respectively), and using the broader S&P 500 Index as the pricing reference to measure market decline, rather than the Dow Jones Industrial Average.[73]

206 We are not proposing such a market-wide control in the Australian market. As stated in paragraph 201, the equities market in Australia is highly correlated with the index future, and we consider that implementing a control in the S&P/ASX 200 products, associated domestic index ETFs and the SPI Future is sufficient, at this stage, to address cross-product and cross-market contagion.

D3: Order entry controls—Expansion of scope

207 Part 2.1 (Competition) introduces a new requirement for market operators to have in place automated price-related order entry controls for equity market products. The controls are intended to act as a filter so that an order that has a clearly erroneous price order does not enter the order book.

208 Market operators are not required to have controls for factors other than price. For example, there is no requirement to have a volume control, so it remains possible that a single order for a quantity of stock that is more than the total stock on issue could enter an order book.

Issue

D3 We are interested in your feedback about whether the scope of the current requirement in Part 2.1 (Competition) for market operators to have order entry controls should be extended to take into account factors other than price, and whether it should apply to other products and markets.

Your feedback

D3Q1 Should the order entry controls apply to all products traded on ASX and Chi-X, including debt, options and warrants?

D3Q2 Should the requirement for market operators to have order entry controls apply to products traded on other markets, such as the National Stock Exchange, SIM Venture Securities Exchange and the Australia Pacific Exchange?

[73] SEC Press Release, *SEC to publish for public comment updated market-wide circuit breaker proposals to address extraordinary market volatility* (2011-190), SEC, 27 September 2011, www.sec.gov/news/press/2011/2011-190.htm.

E Enhanced data for market surveillance

Key points

We propose new and amended rules in the ASIC Market Integrity Rules (Competition), ASIC Market Integrity Rules (ASX) and ASIC Market Integrity Rules (Chi-X) to require:

- market participants to capture and provide additional data on orders and trades for exclusive use by ASIC for regulatory purposes;
- market operators to synchronise their system clocks to a higher standard than the current requirement, which applies from 31 October 2011;
- market participants to synchronise their system clocks; and
- market participants to provide ASIC with data about transaction records, when requested to do so under the Corporations Act or ASIC Act, in a standard format, and containing standardised information in a specified order.

209 We are responsible for supervising trading activity of market participants on Australia's domestic licensed markets. The proposals in this section are designed to assist us in fulfilling our function and to promote the ongoing integrity of Australia's markets.

210 ASIC's surveillance capability needs to keep pace with new trading strategies and changing market structure. The 6 May 2010 'flash crash' in the United States, and subsequent challenges experienced by US regulators to replay the events, support this view. In supervising increasingly complex and technologically advanced markets, ASIC needs to invest in surveillance and data management technology to be able to support ongoing market integrity.

211 This section is in three parts:

E1: Data to assist ASIC with surveillance;

E2: Synchronised clocks; and

E3: Providing records to ASIC—Standard format.

Scope

212 The proposals in this section apply to activities or conduct of persons in relation to products quoted on ASX (excluding futures and options). This includes both on-order book and off-order book orders and trades.

E1: Data to assist ASIC with surveillance

Previous consultation and feedback

213 In CP 145, we proposed to require certain data to be included on order and/or trade messages that would be visible only to ASIC and market operators, similar to the proposals outlined in this section.

214 While there was in-principle support for enhancing ASIC's surveillance capability, respondents suggested that the proposed changes should not be linked to the introduction of competition, and further consultation should take place before any changes were implemented.

215 Respondents noted that additional data on order and trade messages would affect the efficiency of networks and systems processing those transactions, and require significant investment in systems. The estimated implementation timeframe varied from three months to two years, while some respondents questioned the utility of the information required.

International initiatives

216 There have been various initiatives around the world on the data required for market supervision. Table 23 summarises these recent international considerations, including:

(a) the IOSCO Technological Change Report focuses on the need for regulators to have additional tools to deal with technological developments, including an additional consolidated audit trail or surveillance data, a single reporting point for all orders and transactions, and unique entity identifiers (July 2011);[74]

(b) the global legal entity identifier (LEI) system is welcomed by the Financial Stability Board (FSB) and Committee of Payment and Settlement Systems (CPSS)–IOSCO (July and August 2011);[75]

(c) the SEC implements a large trader reporting regime in the United States (July 2011);[76]

(d) the SEC proposes a consolidated audit trail system (May 2010);[77] and

(e) the European Commission proposes requirements for transaction reporting in the Review of MiFID (December 2010).[78]

[74] IOSCO Consultation Report, *Regulatory issues raised by the impact of technological changes on market integrity and efficiency* (IOSCOPD354), Technical Committee of IOSCO, 7 July 2011, Chapter 4.
[75] FSB Press Release, *Meeting of Financial Stability Board* (33/2011), FSB, 18 July 2011; Joint Bank of International Settlements–IOSCO Consultative Paper, *Report on OTC derivatives data reporting and aggregation requirements* (CPSS96), Committee on Payment and Settlement Systems and Technical Committee of IOSCO, 24 August 2011.
[76] SEC Press Release, *SEC adopts large trader reporting regime* (2011-154), SEC, 26 July 2011.
[77] Joint CFTC–SEC Report, *Recommendations regarding regulatory responses to the market events of May 6, 2010*, Joint CFTC–SEC Advisory Committee on Emerging Regulatory Issues, 18 February 2011, www.cftc.gov/ucm/groups/public/@aboutcftc/documents/file/jacreport_021811.pdf.

A global legal entity identifier system

217 A coalition of financial services trade associations has started an initiative to develop an international consensus-based system that identifies requirements and standards for a viable, uniform and global LEI solution to aid regulators and industry in monitoring systemic risk.[79]

218 We recognise this work under way to implement a global LEI and intend to work with industry towards implementing a solution for client identification in a manner that involves minimal change for market participants and leverages on the global LEI initiatives, where possible.

Proposal (1)

E1 We propose new market integrity rules to require market participants to provide additional regulatory data (summarised in Table 11) on order messages and/or trade reports submitted to market operators (visible only to market operators and ASIC). A market participant should provide regulatory data for each side of a reported transaction to which it is a party.

See draft new Chapter 5A (Competition).

This proposal applies to activities or conduct of persons in relation to products quoted on ASX (excluding futures and options).

We propose the following transitional arrangements:

(a) the requirement for regulatory data would be split into two tranches:

  (i) data items marked as priority A to be implemented around 6–12 months from commencement of the rules; and

  (ii) data marked as priority B to be implemented 12–18 months from commencement of the rules: see Table 11.

(b) for each tranche, market participants would be provided with some flexibility to choose their technical implementation date.

Proposal (2)

E1 We propose new market integrity rules to require market operators to record regulatory data received from market participants and pass this regulatory data on to ASIC's markets surveillance system.

See draft new Chapter 5A (Competition) and draft amended Rule 7.1.1 (ASX) and (Chi-X).

This proposal applies to activities or conduct of persons in relation to products quoted on ASX.

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[78] European Commission Consultation Paper, *Review of the Markets in Financial Instruments Directive (MiFID)*, European Commission, 8 December 2010, http://ec.europa.eu/internal_market/consultations/docs/2010/mifid/consultation_paper_en.pdf.

[79] Sifma Press Release, *Financial industry trade associations coalition releases framework for a global legal entity identifier system*, 3 May 2011, www.sifma.org/news/news.aspx?id=25234.

We propose the following transitional arrangements:

(a) the requirement for regulatory data would be split into two tranches:

  (i) data items marked as priority A to be implemented around 6–12 months from commencement of the rules; and

  (ii) data marked as priority B to be implemented 12–18 months from commencement of the rules; and

(b) for each tranche, we propose that market operators would provide the capability to accept regulatory data from participants some time before the relevant implementation date.

Your feedback

E1Q1 Are there any practical issues with these proposals? Please provide details. Are there more desirable mechanisms of achieving the same outcome?

E1Q2 Considering the additional data to be carried via order and trade report messages, what will be the impact on the performance and capacity of your order management and trading systems?

E1Q3 What systems changes are necessary for these proposals? What are the costs of these (where possible, please identify the nature of these costs, quantify the estimated costs and indicate whether such costs will be one-off or ongoing)?

E1Q4 What are your views on the proposed transitional arrangements? Please provide details on why you consider these are, or are not, achievable.

Table 11: Regulatory data to assist ASIC with surveillance—Summary

Data requirement	Description	Content/format	Priority	Requirement	
				Order	Trade report
Execution venue	The venue (or platform) on which orders are matched	For venues operating under an Australian market licence—the ISO 10383 Market Identification Code (MIC) For venues not operating under an Australian market licence, ASIC will define and publish values for specific venues.	A		✓
Category of transaction: • Buy side • Sell side	Categories that describe the transaction	Principal Agency—Wholesale Agency—Retail	A	✓	✓
Client identifier: • Buy side • Sell side	For agency transactions: • Identifies the client	Market participant client account identification Depending on the origin of the transaction, any of: ACN, ARBN, ARSN, Global LEI, CHESS HIN (as applicable)*	A B	✓ ✓	✓ ✓

Data requirement	Description	Content/format	Priority	Requirement	
				Order	Trade report
Intermediary identifier: • Buy side • Sell side	For agency transactions: • Identifies the AFS licensed intermediary—or, where there is more than one AFS licensee,[80] the licensee that provides the instruction to the market participant	AFS licence number	A	✓	✓
Algorithm	For market participant algorithms	Allocated by a market participant: • Algorithm identifier • Execution instance	A	✓	✓
	For client algorithms	Provided by client: • Algorithm identifier • Execution instance	B	✓	✓

* ACN = Australian Company Number; ARBN = Australian Registered Business Number; ARSN = Australian Registered Scheme Number; LEI = Legal Entity Identifier; and CHESS HIN = CHESS Holder Identification Number.

Rationale

219 Order and trade data is used by ASIC for various purposes, including:

(a) monitoring market orderliness;

(b) assessing compliance with market misconduct provisions; and

(c) analysing market structure and market trends.

220 Origin-of-order information allows regulators to detect and investigate market manipulation and insider trading with greater efficiency and may assist market participants' risk management. We consider that the availability of these types of information will enhance our ability to perform market surveillance: see CP 145, paragraphs 321–338.

221 We believe that the enhanced regulatory data outlined in our proposals and discussed in the paragraphs below reflects a range of interim steps that are important for maintaining market confidence and for setting future market structure policies. These would bring Australia more in line with arrangements overseas, while having substantially less impact on market participants (i.e. provision of information that market participants already routinely capture about their clients).

[80] For example, where the market participant takes orders from an AFS licensee and that AFS licensee takes orders from another AFS licensee. We are gathering information about indirect market participants and their clients.

Identification of off-order book execution venues

222 To stay abreast of developments in market structure, including off-order book liquidity (or liquidity in 'dark pools'), we believe it is important to uniquely identify the execution venue for transactions executed off-order book. This will enhance the efficiency of our surveillance function and provide accurate data for future policy decisions.

223 We will maintain and publish a list of execution venue codes for off-order book execution venues.

224 This proposal, if implemented, may replace at least part of the crossings system reporting obligations currently required under Part 4.3 (Competition) 2011.

Categorisation of orders and trade reports

225 Ideally, we would like to have real-time visibility of clients on all orders and trade reports. Market-wide unique client identifiers would strengthen our oversight of markets by enabling us to:

(a) quickly identify persons making trading decisions and systematically detect misconduct by these persons;

(b) more efficiently assess market trends and the impact of certain types of trading activity on the market; and

(c) in the context of market events like 6 May 2010, respond to parties trading at and around the time of the extreme price movements.

226 Before this can be achieved, we consider that categorisation of orders and trade reports, as follows, will improve our current supervisory abilities:

(a) principal;

(b) agency—wholesale; or

(c) agency—retail.

227 This information will enhance our ability to detect certain forms of market abuse and our understanding of the nature of those dealing in the Australian market.

Client identification

228 Where possible, market participants should identify, on orders and trade reports, the client responsible for placing the order. We do not propose to implement any new forms of identifier for this purpose.

229 We will initially require the market participant to identify its client's account number (as used by the market participant to identify its clients). At a future time, we may specify that enhanced forms of identification should be used for certain client categories in place of the participant client account number.

Depending on the origin of the transaction, enhanced forms of client identification may include:

(a) Australian Company Number (ACN) or Australian Registered Business Number (ARBN) [81];

(b) Australian Registered Scheme Number (ARSN);

(c) Global Legal Entity Identifier (Global LEI);

(d) recognised forms of legal identifier from an overseas jurisdiction; or

(e) CHESS Holder Identification Number (CHESS HIN).

230 We recognise that it may not always be possible to identify a single client responsible for an order and intend to provide guidance on the treatment of 'basket orders' and orders booked to a market participant 'suspense account'. In the future, we may look to introduce 'post allocation' reporting for transactions where pre-trade client details are not specific.

231 We believe that the proposed framework for client identification will yield the enhanced supervision capability required, using forms of client identification already commonly used. At this stage, we do not consider it necessary to propose the introduction of any new form of unique identification for Australian traders, although we may reconsider this position in future.

Indirect market participants

232 Where an order originates from the client of an AFS licensee who, in turn, provides trading instructions to a market participant, we propose that the market participant identify the AFS licence number of the intermediary on orders and trade reports. We recognise that this form of identification will be easier where transactions are not entered manually by the market participant but are entered into the market participant's order management system by the indirect market participant or by the client.

233 Over recent years, the number of indirect market participants has grown significantly and information relating to this segment's contribution to the market is limited. Identification of indirect market participants on transactions will allow ASIC to accurately map this important market segment and provide efficiencies for our trading inquiries. All active indirect market participants will be identified, and trading information will be used to assist us to oversee these organisations.

[81] Or the associated Australian Business Number (ABN).

Algorithms

234 Algorithms are playing an increasingly important role in our markets. For principal transactions, and transactions where clients use algorithms provided by a market participant, the market participant should identify the algorithm used, and the specific execution instance of the algorithm across any order manager that controlled the primary decision to trade. For example, if an algorithm is identified as 'ALG-XYZ' and it is executed 100 times during the day, then all orders created by the 59th execution of the day should be identified as originating from 'ALG-XYZ-59'.

235 We recognise that more than one algorithm may be involved before an order is submitted to a market. In these instances, details of the primary decision-making algorithm should be provided. We do not require identification of algorithms whose sole purpose is smart order routing. Further information on how algorithms should be identified will be provided through a regulatory guide.

236 With a longer transition period, we propose to require identification of the algorithms used by clients that are not provided by market participants. We recognise that this may raise issues in relation to sourcing information about clients' algorithms. We seek your feedback on any practical issues that this proposal may raise, and whether you consider that there are more desirable mechanisms of achieving the same outcome.

Off-order book transactions

237 Chapter 5 (Competition) requires only one party to an off-order book transaction to report the transaction. This is to ensure that the same transactions are not reported twice. Where an off-order book transaction involving two market participants is reported to a market operator, it is not appropriate for the market participant responsible for reporting to provide 'for ASIC use only' data relating to the other participant's side of the transaction. In this case 'for ASIC use only' data may be omitted for one side of the transaction, but we expect the reporting market participant to include the other party's unique identifier (broker ID), or AFS licence number where the other party does not have a unique identifier.

Implementation

238 We will look to initially implement the proposals that may be achieved with the least effort and cost. We recognise that substantial system and process changes may be required, and provide transitional arrangements to allow market participants some flexibility in their implementation strategy.

239 We are interested in feedback on what would be involved in reporting each of the items in Table 11. We expect that items marked 'Priority A' are relatively straightforward for market participants to provide. For items

marked 'Priority B', which may be more challenging, it may be appropriate to consider a longer implementation timeframe.

E2: Synchronised clocks

Proposal (1)

E2 We propose to amend existing Rule 6.3.1 (Competition) to require a market operator to synchronise the clocks of its trading, supervision and reporting systems to the Universal Time Clock (UTC)(AUS) designated by ASIC (i.e. the clock of the National Measurement Institute (NMI)) to reduce the specified allowable tolerance.

We propose new market integrity rules to require market operators to synchronise their clocks with a precision of 1 microsecond, and accuracy of +/– 1 millisecond.

To the extent that a market operator relies on third-party providers for trading, supervision or reporting purposes, the market operator must ensure the third-party providers synchronise their clocks with a precision of 1 microsecond, and accuracy of +/– 1 millisecond.

See draft amended Rule 6.3.1 (Competition).

This proposal applies to activities or conduct of persons in relation to products quoted on ASX.

We propose that this would apply 12 months from commencement of the rules.

Your feedback

E2Q1 What are the likely costs of changes (where possible, please identify the nature of these costs, quantify the estimated costs and indicate whether such costs will be one-off or ongoing)?

E2Q2 What are your views on the proposed transition period? Please provide details on why you consider this timeframe is, or is not, achievable.

Proposal (2)

E2 We propose a new market integrity rule to require a market participant to synchronise the clocks of its trading, compliance monitoring and reporting systems to the UTC(AUS) designated by ASIC (i.e. the clock of the NMI) to a specified allowable tolerance, and demonstrate the level of its clocks' compliance with these rules.

We also propose new market integrity rules to require market participants to:

(a) synchronise co-located trading, compliance monitoring and reporting system clocks to a precision of 1 microsecond, and accuracy of +/– 1 millisecond; and

(b) synchronise other trading, compliance monitoring and reporting system clocks to a precision of 1 millisecond, and accuracy of +/– 20 milliseconds.

A market participant must have procedures in place governing its connection to the clock, for managing drift and for restarting the synchronisation process.

To the extent that a market participant relies on third-party providers for trading, compliance or reporting purposes, the market participant must ensure the third-party providers synchronise their clocks to the UTC(AUS) designated by ASIC.

See draft new Part 7.4 (Competition).

This proposal applies to activities or conduct of persons in relation to products quoted on ASX.

We propose that this would apply 12 months from commencement of the rules.

Your feedback

E2Q3 What are the practical issues for market participants to synchronise their clocks?

E2Q4 Should market participants using co-location services provided by market operators be required to synchronise their clocks to the same standard as the market operator?

E2Q5 What are the likely costs of changes (where possible, please identify the nature of these costs, quantify the estimated costs and indicate whether such costs will be one-off or ongoing)?

E2Q6 What are your views on the proposed transition period? Please provide details on why you consider this timeframe is, or is not, achievable.

Rationale

240 In today's market, where orders are processed at extraordinary speed, time synchronisation of market operators' systems is critical to ensuring the accurate consolidation of market data.

241 In CP 145, we consulted on requiring market operators to synchronise the clocks of their trading, supervision and reporting systems to the Australian realisation of Coordinated Universal Time, denoted UTC(AUS), as maintained by the NMI. During consultation, we also indicated our interest in pursuing best practice for synchronisation by market participants. Clock synchronisation for market operators was implemented in Part 6.3 (Competition) as a minimum for a multimarket environment. The proposals in this section build on these requirements to enable the efficient supervision of increasingly fast-moving markets.

242 The standard for market operators needs to improve to keep pace with market developments: see Table 20 in Appendix 1. Specifically, an increase in trading speeds, and significant growth in the proportion of orders and trades per time increment, are expected to result from the following developments:

(a) the introduction of new execution venues and platforms which cater to HFT;

(b) the expected increase in the number of HFTs in the Australian market in the future; and

(c) the establishment of new facilities to allow for increased levels of co-location and decreased market access latency.

An improved standard of time measurement by market operators will assist ASIC's surveillance of the market to keep pace with market developments.

243 The promotion of more accurate sequencing of orders and trades within very short periods of time will also be critical for data vendors in their consolidation and dissemination of market data. In particular, the accurate and efficient creation of a national best bid and offer (NBBO) will rely on a high standard of accuracy and precision of time-stamped orders by market operators. The proposals will help to promote this outcome. This is important for market participants, as they may be relying on the NBBO for order and risk management, as well as for reporting trades at or within the spread or on-exchange crossings that reference the NBBO.

244 The introduction of time synchronisation requirements for order management and trading systems of market participants will enhance our oversight of markets by enabling us to measure compliance with obligations to report immediately and to execute transactions within the NBBO.

245 We suggest that market operators that offer co-location services to market participants should include a synchronisation service within the co-location arrangements, and offer the same standard of synchronisation as is used by the market operator.

246 For market participants not using co-location services, we propose to require synchronisation of their clocks to UTC(AUS) with a precision of 1 millisecond, and accuracy of +/– 20 milliseconds.

247 We expect market operators and market participants to be able to measure and offset any latency between their systems and the NMI's system. We expect a regular checking mechanism to be in place which automatically adjusts the time to maintain the specified standard.

248 We intend to periodically review the clock systems of market operators and market participants required for synchronisation, to ensure that they are

complying with the rules relating to precision and accuracy, and to keep pace with developments.

Coordinated Universal Time—UTC(AUS)

249 The legal reference of time in Australia is Coordinated Universal Time (UTC(AUS)). This is maintained and disseminated by the National Measurement Institute (NMI), a division of the Government's Department of Innovation, Industry, Science and Research. The NMI maintains a number of services including network time protocol (NTP) servers and rubidium clocks which provide a means for market operators and market participants to satisfy the requirements of these rules.

250 Access to the NTP servers is free and provides traceable accuracy of around 20 milliseconds. A rubidium clock costs around $25,000 and provides accuracy to around 0.5 milliseconds (500 microseconds) with fewer synchronisations. The NMI also provides services to continuously monitor time precision and accuracy across organisational systems, and can provide compliance audit reports.

E3: Providing records to ASIC—Standard format

251 Section 912E of the Corporations Act contemplates that ASIC conducts surveillance checks on AFS licensees. It requires AFS licensees and their representatives to give assistance to ASIC in relation to the licensee's compliance with the financial services laws, and in relation to the performance of ASIC's other functions. Among other types of data, we typically request trading records from AFS licensees to assist in our surveillance of the market.

252 In Consultation Paper 152 *ASIC's conversion of ASX and SFE guidance: General operational obligations* (CP 152), we consulted on whether we should provide regulatory guidance to ensure that electronic historical trading records are delivered to us in a standard format, and containing standardised information in a specified order. Respondents indicated that a requirement to provide information in a defined format, with standardised information and in a specified order should be established through rules and not through guidance.

253 Since our consultation in CP 152, we have revised the content required for such trading records, as outlined in Table 12 below.

Proposal

E3 We propose a new market integrity rule to require market participants to use a standard format when sending ASIC transaction-related trading records requested under the Corporations Act or ASIC Act. Market participants must:

(a) send the requested electronic trading records in either .csv or Excel file format, where practicable; and

(b) include the columns of information specified in Table 12 (where relevant) in the order listed.

See draft new Rule 4.1.5A (ASX) and (Chi-X).

This proposal applies to activities or conduct of persons in relation to products quoted on ASX.

We propose that this would apply six months from commencement of the rules.

Your feedback

E3Q1 What changes would be necessary for you to implement this request? Please provide an indication of the implementation timeframe and costs that this would involve.

E3Q2 What are your views on the proposed transition period? Please provide details on why you consider this timeframe is, or is not, achievable.

E3Q3 Do you consider that adopting this proposal would impose an unreasonable burden?

Table 12: Content required

Columns of information to be included
• market participant name • account name • account ID • buy/sell code • security code • trade date • trade execution time • trade units • trade price • trade value • order giver • order ID • order reference number • original order units • order date • order time • order taker • address of the account holder – street address – suburb/town – postal code – country • telephone numbers of the account holder – business – home – mobile

Rationale

254 The format market participants should use to provide trading records requested by ASIC under the Corporations Act or ASIC Act is not currently specified. We generally receive records in a number of different formats, including documents sent as images, .xls, .pdf and .csv files. Given the large quantities of data that cannot be easily or consistently analysed, our ability to effectively perform our regulatory functions would be greatly enhanced if the records were to be provided in the same format, and contain standardised information in a specified order. There will also be efficiency outcomes for market participants.

F Best execution

Key points

Best execution requires market participants to take reasonable steps to obtain the best outcome for their clients.

We propose to expand the product scope of the best execution obligations in Chapter 3 (Competition) so that they apply to trading in ASX-quoted interest rate securities, options, warrants, and AQUA products[82] (to the extent they are not already within the scope of Chapter 3 (Competition).

We seek your feedback on whether any additional data is required to assist investors in assessing execution quality.

255 Best execution is an important investor protection mechanism because it ensures that market participants do not place their own interests ahead of those of their clients (e.g. by exploiting information asymmetries between themselves and their clients) and that clients receive the best result. It also promotes efficiencies by ensuring orders are directed to the execution venue offering the best result.

256 For further detail about the role of a best execution requirement and how it is applied in other jurisdictions, see Section G of CP 145 and Section E of REP 215.

257 This section is in two parts:

F1: Best execution obligations—Expansion of product scope; and

F2: Public reporting on order routing and execution quality.

Scope

258 The proposals in this section apply to interest rate securities, options, warrants and AQUA products quoted on ASX.

[82] Some AQUA products, such as managed investment schemes, are currently included within the definition of 'equity market product' under the ASIC Market Integrity Rules (Competition) and are, therefore, already within the scope of best execution.

F1: The best execution obligations—Expansion of product scope

259 The best execution obligations currently apply to trading in equity market products. We propose to expand the scope of the best execution obligations so that they also apply to trading in ASX-quoted interest rate securities, options, warrants and all AQUA products.

The current best execution obligations

260 When dealing in equity market products, Chapter 3 (Competition) currently requires market participants:

(a) when handling and executing an order for a client, to take reasonable steps to obtain the best outcome for the client or to adhere to the client's instructions (Part 3.1 (Competition)). The best outcome has different meanings for retail and wholesale clients:

(i) for retail clients, best outcome means the best total consideration[83] (i.e. purchase price or sale price plus transaction costs). This may be interpreted solely as the best purchase price or sale price while there are not material differences in transactions costs between licensed markets; and

(ii) for wholesale clients, best outcome may include a range of factors such as price, costs, speed, volume and execution certainty;

(b) to establish, document and implement adequate policies and procedures (Part 3.2 (Competition)). These should reflect the strategy for obtaining the best outcome for the handling and execution of client orders, and should include at a minimum:

(i) how the market participant intends to handle client orders from receipt of an order to execution and settlement. This includes the circumstances in which orders will be transmitted for matching or execution to an order book or elsewhere, and the circumstances in which transmission will be automatic or manual;

(ii) the order books or any other place where the market participant may transmit client orders; and

(iii) arrangements for monitoring best execution and to ensure the market participant continues to have adequate policies, procedures and implementation to meet its obligations to clients;

(c) to disclose their best execution arrangements to clients (Part 3.3 (Competition)). This includes disclosure in relation to:

(i) the obligations of the market participant;

[83] For a buy order, the purchase price paid by a client in respect of performance of a client order, plus transaction costs; or for a sell order, the sale price received by a client in respect of performance of a client order, less transaction costs.

(ii) the venues on which client orders will be executed;

(iii) the circumstances in which client orders will be executed on different venues; and

(iv) how instructions are handled; and

(d) to be able to demonstrate to clients, on receiving a reasonable request, that a client order has been executed in accordance with the best execution arrangements.

261 This obligation will apply to market participants from 31 October 2011. For a period of 12 months from this date, a market participant can meet its best execution obligations solely on ASX without being obliged to consider whether it should have access to other markets: Rule 3.1.1(6) (Competition). For further explanation of the rules and an outline of our current expectations, see Chapter 3 (Competition) and Section C of RG 223.

Proposal

F1 We propose to extend the scope of the best execution obligations in Chapter 3 (Competition) to apply to the following ASX-quoted products:

(a) interest rate securities (including corporate bonds, floating rate notes, convertible bonds, hybrid debt securities, collateralised debt obligations and, potentially, Commonwealth Government Securities[84]);

(b) options;

(c) warrants; and

(d) AQUA products (to the extent they are not already included within the definition of 'equity market product' in the ASIC Market Integrity Rules (Competition)).

See draft new Part 3.1A (Competition).

We propose that this would apply 12 months from commencement of the rules.

Your feedback

F1Q1 What are the practical challenges for market participants to comply with the proposed increased product scope of the best execution obligations?

F1Q2 What are the implications of these obligations for off-order book trading in these products?

F1Q3 To reduce the potential impact on the wholesale market, should we consider limiting the application of the best execution obligations in relation to these products to the extent that they are traded by market participants:

[84] Commonwealth Government Securities (CGS) may be quoted and traded on ASX and/or alternative markets under the Government's proposal announced as part of the Australian Government's *Competitive and sustainable banking system*, December 2010 available at www.treasury.gov.au/banking/content/_downloads/competitive_and_sustainable_banking.pdf. For clarity, we do *not* propose to expand the scope of best execution to include Australian Commonwealth Government Loans (XCL), which were first listed on ASX on 26 February, 1971 under ASX's Wholesale Loan Securities Market rules.

(a) under the rules of a licensed market; or

(b) under the rules of a licensed market that includes retail participation; or

(c) on behalf of retail investors?

Which option do you prefer and why?

F1Q4 Should we consider applying only the best outcome obligation to obtain best outcome when dealing in these products? For example, the obligations in relation to policies and procedures, disclosure and evidencing would not apply.

F1Q5 Will compliance with this proposed obligation require any changes to your systems or procedures? What are the likely costs of such changes (where possible, please identify the nature of these costs, quantify the estimated costs and indicate whether such costs will be one-off or ongoing)? Are there likely to be significant impediments to making these changes?

F1Q6 What are your views on the proposed transition period? Please provide details on why you consider this timeframe is, or is not, achievable.

Rationale

262 The market integrity rules in Chapter 3 (Competition) were limited to equity market products to address the immediate issue of the introduction of competition in these products. However, best execution rules in overseas markets—including in the United States, Canada and Europe—typically apply to trading in all financial products, and not just equity market products.

263 In CP 145, we asked whether the best execution obligations should apply to other products. There was broad support for best execution to apply to a wider scope of products—notably, related equity products, derivatives and debt products.

264 We consider that it is important to ensure that investors are treated in a fair and consistent manner, with similar protections across all ASX-quoted products. While ASIC's existing power to make market integrity rules is limited in scope to market operators and market participants—to the exclusion of indirect market participants and fund managers—we consider that this expansion in scope is an important step in achieving consistency of protections for investors.

265 Our proposal extends the scope to include products that are generally accessible to retail clients, including interest rate securities, options, warrants and any AQUA products that are not currently within the scope of Chapter 3 (Competition). We understand that the retail market in Australia for options, warrants and AQUA products is reasonably large and liquid, so it is appropriate for robust client protections to apply. While the retail market for interest rate securities is currently only relatively small, our proposal also contemplates applying protections to trading in these products because they

are intended to become more accessible to retail clients, including products such as Commonwealth Government Securities (CGS).

266 Although these products are typically only traded on a single market (i.e. ASX), best execution obligations are still relevant. The ASIC Market Integrity Rules (Competition) place a number of requirements on market participants to protect investors, regardless of the number of markets they are connected to—for example, the rules requiring market participants to have client order handling and execution arrangements to ensure that market participants do not place their own interests ahead of their clients' interests. The ASIC Market Integrity Rules (Competition) also provide greater clarity for clients through obligations to establish, document, implement and disclose adequate policies and procedures to obtain the best outcome.

267 While competition in these additional products may not occur in the immediate term, we note the increased interest in quoting these products on other domestic markets over time—most notably, in corporate bonds.

Commonwealth Government Securities

268 The Australian Government announced on 12 December 2010 that it would facilitate the trading of CGS on a retail exchange platform in Australia, as part of its reforms described in *A competitive and sustainable banking system*, to foster a deep and liquid corporate bond market.[85] This commitment is intended to provide the opportunity for retail investors to invest in Australian Government bonds through a mainstream and visible exchange platform.

269 A number of market operators have expressed interest in providing facilities to enable retail investors to trade CGS. The Government expects to issue a 'Request for proposals' shortly, inviting interested market operator(s) to submit a proposal in order to be appointed as an approved market for the purposes of CGS trading. Consistent with the aim of promoting competition in the provision of financial services, the Government may accept more than one proposal and appoint multiple market operators.

270 We intend to consult on the developments in the CGS market in a separate consultation paper. Given the Government's intention to provide the opportunity for retail investors to trade CGS on a retail exchange platform, we consider that the best execution rules should also apply to this class of products. It is important to note that the outcome of the CGS consultation may affect the proposals in this consultation paper, particularly in relation to interest rate securities.

[85] Deputy Prime Minister and Treasurer, Media Release No. 091, *A competitive and sustainable banking system*, 12 December 2010, http://ministers.treasury.gov.au/DisplayDocs.aspx?doc=pressreleases/2010/091.htm&pageID=003&min=wms&Year=&DocType.

Wholesale markets

271 The proposal to extend the product scope of the best execution obligations only applies to trading conducted by market participants in interest rate securities, options, warrants and AQUA products quoted on ASX. As a result, we expect that the large majority of trading on wholesale markets would continue to remain outside the scope of the best execution obligations.

272 As noted in paragraph 260(a), the best execution obligations are applied differently to retail and wholesale clients. The appropriateness of the current distinction between retail and wholesale clients is being considered in the Australian Government Treasury options paper, *Wholesale and retail clients future of financial advice*.[86] This options paper is part of the Future of Financial Advice (FoFA) reforms, which focus on improving the quality of financial advice and expanding the availability of more affordable forms of advice. Accordingly, the outcomes of these reforms may affect the application of the best execution proposal presented in this consultation paper.

F2: Public reporting on order routing and execution quality

Issue

F2 We are not proposing to require market participants to publish a monthly report on order routing and execution quality. However, we are seeking feedback on whether there are any benefits from execution venues and market participants publishing additional best execution data on order execution and handling, or the quality of execution. In particular, we are interested in understanding the type of data that might be of assistance to investors in assessing execution quality.

Your feedback

F2Q1 Do you agree with ASIC's approach not to require monthly reporting of order routing?

F2Q2 What additional data, if any, would assist investors in assessing execution quality?

Rationale

273 To assist investors in assessing the quality of execution they receive, we proposed in CP 145 a market integrity rule requiring market participants to provide evidence of their execution performance to a client. This proposal was implemented as Rule 3.4.1 (Competition), which requires a market participant to be able to demonstrate to a client, on receiving a reasonable

[86] Treasury Options Paper, *Wholesale and retail clients: Future of financial advice*, Treasury, January 2011, http://futureofadvice.treasury.gov.au/content/consultation/wholesale_retail_OP/downloads/Wholesale_and_Retail_Options_Paper.pdf.

request, that the client's orders have been executed in accordance with the participant's best execution arrangements.

274 We also proposed in CP 145 periodic public reporting to assist the process for market participants of assessing where to route client orders and for clients to assess the order-routing decisions of their brokers. We proposed monthly public reporting by:

(a) execution venues (including licensed markets, crossing system operators and market participants executing client orders against their own account) on their order execution quality (e.g. prices, size, speed); and

(b) market participants on their order-routing decisions.

275 Responses to CP 145 suggested that there was little demand from institutional investors for such information and that there were questionable benefits for retail investors. We understand that institutional investors have access to sophisticated transaction cost analysis (TCA) tools. We also understand that independent data providers are intending to publish tools at no cost, or minimal cost, which would enable investors to assess the price they receive against the NBBO across all execution venues at the time.

276 The proposal for periodic public reporting was not implemented as a rule in the ASIC Market Integrity Rules (Competition), but we indicated that we intended to revisit this issue in further consultation with industry.

G Pre-trade transparency and price formation

Key points

We propose a package of amendments to the existing exceptions to the pre-trade transparency requirements in the ASIC Market Integrity Rules (Competition), including:

- modifying the 'at or within the spread' exception (Rule 4.2.3 (Competition)) to require meaningful price improvement;
- narrowing the scope of orders to which the minimum size threshold (Rules 4.1.5 and 4.2.3 (Competition)) would apply (to passive orders only) and introducing a trigger at which point the minimum size threshold would increase from $0 to $50,000—that is, if the value of dark liquidity below block size increases by 50% or more within three years of July 2011, the minimum size threshold for passive orders would be set to $50,000, so that passive orders below $50,000 must be executed on a pre-trade transparent basis;
- replacing the $1 million threshold for block trades (Rule 4.2.1 (Competition)) with a tiered model; and
- granting waivers for certain existing ASX exceptions to pre-trade transparency that fall outside the ASIC Market Integrity Rules (Competition) and are still considered necessary.

We propose to clarify our expectations in guidance about existing requirements to display client orders as expeditiously as possible on a pre-trade transparent order book.

We also propose to clarify our expectations in new market integrity rules for the validation of trades relying on pre-trade transparency exceptions, and record-keeping requirements.

277 Pre-trade transparency refers to information on bids and offers being made publicly available before trades occur. Pre-trade transparency is fundamental to price formation, enabling investors to identify trading opportunities and listed companies to value their assets.

278 We consider that pre-trade transparency is particularly important because it contributes significantly to the price formation process. One academic study that analysed securities in the S&P/ASX 200 estimated that pre-trade information (both at the best bid and offer prices and other orders in an order

book) accounted for 77% of the price discovery, while post-trade information accounted for only 23%.[87]

279 This section is in eight parts:

G1: Non-displayed liquidity ('dark liquidity');

G2: Meaningful price improvement;

G3: Minimum size for dark orders;

G4: Block trades;

G5: Review of other pre-trade transparency exceptions;

G6: Record keeping;

G7: Validation of trades relying on pre-trade transparency exceptions; and

G8: Execution of client orders as expeditiously as possible.

Scope

280 The proposals in this section apply to equity market products only.

G1: Non-displayed liquidity ('dark liquidity')

281 In Section H of CP 145 and Section E of REP 215, we discussed the benefits of non-displayed liquidity ('dark liquidity')—for example, to facilitate large orders and minimise market impact—and outlined our concerns about the importance of balancing pre-trade transparent liquidity and dark liquidity so as not to undermine the price formation process on public markets. We noted the inherent tension between the short-term private advantages for a subset of the market of trading in dark venues (e.g. lower exchange fees) and the long-term public good of contributing to the price formation process, which gives investors confidence and promotes the interests of issuers and the broader community through an efficient secondary market for equities.

282 While trading in dark venues may be appealing to some subsets of the market in the short term, there is evidence to suggest that too high a proportion of liquidity being diverted from pre-trade transparent order books may result in wider spreads and worse prices for trades transacted both on pre-trade transparent order books and in dark venues. This is because spreads in pre-trade transparent order books are likely to widen in response to there being fewer uninformed traders placing transparent orders (i.e. because traders want to avoid trading with informed traders to reduce

[87] C Cao, O Hansch & X Wang, 'The information content of an open limit-order book', *Journal of Futures Markets*, vol. 29, 2009, pp. 16–41. The paper assess the contribution to price discovery made by the last traded price (23%), the best bid and ask prices (54.5%) and the orders in book at 2–10 price steps away from the midpoint (22.5%).

the risk of the market moving against them after they enter into a position).[88] Wider spreads means worse prices on pre-trade transparent order books, as well as for those transacting in dark venues, because off-order book trades reference prices on pre-trade transparent order books.

283 An academic study by Dan Weaver of Rutgers University examining the impact of internalisation and dark liquidity on price formation on the New York Stock Exchange (NYSE) and Nasdaq in October 2009[89] showed that the increasing proportion of off-order book trading has adversely affected price formation in the United States. It has also led to a widening of spreads and a reduction of depth in the market (i.e. the volume of orders at each price point). Weaver re-ran the study based on October 2010 data. The results showed an even stronger adverse impact on price formation than the earlier study.

284 New technologies and trading strategies have made it more efficient to execute transactions without displaying them on a pre-trade transparent order book. This has resulted in significant growth in the number of non-pre-trade transparent electronically accessible pools of orders, such as crossing systems ('dark pools').

Previous consultation and feedback

285 In CP 145 we proposed market integrity rules to harmonise minimum pre-trade transparency requirements across markets, including that all orders during normal trading hours should be pre-trade transparent, subject to a small number of exceptions, summarised in Table 13.

Table 13: Exceptions to pre-trade transparency proposed in CP 145

Proposal in CP 145	Interim approach adopted
Block trades—replace ASX's static $1 million threshold with tiered thresholds based on average daily volume	Harmonised the existing $1 million threshold across all markets: Rule 4.2.1 (Competition).
Large portfolio trades—based on the existing ASX model	Harmonised the existing ASX model across all markets: Rule 4.2.2.

[88] D Easley, NM Keifer & M O'Hara, 'Cream-skimming or profit sharing? The curious role of purchased order flow', *Journal of Finance*, vol. 51, 1996, pp. 811–33.
[89] D Weaver, *Off-exchange reporting and market quality in a fragmented market structure*, Comment on Concept Release *Equity market structure* (Release No. 34-61358), 16 April 2010, www.sec.gov/comments/s7-02-10/s70210-127.pdf; D Weaver, *Off-exchange reporting and market quality in a fragmented market structure,* Rutgers Business School, Rutgers University, 2 May 2011.

Proposal in CP 145	Interim approach adopted
Price improvement trades—where the price is determined to be within the spread and greater than $20,000	Substantially the same outcome as ASX's priority crossing and Centre Point order types (i.e. trades must be priced at or within the spread at a tick or midpoint) but we have accommodated other crossings on the basis of the best available bid and offer across all markets (i.e. NBBO): Rule 4.2.3.
Hidden orders—non-pre-trade transparent orders on an order book where the size is greater than $20,000	Orders that are fully or partly pre-trade transparent take priority over fully hidden orders. ASX does not have fully hidden orders on its order book and Chi-X has a $20,000 threshold applied to those on its market: Rules 4.2.3 and 4.1.5.

286 While the majority of respondents to CP 145 acknowledged our concerns about balancing pre-trade transparent liquidity and dark liquidity, there were discordant views on the appropriate approach. Respondents urged us to consult further on the mechanism to promote pre-trade transparency.

287 As an interim position, we harmonised across all markets—as far as possible and taking into account the new multimarket environment—ASX's existing pre-trade transparency exceptions. In our response to feedback received on CP 145 (see REP 237), we stated that we would review the exceptions to pre-trade transparency as a matter of priority with the aim of settling revised rules in early 2012. We made this decision so that the commencement of competition between exchange markets would not be delayed while we continued our review.

288 This paper contains our revised proposals. In formulating these proposals, we have taken into account:

(a) feedback received on CP 145 (see REP 237);

(b) subsequent discussions with industry;

(c) further analysis of dark liquidity trends domestically and abroad; and

(d) recent overseas regulatory initiatives, including the changes in Canada to require dark orders to provide meaningful price improvement and the introduction of a minimum order size for passive orders.

See Appendix 2 for a summary of recent trends.

What are the dark liquidity trends in the Australian market?

289 As outlined above, the pre-trade transparency exceptions allow for a number of forms of dark liquidity in Australia. These include:

(a) block and portfolio crossings; and

(b) trades that occur using the 'at or within the spread' exception. Currently, trades using the 'at or within the spread' exception include priority crossings, Centre Point priority crossings and Centre Point trades. We refer to these collectively as 'dark liquidity below block size' or 'dark trading below block size'.

290 The trends in these two types of dark liquidity are considered separately. In this section, we consider the trends in dark liquidity below block size. We focus on dark liquidity below block size, rather than all dark liquidity, because the benefits of dark liquidity above block size in reducing market impact costs are well documented and recognised.

291 To consider the trends in dark liquidity below block size in Australia, we analysed the monthly total dollar value traded, the proportion of value executed as block and portfolio crossings, and the proportion of dark liquidity below block size over the period September 2009 to July 2011: see Figure 8 in Appendix 2. This figure shows no obvious trend in total dollar value traded, the proportion of block and portfolio crossings nor the proportion of total dark liquidity (both block and below block size).

Note 1: The 23-month period from September 2009 to July 2011 was chosen to give a reasonable time series to identify any significant trends. August 2011 was excluded due to the extreme volatility experienced in that month.

Note 2: Centre Point, a venue that allows a new form of dark liquidity below block size, was introduced on 28 June 2010 (during the sample period).

292 A more detailed analysis of dark liquidity below block size over the period September 2009 to July 2011 shows three distinct trends, as outlined below.

Trend 1: Rise in number and value of dark trades below block size

293 Over the period September 2009 to July 2011, both the aggregate value and number of dark trades below block size have trended upwards:

(a) Figure 9 in Appendix 2 shows variation in the value of dark liquidity below block size from a low of $10 billion in January 2010 to a high of $20 billion in March 2011. Over the period, this represents a modest increase from 11.1% to 13.8% of trading value; and

(b) Figure 10 in Appendix 2 shows that there has been a significant increase in the number of dark trades below block size from 990,000 trades in September 2009 to approximately 1.8 million trades in July 2011. This represents a substantial increase in the proportion of these trades, by number, from 8.1% to 15%.

294 The data relied on over the period September 2009 to July 2011 includes accidental crossings.[90] We consider that the inclusion of accidental crossings overstates the value of dark liquidity below block size. Therefore, in calculating a more accurate number for the value of dark liquidity below block size in the current market environment, we rely on data for the period April 2011 to July 2011 which excludes accidental crossings. The current value of dark liquidity below block size is important because it provides the basis for one of the proposals in this section: see Proposal G3 (2).

295 Over the period April 2011 to July 2011, when accidental crossings are excluded from these numbers, similar trends are observed:

(a) Figure 11 (left-hand side) in Appendix 2 shows a relatively stable level of the value of dark liquidity below block size, ranging from $9.69 billion in April 2011 to $12.08 billion in May 2011, averaging $10.94 billion over the four months from April to July 2011. This represents between 9.4% and 10.6% of the total dollar value traded.

(b) Figure 11 (right-hand side) in Appendix 2 shows that the number of crossings has grown from around 980,000 to 1.22 million over this relatively short period (averaging 1.17 million). This represents between 8.8% and 10.2% of all trades.

Trend 2: Strong decline in average size of dark trades below block size

296 There has been a strong decline in the average size of dark trades below block size, from $14,775 in September 2009 to $9,405 in July 2011: see Figure 12 in Appendix 2. In July 2011, the average trade sizes for priority crossings, Centre Point priority crossings and Centre Point trades were $10,523, $5,708 and $3,715, respectively. We note that the average trade size on ASX has also fallen from around $7,802 to $7,441. This compares to an average trade size on ASX of $35,000 in 2006.[91]

Trend 3: Small and declining median size of dark trades below block size

297 The median size of these dark trades below block size is extremely small, at just $1,540 in September 2009, falling to $814 in June 2011. This means that half of all these trades are valued at or below $814: see Figure 12 in Appendix 2. In July 2011, the median trade size for priority crossings, Centre Point priority crossings and Centre Point trades were $606, $500 and $366, respectively. These small trade sizes are surprising, given that the motivation for trading in the dark is typically to minimise the price impact associated with executing large orders.

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[90] An accidental crossing occurs when a bid or offer entered or amended using an AOP system matches with a pre-existing bid or offer from the same market participant. The same person is not permitted to enter both sides of the crossing.

[91] ASX Limited, *ASX submission to ASIC consultation on equity market structure regulatory framework*, Submission on CP 145, 21 January 2011, www.asic.gov.au/asic/pdflib.nsf/LookupByFileName/CP145-Submission-ASX-Limited.pdf/$file/CP145-Submission-ASX-Limited.pdf.

298 While we do not consider that the situation in the Australian market has reached the point where price formation is being harmed, we remain concerned about the speed at which the nature and size of trading occurring through forms of dark liquidity is changing both here and abroad, and about the impact of a potential shift of liquidity from pre-trade transparent order books into dark venues.

299 Therefore, we propose to establish a regulatory framework with a clear aim of preserving the pre-trade price formation process. This is intended to mitigate the risk of market participants and market operators needing to incur potentially significant costs within a short period of time by having to adapt their infrastructure and business models significantly in the future to changes in the regulatory framework (designed to address pricing inefficiencies arising from an actual shift of liquidity away from pre-trade transparent order books).

Overseas developments

IOSCO principles for dark liquidity

300 On 20 May 2011, IOSCO published its final report, *Principles for dark liquidity*, setting out principles to assist regulators to address issues concerning dark liquidity.[92] We consider that the proposals in this consultation paper, together with the existing regulatory framework, would more closely align the Australian regime to the principles issued by IOSCO. Table 24 in Appendix 1 outlines the proposed Australian regime compared with the six principles issued by IOSCO.

Overseas regulatory initiatives

301 The pre-trade transparency proposals in this paper are also consistent with steps being considered or taken by other regulators. For example, the CSA and the IIROC announced on 29 July 2011 that they are moving forward with proposals to require that small orders that trade with dark liquidity obtain 'meaningful price improvement,' and that pre-trade transparent orders should be executed before dark orders at the same price on the same marketplace. The new framework will also permit IIROC to establish a minimum size threshold for dark orders.[93]

302 In Europe, the European Commission and ESMA are reviewing the Markets in Financial Instruments Directive (MiFID). In its 8 December 2010

[92] IOSCO Report, *Principles for dark liquidity* (IOSCOPD353), Technical Committee of IOSCO, May 2011.
[93] Joint CSA–IIROC Position Paper, *Dark liquidity in the Canadian market* (23-405), 19 November 2010.

consultation paper, the European Commission raised the possibility of a minimum size threshold for dark orders.[94]

303 In the United States, the Joint CFTC–SEC Advisory Committee on Emerging Regulatory Issues presented a report, on 18 February 2011, with recommendations for regulatory responses to the 6 May 2010 'flash crash', including:

(a) for the SEC to analyse the impact of a broker–dealer internalising its customer's orders or having preferencing arrangements. The review should consider whether to:

  (i) adopt its proposed rule requiring that internalised or preferenced orders only be executed at a price materially superior to the best bid or offer; and/or

  (ii) require firms internalising customer order flow or executing preferenced order flow to be subject to market maker obligations that require them to execute a material portion of their order flow during volatile market periods; and

(b) for the SEC to consider greater protection for limit orders other than those at the 'top of book', or increased disclosure of relative liquidity in each book. The report also recommended that the SEC consider incorporating into its existing 'trade-through' rule a 'trade at' rule (i.e. the trading centre is not permitted to execute a trade at the NBBO unless the trading centre is displaying that price at the time it receives the incoming contra-side order. Such a rule would require a trading centre not displaying the NBBO at the time it receives an incoming marketable order either to execute the order with significant price improvement or to route the order to a venue displaying the best price).[95]

The SEC has not yet proposed any rules based on these recommendations.

Principles that guide our thinking about pre-trade transparency

304 Our aim is to balance the benefits of dark liquidity for larger-sized orders against protecting the pre-trade price formation process, as well as retail investors and the overall quality of the Australian market. In particular, our focus has been to:

[94] European Commission Consultation Paper, *Review of the Markets in Financial Instruments Directive (MiFID)*, European Commission, 8 December 2010.
[95] Joint CFTC–SEC Report, *Recommendations regarding regulatory responses to the market events of May 6, 2010*, Joint CFTC–SEC Advisory Committee on Emerging Regulatory Issues, 18 February 2011, www.cftc.gov/ucm/groups/public/@aboutcftc/documents/file/jacreport_021811.pdf.

(a) continue to enable institutional investors with large orders to manage their market impact costs through the use of dark liquidity;

(b) maximise pre-trade transparency through incentives to display orders;

(c) protect displayed limit orders by requiring that dark orders below block size must offer meaningful price improvement. This will also ensure investors at least get a better price outcome when their orders are executed in the dark; and

(d) treat similar activity consistently.

Proposals are a package

305 With these principles in mind, we propose a package of amendments to the existing exceptions to the pre-trade transparency requirements in the ASIC Market Integrity Rules (Competition). These are found below in:

G2: Meaningful price improvement;

G3: Minimum size for dark orders;

G4: Block trades; and

G5: Review of other pre-trade transparency exceptions.

These exceptions are interlinked and should, therefore, be considered as a package rather than in isolation.

Consequential amendments—Restrictions to activities during takeovers and buybacks

306 Parts 6.4, 6.5 and 6.6 of the ASIC Market Integrity Rules (ASX) and ASIC Market Integrity Rules (Chi-X) and Chs 2J and 6 of the Corporations Act place restrictions on activities during takeovers and buybacks.

307 In CP 166, we consulted on a proposal to extend the restrictions currently applying to special crossings[96] during takeovers and buybacks to include 'trades at or within the spread' (within the meaning of Rule 4.2.3 (Competition)) that are conducted off-market.

308 Industry was concerned that our proposed approach in CP 166 to extend restrictions over activities during takeovers and buybacks would prevent current market practice in a multimarket environment. To preserve the existing market practice, we are not, at this stage, extending the restrictions to trades conducted off-market using the 'trade at or within the spread' exception. We intend to revisit this issue once the pre-trade transparency regime (which is the subject of this consultation process) has been settled.

[96] As defined in ASIC Market Integrity Rules (ASX) and ASIC Market Integrity Rules (Chi-X). Generally, this means trades conducted off-order book between two separate clients of a market participant, and reported to the market after the event.

309 We are now considering whether any consequential amendments should be made to our approach to restrictions over activities during takeovers and buybacks in light of the proposed package of pre-trade transparency exceptions, and we seek your views on this.

G2: Meaningful price improvement

310 As noted in Table 13, market participants are currently able to trade in dark venues at the same price as the best available bid or offer on pre-trade transparent order books (i.e. at the national best bid and offer, or NBBO). This has the effect of enabling dark orders to step ahead of pre-trade transparent orders at the same price, and may discourage investors from displaying orders if they believe it is likely that such orders will be bypassed.

311 This may lead to a reduction in the level of displayed depth in the order book. It may also potentially reduce investor confidence if an investor observes that their order remains unfilled while other, non-displayed orders are being executed at the same price. Investor confidence is important as it can encourage other investors to participate, contributing to liquidity and stimulating more competitive pricing. Conversely, a lack of confidence can discourage participation.

312 We therefore propose to remove the ability to trade in dark venues 'at' the best available bid or offer in sizes below block size.

Proposal

G2 We propose to modify the 'at or within the spread' exception in Rule 4.2.3 (Competition) to require that market participants obtain meaningful price improvement.

Where the trade is for a volume less than or equal to the volume displayed at the best available price, we consider 'meaningful' price improvement to be a one tick size price improvement or the midpoint of the best available bid and best available offer (or NBBO).

Where the trade is for a volume greater than the volume available at the best bid and offer across the pre-trade transparent order books, price improvement may take into account the volume-weighted average price of the available orders rather than best prices only.

See draft amended Rule 4.2.3 (Competition).

This proposal applies to equity market products.

We propose that this would apply six months from commencement of the rules.

Your feedback

G2Q1 Are there any practical issues with requiring meaningful price improvement?

G2Q2 Should meaningful price improvement refer solely to the top-of-book bid or offer, or should we permit, as proposed, volume-weighted averaging based on the size of the trade? Are there any difficulties (e.g. technological issues) with these proposed methods of calculation?

G2Q3 Is it appropriate that all order types that could rely on this exception are based on the consolidated best bid and offer (i.e. NBBO)—for example, pegged orders?

G2Q4 Should fully hidden orders be permitted in an order book? Should they also be subject to meaningful price improvement?

G2Q5 What impact, if any, would the proposed record-keeping obligation (see Proposal G6) have on your systems or procedures in relation to this exception?

G2Q6 What are the likely compliance costs (where possible, please identify the nature of these costs, quantify the estimated costs and indicate whether such costs will be one-off or ongoing)?

G2Q7 What are your views on the proposed transition period? Please provide details on why you consider this timeframe is, or is not, achievable.

G2Q8 Is it necessary to make consequential amendments to the existing regulatory framework surrounding restrictions to activities during takeovers and buybacks, including to Chapter 6 (ASX) and (Chi-X), as a result of this proposal?

Rationale

313 The current framework in Australia permits trades below block size to be transacted in dark venues at the same price as the best pre-trade transparent bid or offer (i.e. using ASX's priority crossing and ASIC's new 'at or within the spread' exception, which applies from 31 October 2011 under the ASIC Market Integrity Rules (Competition)). This enables dark orders to step ahead of pre-trade transparent orders and, consequently, may discourage the display of orders. It also means that clients are not getting a better price outcome for trading in dark venues.

314 We recognise that, in certain circumstances, clients may benefit from receiving time-priority by having their orders crossed by a market participant off-market at the spread (i.e. 'jumping the queue'). For example, this can occur where the spread in an equity market product is narrow and the queue is long. We do not consider that this benefit received by the party that gains time priority outweighs the potential cost to the broader market of:

(a) discouraging the display of pre-trade transparent orders; and

(b) any consequential impact on the public pre-trade price formation process.

315 To provide a balanced incentive structure to support the pre-trade transparent price formation process, we consider that investors that contribute to the price formation process by displaying orders in pre-trade transparent order books should receive priority over dark orders below block size. Therefore, orders executing in dark venues ahead of the pre-trade transparent orders should offer meaningful price improvement.

316 We consider 'meaningful' to be one price increment (tick size) as defined in Part 6.4 (Competition), or the midpoint of the best available bid and best available offer. Where the size of the order exceeds the volume available at the best price, a market participant may choose to take into account a volume-weighted average of the available prices when determining price improvement: see the example at paragraph 320.

317 We intend to apply this requirement consistently to transactions both on and off an order book. We note that Canadian regulators are proceeding with a similar interpretation of 'meaningful' as we are adopting in our proposals—however, without the volume improvement aspect.

Price improvement overseas has not been meaningful

318 Experience overseas has been that competition between market participants has resulted in clients (particularly retail clients) receiving price improvement that is economically insignificant. In the United States, virtually all marketable retail flow is executed off exchange at the best bid or offer or with minimal price improvement. Bright Trading, in its submission to the SEC concept release, *Equity market structure*, suggested that, when retail clients actually receive price improvement, it might be as little as 0.0001 to 0.001 cents per unit.[97] In the United States, five major market makers handle more than 80% of this business.[98] Retail brokers typically receive $0.05–$0.10 per 100 shares as payment for their order flow. This compares with the standard 'take' fees of $0.18–$0.30 per 100 shares charged by exchanges.[99]

319 In Canada, better price improvement is received by clients, but this is slowly falling, with orders on some alternative trading systems starting to offer only 10% of the spread.[100] Before this, at least 20% price improvement was offered by orders.

[97] Bright Trading, *LLC response to the SEC round table discussion on equity market structure of June 2, 2010*, www.sec.gov/comments/4-602/4602-29.pdf.
[98] The five are Knight Capital Group, Citadel, ATD (Citi), UBS and E*Trade Capital Markets: from Rosenblatt Securities Inc, who was contracted by ASIC to provide research in 2011. All further references to this research are described as Rosenblatt Securities Inc.
[99] Rosenblatt Securities Inc.
[100] Joint CSA–IIROC Staff Notice, *Regulatory approach to dark liquidity in the Canadian market* (23-311), CSA and IIROC, 29 July 2011.

Calculation of meaningful price improvement—Example

320 We are proposing that price improvement may be calculated based on the NBBO (i.e. top-of-book) or based on the volume-weighted average (which may include prices at more than one price point). This is best illustrated by using the following simple example.

Table 14: Calculation of meaningful price improvement

Consolidated best available bid		Consolidated best available offer	
$5.01	500 shares	$5.04	1000 shares
$4.99	1000 shares	$5.05	1000 shares

321 The example assumes that:

(a) the current best available bid price across all markets is $5.01, and 500 shares are displayed at this price;

(b) the next best bid price is $4.99, and 1000 shares are displayed at this price;

(c) the current best offer is $5.04, and 1000 shares are displayed at this price; and

(d) a person wants to sell 1000 shares.

322 Meaningful price improvement would be calculated as follows:

(a) using the top-of-book only with a spread of $5.01 and $5.04 and a 1 cent tick size, a non-pre-trade transparent order could only be executed at $5.02, $5.025 (being the midpoint) or $5.03; or

(b) the volume-weighted average price approach reflects feedback from market participants that they may offer clients volume improvement rather than just best price improvement and, if executed on a pre-trade transparent order book, the client order may step through more than one price point. In the above example, the volume-weighted average bid price that could be achieved to sell 1000 shares on the book is $5.00 (i.e. 500 at $5.01 and 500 at $4.99). Using this approach, the spread would be $5.00 and $5.04, and a non-pre-trade transparent order could only be executed at $5.01, $5.02 and $5.03.

323 Therefore, a non-pre-trade transparent order to sell 1000 shares could be executed at $5.01, $5.02, $5.03 or the top-of-book midpoint of $5.025.

Impact of our proposal—Examples

324 We consider that the cost of providing price improvement needs to be meaningful to offset the potential negative impact of:

(a) reduced transparency on price formation; and

(b) disincentives to display passive orders caused by the increased risk of dark orders stepping ahead of pre-trade transparent orders.

325 We expect that our proposal will have a different impact on liquid and illiquid stocks. We therefore provide an example of a liquid and less liquid stock to illustrate the expected impact of our proposal:

(a) *Liquid stocks* (e.g. Telstra)

Highly liquid stocks, such as Telstra, typically trade at the minimum tick size most of the time. For these stocks, meaningful price improvement would require that dark orders below block size are executed at the midpoint price. For an average-sized trade of $8,000 (2,649 shares in Telstra[101]), we would expect that the potential saving to a client would be $13.25 (2,649 shares with a price improvement of 0.5 cents per share), or 0.17%, compared with a trade at the spread. Differences in exchange fees for on-market and off-market trades offer further potential savings if the market participant passes on the savings to the client. In comparison, when meaningful price improvement is not required, experience in the United States suggests that a retail client may receive as little as 0.01 cents per share price improvement, which translates into $0.26 (or 0.003%) for an $8,000 trade: see Figure 13 in Appendix 2.

(b) *Less liquid stocks* (e.g. Jetset Travelworld Ltd)

Less liquid stocks do not typically trade at the minimum tick size, and therefore offer more opportunity for price improvement. A trade of $8,000 (10,390 shares[102]) in a less liquid stock, such as Jetset Travelworld Ltd, would result in greater price improvement for the client, with a trade at the midpoint of the spread resulting in a saving of $67.53 (10,390 shares with a price improvement of 0.65 cents per share), or 0.84%. If the price improvement was received at the minimum tick size (i.e. $0.005), this would equate to a saving of $51.95, or 0.65%, compared with a trade at the spread: see Figure 13 in Appendix 2.

326 We consider this to be meaningful because it encourages those willing to provide an amount of price improvement over the NBBO to accept this improvement as a genuine cost associated with the benefits of keeping an order dark.

327 The objective is to avoid a situation where there is an insignificant cost associated with stepping ahead of pre-trade transparent orders. This is consistent with the view taken by Canadian regulators, who noted 'the costs to all participants in the market, including investors, and regulators if sub-

[101] Based on Telstra's share price of $3.02 on 30 May 2011.
[102] Based on Jetset Travelworld's share price of $0.77 on 30 May 2011.

penny pricing were permitted outweigh the benefits of such small price improvement.'[103]

G3: Minimum size for dark orders

328 The original purpose for the introduction of dark pools and dark order types was to facilitate large orders. While we recognise the benefits of dark liquidity for managing the market impact costs of larger orders, a greater number of small non-pre-trade transparent orders (and a potential corresponding decrease in pre-trade transparent liquidity) may have a negative impact on the public price formation process. Trading in small sizes in dark venues may offer benefits to individual investors, but this must be weighed against the potential damage to the market as a whole caused by a weak price formation process.

329 Therefore, we consider that exceptions to the pre-trade transparency requirements should generally be limited to larger orders. We consider that a minimum size threshold for dark orders is an effective mechanism to balance the total proportion of pre-trade transparent liquidity versus dark liquidity, and is a necessary component of encouraging market participants and investors to contribute to pre-trade price formation.

330 We do not believe that the Australian market has yet reached the point where the proportion of dark liquidity has been detrimental to the public price formation process. However, if overseas trends are replicated here we need a mechanism in place to address this quickly.

Proposal (1)

G3 We propose:

(a) to amend the order types to which the threshold in Rules 4.1.5 and 4.2.3 (Competition) applies. The threshold for partly disclosed orders, and orders resulting in trades with meaningful price improvement, as outlined in Proposal G2, would apply solely to passive orders. For Rule 4.2.3 (Competition), orders resulting in trades above the threshold would be exempt from pre-trade transparency, provided that they are executed with meaningful price improvement, as outlined in Proposal G2, or meet the criteria for another exception;

(b) that market participants would not be permitted to aggregate orders to meet the minimum size threshold; and

(c) that where a dark order meeting the minimum size threshold receives a partial fill, which results in the remaining balance being less than the threshold, that order may continue to remain dark.

[103] Joint CSA–IIROC Position Paper, *Dark liquidity in the Canadian market* (23-405), CSA and IIROC, 19 November 2010.

See draft amended Rules 4.1.5 and 4.2.3 (Competition)

This proposal applies to equity market products.

We propose that this would apply six months from the commencement of the rules.

Proposal (2)

G3 We propose to issue guidance that the threshold in Rules 4.1.5 and 4.2.3 (Competition) would continue to be set at $0 until such time that there is a significant shift in the value of trading without pre-trade transparency during normal trading hours and below block size. We intend to change the threshold to $50,000 if the value of dark liquidity below block size increases by 50% or more from $10.94 billion within three years of July 2011. (The figure $10.94 billion represents the average value of dark liquidity below block size over the period April to July 2011: see Figure 11 (LHS) in Appendix 2.)

We propose to adopt this position on release of the guidance.

Your feedback

G3Q1 Do you have any views on the proposed trigger?

G3Q2 What is the appropriate time period over which to calculate the base value of dark liquidity below block size to be used for the trigger?

G3Q3 Is 50% the appropriate level for the trigger?

G3Q4 Should the $50,000 threshold apply to all equity market products? For example, should we consider a tiered threshold based on liquidity?

G3Q5 Should this threshold apply equally to partly and fully hidden orders?

G3Q6 What are the likely compliance costs (where possible, please identify the nature of these costs, quantify the estimated costs and indicate whether such costs will be one-off or ongoing)?

G3Q7 What are your views on the proposed transition period? Please provide details on why you consider this timeframe is, or is not, achievable.

G3Q8 Is it necessary to make consequential amendments to the existing regulatory framework surrounding restrictions to activities during takeovers and buybacks, including to Chapter 6 (ASX) and (Chi-X), as a result of this proposal?

Rationale

331 Consistent with the initial rationale for dark pools and dark order types to facilitate the execution of large orders and manage market impact, our proposal would permit larger-sized orders (where the resulting trade would be valued at $50,000 or more) to continue to benefit from being fully dark (subject to them offering meaningful price improvement or being above the

block or portfolio trade size threshold): see 'Factors we considered in proposing a threshold of $50,000' at paragraph 348 for further analysis.

332 Small passive orders will need to be directed to pre-trade transparent order books, and will be protected against dark orders below block size from stepping ahead of them.[104]

333 We recognise that some respondents to CP 145 were discouraged by our proposal to require smaller orders to be displayed on a licensed market, suggesting that it would provide an incentive for market operators to keep trading fees high. However, we expect a key benefit of the introduction of competition between pre-trade transparent order books will be to place downward pressure on trading fees.

Trigger for the introduction of the threshold

334 We acknowledge that the data on dark liquidity in Australia does not yet indicate that there has been a detrimental impact on price formation. The value of dark liquidity below block size has varied over the 23-month period from September 2009 to July 2011, although there has been a general upward trend in the proportion of the value of dark liquidity below block size: see Figure 9 in Appendix 2. There has been a large increase in the number of these types of crossings: see Figure 10 in Appendix 2. We therefore remain concerned that the Australian public price formation process is at risk in the near term, based on:

(a) the speed at which non-block dark liquidity has grown overseas (e.g. in the United States—see Figure 3 in Appendix 2); and

(b) the significant recent increase in the number of crossing systems in Australia (which has trebled to 15 since 2009, and collectively captures about 3% of total volume: see Table 25 in Appendix 2).

335 To balance our concerns and the actual shift in liquidity away from pre-trade transparent order books that has occurred, we propose to set a trigger point at which we will make changes to the minimum order size threshold of $0 to $50,000. We will make an announcement if the trigger is reached and details about our next steps. If the trigger point is reached, we would amend Rules 4.1.5 and 4.2.3 (Competition) to increase the threshold as soon as possible after the trigger has been reached. We propose that the trigger would be a 50% increase in the dollar value of dark trades below block size within three years.

336 The base value of dark liquidity below block size has been calculated based on data for the period April to July 2011.[105] The average value of dark

[104] Passive orders are orders that are not immediately matched when they are received by a market operator—they rest in an order book (e.g. a limit order priced away from the best bid or offer). In contrast, aggressive orders are those that are immediately matched (e.g. market orders).

liquidity below block size during this period was $10.94 billion per month: see Figure 11 (LHS) in Appendix 2. Therefore, an increase in the value of dark liquidity below block size to $16.4 billion over a calendar month would trigger the increase in the threshold. It is important to emphasise that these values differ from those reported in Figure 9 and Figure 10 in Appendix 2 because they exclude accidental crossings.

337 It has been difficult to define a trigger that anticipates natural growth in the volume of trading—particularly with the introduction of competition between exchange markets and the trend towards greater HFT, as well as potential real growth in dark trading. A trigger based on the dollar value traded, rather than the proportion of trading, has been used due to the expected change in the composition of trading as a result of competition in exchange markets.

338 This trigger should be considered in the context of the relative stability of the dollar volume of dark liquidity below block size (including accidental crossings) over the 23-month period from September 2009 to July 2011. Over this period there has been growth of 16.5%, from $14.5 billion to $16.8 billion. The month with the highest level of dark liquidity below block size (including accidental crossings) was March 2011, which had a value of $19.95 billion, representing only a 36% increase from September 2009.

339 Some readers may perceive the trigger as our view of the point at which dark liquidity adversely affects price formation. To be clear, we do not consider this trigger to definitively define that point. Rather, we consider that a 50% increase over three years from July 2011 is an indicator of the point at which we would have significant concerns about the shift in the proportion of liquidity away from the pre-trade transparent order books.

340 In proposing a trigger, we have reviewed the stocks that already have a considerable amount of dark trading below block size. There are currently a number of ASX 200 products where dark trading below block size already represents 15% or more of dollar volume (i.e. 38 stocks). This figure increases to 90 when taking into account all equity market products: see Table 28 in Appendix 2. There are a small number of stocks (three) outside the S&P/ASX 200 where 50% of their trading is dark trading below block size.

341 We consider that an increase from the current 10.1% to 15% of current volumes would be a clear indicator of a significant shift of liquidity into dark (below block) forms of trading.

342 We note that the trigger would be measured against a base situation of the current regulatory framework (i.e. a percentage dollar volume move from the

[105] This period was selected to capture a period of recent trading. However, the absence of a clear trend in the dollar value of dark liquidity below block size (including accidental crossings) over the period September 2009 to July 2011 suggests that a longer sample period would not significantly change the base value.

value of priority crossings and Centre Point order types currently). If we implement our proposed tiered block trade model (Proposal G4), we would adjust the figures to take into account the new model.

343 We note that implementing the trigger would in no way prevent ASIC from choosing to implement a threshold or different regime to address our concerns before the trigger was reached (and after further consultation).

Application of the threshold to passive orders

344 The threshold in Rules 4.2.3 and 4.1.5 (Competition) currently applies to both passive and aggressive orders. We propose to narrow the scope to passive orders only. This is because aggressive orders execute immediately and do not contribute to price formation in the way that limit orders do. We note that our proposal would require aggressive orders (below block size) to receive meaningful price improvement.

345 Limiting the requirement to passive orders in this way will reduce the impact of the proposal on market participants. Table 26 in Appendix 2 shows that 75% of all new orders by value, and 81% by number, are passive orders. Therefore, aggressive orders (25% of orders by value, and 19% of orders by number) would not be subject to the threshold. We note that the passive numbers appear inflated compared with the aggressive numbers partly because they do not execute immediately and can therefore be cancelled and resubmitted.

346 Market participants will not be permitted to aggregate orders to meet the minimum size threshold to circumvent the requirement. This would undermine the purpose of the requirement.

Stubs

347 We proposed in CP 145, and implemented in Chapter 4 (Competition), a requirement that the 'stub' of an order (i.e. the remainder of an order after a partial fill) should no longer be entitled to the threshold exception where the remaining balance is less than the threshold. However, based on feedback received about the practical difficulties in implementing this requirement, we propose that the 'stub' of a dark order that originally met the minimum size threshold may continue to remain dark until cancelled or fully executed.

Factors we considered in proposing a threshold of $50,000

348 We recognise that advances in technology have placed downward pressure on trade size—mostly to manage market impact.[106] However, it is still our

[106] This pressure on trade size in part contributed to our decision to propose a tiered threshold for block trades, with two tiers (that would apply to the vast majority of stocks) being substantially lower than the current static $1 million threshold: see paragraph 357.

view that the use of dark liquidity should generally be limited to facilitating larger-sized orders. It is therefore important that the minimum threshold for dark orders is of a size commensurate with larger-sized orders, while still allowing some trading based on meaningful price improvement between this threshold and the block size threshold.

349 We recognise that there are certain stocks that have a significant volume of liquidity at the spread, and even a shift of a considerable amount of pre-trade transparent liquidity to dark liquidity is unlikely to have a detrimental impact on the spread in these stocks. For example, and as noted in Table 6, Telstra has an average volume at the bid or offer of over $10 million, and Qantas of over $1.1 million. We considered whether a threshold was necessary for these stocks.

350 At the opposite end of the spectrum, in the least liquid stocks, it can often be difficult to locate liquidity. We understand that there is an element of broker facilitation and/or a greater degree of effort to find liquidity for clients in these stocks, rather than relying solely on the central limit order book. However, it is the spreads of the least liquid stocks that are affected the most by the removal of liquidity from pre-trade transparent order books. We considered whether a lower threshold (for the former reason) or a higher threshold (for the latter reason) would be preferable to avoid the price discovery process in these stocks being adversely affected.

351 For the majority of stocks, the removal of even a small amount of pre-trade transparent liquidity from the public markets may result in wider spreads and be detrimental to the price formation process. For example, a review of the S&P/ASX 200 stocks shows that the average depth at the best bid and ask price is only 2.5% of the average daily trading activity. Over 50 stocks in the index have less than 0.5% of their average daily trading value displayed at the best bid and ask price. Only 25 stocks in the index have more than 5% of their average daily trading value displayed at the best bid and ask prices.[107]

352 On balance, we determined that, for ease of implementation and simplicity, it would be preferable to have a single threshold applicable to all equity market products. While we determined that the threshold should be indicative of a larger-sized order, there is no one statistic that is a determinant for the threshold. Our model's objective is for over 50% of orders (by value) that are currently pre-trade transparent to remain pre-trade transparent. A threshold of $50,000 would mean that around 55% of passive orders would be subject to the threshold: see Table 27 in Appendix 2.

353 We have not tried to assess the impact of the thresholds against priority crossings because it is not possible to assess the proportion of passive versus

[107] This analysis is based on snapshots of the order book taken every 10 minutes and averaged over a one-month period.

aggressive orders that market participants receive from clients and deal with through the priority crossing exception.

Option considered—Recognition of displayed orders

354 We considered and discussed with some industry representatives the possibility of a form of display rule—that is, to formally recognise that certain orders may sit at the best available bid or offer for some time, contributing to pre-trade transparency—and that perhaps, in these circumstances, they should be entitled to trade in the dark (i.e. on dark venues) at that price (i.e. without meaningful price improvement).

355 This option would involve:

(a) requiring the orders to be displayed on a pre-trade transparent order book at the best available bid or offer;

(b) a mandated minimum display period to give others an opportunity to interact with the order (e.g. 2 seconds); and

(c) a minimum size requirement. The size that is displayed would be the maximum size that could be executed in the dark at the displayed price. This would address the situation that often occurred with the 10-second rule, where orders of one share were displayed but executed in a substantially larger size in the dark.[108]

356 While there was general support for this option in principle, a number of practical concerns were raised:

(a) it would still permit dark orders to step ahead of other displayed passive orders at the same price. This may undermine our objective to encourage the display of orders;

(b) it may result in flashing of orders, which may create unnecessary noise and impede price discovery; and

(c) it would be difficult for market operators to implement and monitor.

Issue

G3 We are interested in your feedback on the merits of the option to allow certain displayed orders that have contributed to pre-trade transparency at the best available bid or offer to trade at that price in the dark, and the practical issues that this option raises.

Your feedback

G3Q9 Should we allow this display rule option?

G3Q10 If yes, what should be the minimum size and display period?

[108] The 10-second rule permitted priority crossings to be executed on ASX only after a delay of 10 seconds. This requirement was repealed in 2009.

G3Q11 How can the practical concerns that we have raised be mitigated?

G3Q12 Are there other practical concerns that we should consider with this option, and how might they be mitigated?

G3Q13 What are the likely compliance costs (where possible, please identify the nature of these costs, quantify the estimated costs and indicate whether such costs will be one-off or ongoing)?

G4: Block trades

357 In the Australian market, there have always been exceptions to pre-trade transparency requirements for large orders. The long-standing threshold for orders entitled to the pre-trade transparency exception is $1 million. We continue to recognise the benefits of dark liquidity for managing market impact costs of larger orders.

358 In CP 145, we consulted on a tiered threshold model. We proposed a $1 million threshold for the most liquid equity market products, and $500,000 for all other equity market products, but asked whether there was merit in also having thresholds of $2.5 million and $200,000 for the most liquid and least liquid stocks, respectively.

359 Respondents generally supported the proposed $1 million and $500,000 thresholds, and many also endorsed a threshold of $200,000, or even lower. One respondent endorsed a top tier of $2.5 million. One submission stated that the existing single $1 million threshold worked effectively and was simpler than a tiered model. Although respondents generally supported the tiered model, we said we would reassess all exceptions to the pre-trade transparency obligation as a package: see Section F of REP 237.

Proposal

G4 We propose to balance Proposals G2 and G3 (1) with an amendment to Rule 4.2.1 (Competition) by replacing the static $1 million threshold with the following tiered thresholds:

(a) $1 million for highly liquid equity market products;

(b) $500,000 for moderately liquid equity market products; and

(c) $200,000 for all other equity market products.

We propose that ASIC will assess, at least annually, the equity market products that fall into each category and will make this information publicly available.

See draft amended Rule 4.2.1 (Competition).

This proposal applies to equity market products.

We propose that this would apply six months from commencement of the rules.

Your feedback

G4Q1 Do you have any views on the tiered block thresholds?

G4Q2 How frequently should we calculate average daily volume (ADV) and allocate equity market products to each tier (e.g. weekly, monthly, quarterly)? (The categories for post-trade transparency delayed publication are calculated weekly.)

G4Q3 How much notice is required for market operators and market participants to give effect to the calculation referred to in G4Q2?

G4Q4 What are the likely compliance costs (where possible, please identify the nature of these costs, quantify the estimated costs and indicate whether such costs will be one-off or ongoing)?

G4Q5 What are your views on the proposed transition period? Please provide details on why you consider this timeframe is, or is not, achievable.

G4Q6 Is it necessary to make consequential amendments to the existing regulatory framework surrounding restrictions to activities during takeovers and buybacks, including to Chapter 6 (ASX) and (Chi-X), as a result of this proposal?

Rationale

360 We propose (as part of the package with our proposals for meaningful price improvement and minimum size for dark orders) a tiered regime, with thresholds set in one of three bands based on 2.5% of ADV. We expect that this approach will encourage greater trading in less liquid stocks that do not trade in sizes large enough to benefit from the exception to pre-trade transparency: see paragraphs 282–287 of CP 145 for further information on the rationale for the tiered model.

361 Based on July 2011 trade data, the thresholds would be allocated as outlined in Table 15.

Table 15: Possible thresholds for block trade exception[109]

Category and threshold	No. of products	Product symbols
Category A: $1 million	26	AMP, ANZ, BHP, BXB, CBA, CSL, FGL, FMG, ILU, IPL, LYC, MCC, MQG, NAB, NCM, ORG, QBE, RIO, SGP, STO, TLS, WBC, WDC, WES, WOW, WPL

[109] The average daily volume (ADV) traded for the three months to July 2011 was calculated for each stock. Table 15 identifies the stocks that would have satisfied a 2.5% ADV threshold of $1 million and $500,000.

Category B: $500,000	28	AGK, AGO, AIO, AMC, ASX, AWC, BSL, CCL, CFX, CPU, GPT, IAG, JBH, LEI, MAP, MGR, ORI, OSH, OZL, PDN, QAN, QRN, SUN, TAH, TCL, TWE, WOR, WRT
Category C: $200,000	All others	All other equity market products

362 We will periodically review the products that fall within each threshold and make the information publicly available.

G5: Review of other pre-trade transparency exceptions

363 In RG 223, at RG 223.175– RG 223.177, we identified that there are a number of ASX exceptions to pre-trade transparency (in the ASX Operating Rules) that fall outside the ASIC Market Integrity Rules (Competition). We confirmed that ASX may retain the exceptions and that market participants may continue to rely on the exceptions on a transitional basis until ASIC has reviewed these as part of the wider pre-trade transparency framework review.

364 We have also subsequently confirmed with ASX that we will grant a waiver to permit ASX to continue to offer special combinations and tailor-made combinations. The relevant waivers will be granted for commencement from 31 October 2011.

Proposal (1)

G5 We propose to withdraw the relevant waivers to ASX for the following transactions, currently permitted under the ASX Operating Rules:

(a) index-replicating special crossings;

(b) underwriting disposal special crossings;

(c) exchange-approved special crossings; and

(d) completion of order special crossings.

We propose to extend the relevant waivers for the following transactions, currently permitted under the ASX Operating Rules:

(e) orders on the VolumeMatch book;

(f) exchange-traded funds special trades; and

(g) crossings of derivative/cash combinations.

We propose for these to take effect six months from the commencement of the proposed rules referred to in this section.

Proposal (2)

G5 We propose a new market integrity rule to confirm that the following orders are not subject to the pre-trade transparency obligations:

(a) primary market transactions (such as issuance allotment, subscription or takeover bid); and

(b) stock lending or stock borrowing.

See draft new Rule 4.1.9 (Competition).

This proposal applies to equity market products.

We propose that this would apply from the commencement of the rules.

Your feedback

G5Q1 Are there any reasons why we should consider retaining any of the exceptions that we propose to remove?

G5Q2 Are there any reasons primary market transactions, and stock lending or borrowing, should be subject to the pre-trade transparency obligations?

G5Q3 Are the other exceptions to pre-trade transparency that we have not raised in this paper (i.e. trades during the pre-trading and post-trading periods and out-of-hours trading) still appropriate?

G5Q4 What are your views on the proposed implementation periods? Please provide details on why you consider these timeframes are, or are not, achievable.

G5Q5 Is it necessary to make consequential amendments to the existing regulatory framework surrounding restrictions to activities during takeovers and buybacks, including to Chapter 6 (ASX) and (Chi-X), as a result of this proposal?

Rationale

365 We propose to remove the exceptions that are rarely used or redundant. We propose to grant waivers for those that are frequently used (e.g. daily), or relate to relatively new products. This is reflected in Table 16—the rows shaded in grey show the exceptions we propose to remove.

366 When we introduced the ASIC Market Integrity Rules (Competition), we did not explicitly exclude primary market transactions, and stock lending or borrowing, from the pre-trade transparency requirements. It was not our intention that these activities should be caught by the rules. We therefore intend to formally exclude them.

Table 16: Review of ASX exceptions to pre-trade transparency

Exception	Purpose	Usage
Orders on the VolumeMatch book—VM (ASX Trade condition code)	A trade that was executed as a result of orders entered on the VolumeMatch order book that met the criteria set out in ASX Operating Rules and subsequently matched at a price determined by ASX.	1 trade (since its launch on 28 June 2010)
Index-replicating special crossings—IB (ASX Trade condition code)	An index-replicating special crossing identifies a special crossing in a portfolio of securities which mirrors an approved index.	1 trade (Jan–May 2011)
Exchange-traded funds (ETFs) special trades—ET (ASX Trade condition code)	An ETF special trade is used to report the individual trades in an ETF portfolio that apply to the primary market activities associated with the subscription and redemption of ETF units.	2,832 trades (Jan–May 2011)
Underwriting disposal special crossings/shortfalls in underwriting—SO (ASX Trade condition code)	Initial disposal by the market participant of the underwriter's or sub-underwriter's commitment.	1 trade (Jan 2009–Jun 2011)
Exchange-approved special crossings (other)—SO (ASX Trade condition code)	Where the reason for the sale was to enable an issuer to maintain or obtain a spread of holders in accordance with ASX Listing Rules, or where the sale results from an approach to holders of equity securities of an issuer in accordance with the ASX Operating Rules.	No longer used. Not part of ASX Trade
Completion of order special crossings—SA (ASX Trade condition code)	Indicates that a sale which is less than a marketable parcel is made, and has the effect of completing a client's order in accordance with the terms of that order or is made for the purpose of reselling a cash market product.	3 trades (Jan–May 2011)
Combination crossings—XTTM (ASX Trade condition code)	This covers crossings in derivatives/cash and cash only combinations. Note: Derivatives only combinations are not relevant for the purposes of the ASIC Market Integrity Rules (Competition).	4,087 trades[110] (Jan 2009–Jun 2011)

G6: Record keeping

Proposal

G6 We propose a new market integrity rule to require market participants to keep, for a period of seven years, records that enable the participant to

[110] This number includes derivatives only combinations. As derivatives/cash, cash only combinations and derivatives only combinations share the same condition code, the number of derivatives/cash and cash only combinations could not be distinguished from derivatives only combinations.

demonstrate compliance with any pre-trade transparency exceptions relied on.

See draft new Rule 4.1.1(3) (Competition).

This proposal applies to equity market products.

We propose that this would apply from the commencement of the rules.

Your feedback

G6Q1 Are there any practical implications associated with complying with this proposal?

G6Q2 What are the likely compliance costs (where possible, please identify the nature of these costs, quantify the estimated costs and indicate whether such costs will be one-off or ongoing)?

G6Q3 What are your views on the proposed implementation timeframe? Please provide details on why you consider this timeframe is, or is not, achievable.

Rationale

367 Whenever a market participant relies on an exception to the pre-trade transparency obligations, we expect that the participant is already retaining records to demonstrate that the reliance was compliant with the market integrity rules. We propose to clarify this in a new rule, and to clarify that records should be retained for seven years. This is consistent with the transaction record-keeping requirements in the Corporations Act, and the ASIC Market Integrity Rules (ASX) and ASIC Market Integrity Rules (Chi-X).

368 In particular, we expect that a market participant that relies on the 'at or within the spread' exception in Rule 4.2.3 (Competition) will have robust procedures and processes in place to enable it to keep a record of the bid or offer relied on to meet the criteria at the time the trade is executed.

369 To ensure that market participants maintain accurate records, we propose to supplement existing rules with a requirement for participants to record the best available bid and best available offer at the time the trade is matched (or executed, as the case may be) and reported to a market operator. We expect market participants to make this information available to ASIC for inspection on request. Our expectations for validating trades relying on this exception are outlined below in 'G7: Validation of trades relying on pre-trade transparency exceptions'.

G7: Validation of trades relying on pre-trade transparency exceptions

370 Rule 5.1.4(2) (Competition) requires a market operator, as a publication venue, to take reasonable steps to ensure that post-trade information (i.e. information about executed trades) that it makes available for its market is and remains complete, accurate and up-to-date. We state in RG 223.225 that we expect market operators to take reasonable steps to check that the post-trade information is consistent with the pre-trade transparency exception relied on by the market participant. We have also clarified our expectations in subsequent correspondence directly with ASX and Chi-X.

371 Market participants also have an obligation to ensure that the post-trade information they report is and remains complete, accurate and up-to-date: Rule 5.1.1(4) (Competition). We have clarified that, in relation to Rule 4.2.3 (Competition)—the 'at or within the spread' exception to pre-trade transparency—we expect market participants to have robust procedures and processes in place to ensure that trade reporting systems and associated filters enable only trades that are at or within the spread to be reported.[111] As stated previously, we have zero tolerance for error.

Proposal

G7 We propose to expand Rules 5.1.1(4) and 5.1.4(2) (Competition) to confirm our expectation that market participants and market operators must have systems and controls in place to verify and validate that trades reported by them or to them, based on a pre-trade transparency exception, actually meet the criteria for the relevant exception.

We propose that a market operator must not accept a report of a trade that does not meet the criteria, and a market participant must take appropriate measures to deal with a rejected trade report.

See draft new Rules 5.1.1(4A) and 5.1.4A (Competition).

This proposal applies to equity market products.

We propose that this would apply from the commencement of the rules.

Note: We have already clarified this to the market as our current expectation: see paragraph 371.

Your feedback

G7Q1 Do you have any comments on this proposal?

Rationale

372 Consistent with the intent of the existing market integrity rules, we propose to clarify our expectations with market operators and market participants.

[111] ASIC Newsletter, *Market supervision update—Issue 11*, ASIC, July 2011, www.asic.gov.au/asic/asic.nsf/byheadline/ASIC-Market-Supervision-Update-issue-11?openDocument.

We consider it is important to formalise these expectations so that they remain clear in the future.

Market operator controls

373 Consistent with existing Australian market practice, we expect a market operator to have the necessary controls in place to ensure that the trades reported to it meet the criteria of the pre-trade transparency exceptions relied on, depending on the nature of the criteria.

Table 17: Validation of trades relying on pre-trade transparency exceptions

Exception	Expectations for market operators
Block trades: Rule 4.2.1 (Competition)	We expect real-time validation that reported trades meet the size threshold for the particular product—that is, $1 million under the current rule, but may be the tiered approach in Proposal G4 at some point in the future. Trades reported that do not meet the size threshold must not be accepted or published.
Large portfolio trades: Rule 4.2.2 (Competition)	We recognise that these trades comprise a complex series of transactions and it is not possible to validate in real time that the transactions meet the criteria. We expect market operators to have controls in place to review the entry of the series of transactions with a view to resolving any non-compliance queries with the market participant as soon as possible. This includes, where necessary, not accepting the transactions for reporting purposes. At a minimum, we would expect these kinds of trades to be reviewed and dealt with daily.
At or within the spread: Rule 4.2.3 (Competition)	We expect real-time validation of the trade against the market operator's own calculation of the NBBO across all markets at the time the trade is reported to ensure that the trade is actually at or within the spread. We note that Proposal G2 may result in a change to require meaningful price improvement. The validation is subject to a small tolerance agreed with ASIC to address latency issues with the compilation of consolidated data. Trades reported that do not meet the criteria must not be accepted or published.
Trades with time period criteria: Rules 4.2.4, 4.2.5 and 4.2.6 (Competition)	We expect real-time validation that the trade was entered in the time period relied on for the pre-trade transparency exception. Trades reported that do not meet the criteria must not be accepted or published.

374 We continue to expect market operators to take any additional reasonable steps necessary to ensure that post-trade information is and remains complete, accurate and up-to-date. This includes, at a minimum, ensuring that the information is continuously updated without undue delay as transactions are executed, reported or cancelled, and identifying if data fields are incomplete.

Market participant controls

375 We expect market participants to have robust procedures and processes in place to ensure that trade reporting systems and associated filters enable only trades that are compliant with the pre-trade transparency exceptions to be reported to a market operator. We consider that there should be regular reviews of the arrangements and verification by a sufficiently senior executive.

376 In our consideration of market participant compliance with Rules 4.2.3 (the 'at or within the spread' exception) and 5.1.1(4) (Competition), we will have zero tolerance for error. We will not accept any variation away from the NBBO used by the market participant. Market participants need to be prepared to demonstrate to ASIC how they calculate the NBBO used.

377 Market participants cannot rely on a market operator's acceptance of a trade as evidence that a trade complies with the exception in Rule 4.2.3 (Competition). The small tolerance afforded to market operators is for their validation purposes only to take into account the additional latency and complexity in the compilation of an NBBO, and to help manage the volume of trade reports that are not accepted.

378 Market participants need to be prepared, as they are currently, to manage transactions that are not accepted (and therefore not published) by market operators (i.e. where a trade occurs only when it is accepted and published by a market operator).[112] Where a trade report is not accepted by a market operator (and therefore not published), we will not consider market participants to have met their obligation under Rule 5.1.1 (Competition) until the trade is resubmitted and published.

379 Market participants must understand, and adapt to, any contingency arrangements the relevant market operator may have in place if the reporting service were to have an outage. This may include a manual process.

[112] Unpublished transactions are not yet trades and, therefore, do not require cancellation.

G8: Execution of client orders as expeditiously as possible

380 Rules 5.1.3 and 5.1.4 (ASX) and (Chi-X) require a market participant to deal fairly and in due turn with two client orders, or a client order and an order on its own account. In complying with this obligation, a number of factors are relevant, including:

(a) whether the market participant acts in accordance with the instructions given to it by the client; and

(b) for non-discretionary orders (e.g. in relation to time and price), whether orders are entered on a trading platform in the sequence in which they are received, and otherwise as expeditiously as practicable.

Proposal

G8 We propose to issue further guidance in relation to Rules 5.1.3 and 5.1.4 (ASX) and (Chi-X) to confirm our expectations about the obligation to execute non-discretionary client orders as expeditiously as possible. Our expectation is that market participants should display non-discretionary client orders on a pre-trade transparent order book immediately, unless:

(a) specifically instructed otherwise by a client; or

(b) the market participant can otherwise execute the client order immediately.

This proposal applies to equity market products.

We propose for this guidance to apply from the date it is released (whether in the form of a regulatory guide or a newsletter).

Your feedback

G8Q1 Does this clarification alter the way that client orders are currently handled?

Rationale

381 With the rapid growth in crossing systems in Australia, there are increasingly more incentives for market participants to rest client orders in their own crossing systems or other venues rather than routing them through to an order book (e.g. to save on market operator execution fees). We do not consider that this is acting in the best interests of the client, and withholding orders may also be detrimental to the liquidity and price formation process on pre-trade transparent order books.

382 We intend to issue further guidance to clarify our expectation that the obligation under Rules 5.1.3 and 5.1.4 (ASX) and (Chi-X) require market participants to execute client orders immediately, or to route them to a pre-trade transparent order book. This is consistent with the intent of the requirements when the market integrity rules came into effect.

H Regulatory and financial impact

383 In developing the proposals in this paper, we have carefully considered their regulatory and financial impact. On the information currently available to us we think they will strike an appropriate balance between:

(a) maximising market efficiency and opportunities for innovation; and

(b) mitigating risks to price formation and protecting the interests of investors and financial consumers.

384 Before settling on a final policy, we will comply with the Australian Government's regulatory impact analysis (RIA) requirements by:

(a) considering all feasible options, including examining the likely impacts of the range of alternative options which could meet our policy objectives;

(b) if regulatory options are under consideration, notifying the Office of Best Practice Regulation (OBPR);

(c) if our proposed option has more than minor or machinery impact on business or the not-for-profit sector, preparing a Regulation Impact Statement (RIS).

385 All RISs are submitted to the OBPR for approval before we make any final decision. Without an approved RIS, ASIC is unable to give relief or make any other form of regulation, including issuing a regulatory guide that contains regulation.

386 To ensure that we are in a position to properly complete any required RIS, we ask you to provide us with as much information as you can about:

(a) the likely compliance costs;

(b) the likely effect on competition; and

(c) other impacts, costs and benefits,

of our proposals or any alternative approaches: see 'The consultation process' p. 4.

Appendix 1: Comparison of ASIC proposals with international regulatory responses

387 This appendix contains information referred to within the consultation paper that compares our proposals with international regulatory responses to the same issues arising in other markets.

Automated electronic trading

388 Section C details the regulatory proposals that we consider are necessary to address the issues in response to the growth in automated electronic trading.

389 In considering the implications of automated electronic trading in the Australian market, and the proposals in Section C, we have closely reviewed the IOSCO principles for DEA[113] and initiatives in other jurisdictions. These initiatives are summarised in Table 18. We have been mindful to minimise the possibility for cross-border regulatory arbitrage. Table 19 provides a comparison of the proposals contained in Section C with the IOSCO principles for DEA, the CP 145 proposals, and the existing requirements. A summary of our approach to the issues raised by HFT is in Table 20.

Recent international regulatory responses

390 Since CP 145 was released, there have been various initiatives overseas in relation to automated trading. These initiatives are summarised in Table 18. The proposals in Section C are consistent with these regulatory responses.

Table 18: Recent international initiatives on electronic trading

Jurisdiction	Description
IOSCO—Report on principles for *direct electronic access* to markets (August 2010) (IOSCO principles for DEA)[114]	Sets out principles for DEA, including: • financial standards for DEA clients, • establishment of a legally binding contract between market participants and their DEA clients, and • controls for market operators and market participants to manage the risks associated with electronic trading.
IOSCO—Consultation report on *market integrity and efficiency* (IOSCO Technological Change Report) (July 2011)[115]	Summarises the work IOSCO has done on DEA, transparency and dark liquidity, screen-based trading systems and trading controls. Outlines the risks to market efficiency and integrity IOSCO is considering in relation to electronic trading and HFT in particular.

[113] IOSCO Report, *Principles for direct electronic access to markets* (IOSCOPD332), Technical Committee of IOSCO, 12 August 2010.
[114] IOSCO Report, *Principles for direct electronic access to markets* (IOSCOPD332), Technical Committee of IOSCO, 12 August 2010.
[115] IOSCO Consultation Report, *Regulatory issues raised by the impact of technological changes on market integrity and efficiency* (IOSCOPD354), Technical Committee of IOSCO, 7 July 2011.

Jurisdiction	Description
European Securities and Markets Authority (ESMA)—Consultation paper on guidelines for *systems and controls in a highly automated trading environment* for trading platforms, investment firms and competent authorities (July 2011)[116]	Proposes guidance for investment firms and trading platforms, including: • requirements for electronic trading systems and algorithms (e.g. governance, capacity, testing, monitoring, reviewing, records and skills); • controls (e.g. pre-trade filters, messaging traffic, operational risk, records and circuit breakers); • market abuse (e.g. skills, training, monitoring, suspicious transaction reporting, records and HFT strategies); and • DEA for clients (e.g. due diligence of DEA clients, monitoring and pre-trade controls).
Canada—Notice of proposed National Instrument 23-103: *Electronic trading and direct electronic access to marketplaces* (April 2011)[117]	Proposes that market participants: • have risk management and supervisory controls to manage the financial, regulatory and other risks of the activity, and have exclusive control; • have the necessary knowledge and understanding of automated order systems used by themselves or any client; • undertake due diligence of DEA clients, including requiring a client agreement; and • adopt unique identifiers for DEA clients. Proposes that market operators have the ability to: • immediately terminate access; • prevent trades from executing beyond certain thresholds; and • cancel or amend trades.
European Commission—Consultation: *Review of the Markets in Financial Instruments Directive* (Review of MiFID) (December 2010)[118]	Proposes requirements for automated trading, including: • robust risk controls for automated trading, and regulators to be notified of computer algorithms, including explanations of their purpose and how they function; • persons involved in HFT over a minimum threshold to be authorised as investment firms; • HFTs that execute significant volume to be subject to market maker obligations; • minimum resting period for orders; and • firms that provide 'sponsored access' to automated traders to have robust risk controls and filters.
US–SEC Rule 15c3-5: Risk management controls for brokers or dealers with *market access* (November 2010)[119]	Requires that broker–dealers, whether accessing a market themselves or providing access to DEA clients, have risk management controls and supervisory procedures designed to manage the financial, regulatory and other risks of the activity. Unfiltered access to a market is prohibited.

[116] ESMA Consultation Paper, *Guidelines on systems and controls in a highly automated trading environment for trading platforms, investment firms and competent authorities* (ESMA/2011/224), ESMA, 20 July 2011.
[117] OSC, *Notice of proposed National Instrument 23-103 Electronic trading and direct electronic access to marketplaces*, 8 April 2011, www.osc.gov.on.ca/en/SecuritiesLaw_ni_20110408_23-103_pro-electronic-trading.htm.
[118] European Commission Consultation Paper, *Review of the Markets in Financial Instruments Directive (MiFID)*, European Commission, 8 December 2010, http://ec.europa.eu/internal_market/consultations/docs/2010/mifid/consultation_paper_en.pdf.
[119] SEC Rule, *Rule 15c3-5: Risk management controls for brokers or dealers with market access*, (Release No. 34-63241); SEC, November 2010.

IOSCO's eight principles for direct electronic access

391 In August 2010, IOSCO released eight principles for direct electronic access to markets.[120] In Table 19, we compare the IOSCO principles for DEA with the existing and proposed ASIC market integrity rules.

Table 19: Comparison of IOSCO principles for direct electronic access with existing and proposed ASIC market integrity rules

IOSCO's 8 principles for DEA	CP 145 proposals	Existing or proposed ASIC market integrity rules
1. Minimum customer standards—financial resources, familiar with and comply with rules, knowledge of and proficiency in the order entry system.	We proposed that market participants ensure that their AOP clients meet specified minimum standards.	Existing ASIC Market Integrity Rules (ASX) and ASIC Market Integrity Rules (Chi-X): Rule 5.6.2—A market participant is required to ensure that each authorised person has demonstrated knowledge of the participant's order entry system and the dealing rules. We propose in this paper to supplement existing market integrity rules by requiring a market participant to ensure that it knows and understands the nature of its AOP client's business before permitting that AOP client to connect and submit orders into its DEA system, and ensure the AOP client has adequate financial resources: see Proposal C4 (1).
2. Legally binding agreement—between the intermediary and the DEA customer appropriate to the nature of the service provided.	We proposed to require a market participant to have a legally binding written contract with its AOP client.	We propose in this paper for a legally binding agreement between a market participant and its AOP client that is an AFS licensee: see Proposal C4 (2). For other clients, we propose to allow some flexibility about how market participants can deliver the outcome of clients meeting certain minimum standards: see Proposal C4 (1). One option would be to include the requirements in their terms of business.
3. Intermediary's responsibility for trades—ultimate responsibility for all orders and for compliance with all regulatory requirements and market rules (including where client sub-delegates access to third parties).	We proposed to require market participants to have adequate arrangements, systems and controls and capabilities around AOP and AOP client order flow.	Existing ASIC Market Integrity Rules (ASX) and ASIC Market Integrity Rules (Chi-X): Rule 2.5.4—A market participant is responsible for the accuracy of details, the integrity and bona fides of all trading messages containing its unique identifier that are submitted into the trading platform. Rule 5.5.1—A market participant is deemed to have knowledge of all trading messages submitted via its unique identifier. Part 5.6—Automated order processing—filters, conduct and infrastructure requirements. Part 5.7—Obligation to prevent manipulative trading and consider the circumstances of an order. Part 5.9—Fair and orderly markets obligation.

[120] IOSCO Report, *Principles for direct electronic access to markets* (IOSCOPD332), Technical Committee of IOSCO, 12 August 2010.

IOSCO's 8 principles for DEA	CP 145 proposals	Existing or proposed ASIC market integrity rules
		We propose in this paper to supplement existing market integrity rules by requiring market participants to ensure that they know and understand the nature of their AOP client's business before permitting that AOP client to connect or submit orders into its order management system, and to ensure that the AOP client has adequate financial resources: see Proposal C4 (1). For AOP clients that are AFS licensees, market participants must have a legally binding agreement with the client in place to facilitate this: see Proposal C4 (2).
4. Customer identification—disclose in a timely manner the identity of DEA customers (and any sub-delegates).	We proposed that market participants identify AOP clients on their real-time orders and trades.	Market participants are already required to provide details about their clients to ASIC on request (under the Corporations Act and the *Australian Securities and Investments Commission Act 2001*). We propose in this paper that market participants identify clients and intermediaries on their real-time orders and trades: see Proposal E1 (1).
5. Pre- and post-trade information—markets provide members with access to relevant pre-trade and post-trade information for monitoring and risk management**.**	We proposed that market operators make real-time pre-trade and post-trade information available on reasonable commercial terms and on a non-discriminatory basis.	Existing ASIC Market Integrity Rules (Competition): Rules 4.1.2 and 4.1.3 support existing practices to those proposed in CP 145.
6. Markets—adequate systems and controls for management of risk relating to fair and orderly trading (e.g. automated pre-trade controls that enable intermediaries to implement appropriate trading limits).	We proposed that market operators have order entry controls, automated volatility controls and trade cancellation arrangements for extreme price movements.	Existing ASIC Market Integrity Rules (Competition): Parts 2.1 and 2.2 require order entry controls and extreme trade cancellation arrangements. We propose in this paper that market operators have automated volatility controls: see Section D, 'Extreme price movements'.
7. Intermediaries— adequate systems and controls, including automated pre-trade, to limit or prevent a DEA customer from placing an order that exceeds a relevant position or credit limits.	We proposed to require market participants to have adequate arrangements, systems and controls and capabilities around AOP and AOP client order flow. We proposed to require market participants to test and document all order algorithms that they or their clients use.	Existing ASIC Market Integrity Rules (ASX) and ASIC Market Integrity Rules (Chi-X): Part 2.1—Market participant management requirements. Rule 2.5.4—A market participant is responsible for the accuracy of details, the integrity and bona fides of all trading messages containing its unique identifier that are submitted into the trading platform. Rule 5.5.1—A market participant is deemed to have knowledge of all trading messages submitted via its unique identifier. Part 5.6—Automated order processing—filters, conduct and infrastructure requirements. Part 5.7—Obligation to prevent manipulative trading and consider the circumstances of the order. Part 5.9—Fair and orderly markets obligation.

IOSCO's 8 principles for DEA	CP 145 proposals	Existing or proposed ASIC market integrity rules
		We propose in this paper to supplement existing market integrity rules by requiring market participants to have direct and immediate control over all trading messages, including pre-trade and real-time controls and post-trade analysis: see Proposal C3 (2).
8. Adequacy of systems—intermediaries and markets have adequate operational and technical capabilities to manage risks posed by DEA.	We proposed to require market participants that use a trading algorithm to generate orders or permit DEA clients to use such an algorithm to: • test and document all order algorithms that they or their clients use; and • have adequate systems and controls and documentation.	Existing ASIC Market Integrity Rules (ASX) and ASIC Market Integrity Rules (Chi-X): Part 5.6—Automated order processing—filters, conduct and infrastructure requirements. Part 5.7—Obligation to prevent manipulative trading. Part 5.9—Fair and orderly markets obligation. We propose in this paper to supplement existing market integrity rules by requiring market participants to: • test all order algorithms before use, or before implementing material changes, and ensure that AOP client complies with the same requirement; • have in place business continuity plans to ensure connectivity to the market is maintained at all times; • annually review each certified AOP system and provide ASIC with an attestation. See Proposals C3 (1), C3 (3) and C3 (4).

Regulatory issues with HFT algorithmic programs

392 We raised a number of regulatory issues with HFT algorithmic programs in CP 145 and REP 215. Table 20 summarises the issues we raised, along with a number of other concerns, and our proposed approach to resolving the issues. These issues are also discussed in the IOSCO Technological Change Report.[121]

Table 20: Approach to issues raised about HFT

Issue	ASIC approach
Market volatility—algorithmic programs may overreact to market events, creating unnecessary volatility and risk of contagion to other products.	Chapter 2 (Competition) requires market operators to have order entry controls and to cancel trades that occur in an extreme range away from a reference price. We propose in this paper that market operators should have in place automated volatility controls, including in relation to domestic index ETFs and index future: see Section D, 'Extreme price movements'. We also propose in this paper that market participants should have in place pre-trade controls that can stop an order or series of orders that may cause a disorderly market, which clarifies our existing expectation that unfiltered client access to markets is not permitted: see Proposal C3 (2).

[121] IOSCO Consultation Report, *Regulatory issues raised by the impact of technological changes on market integrity and efficiency* (IOSCOPD354), Technical Committee of IOSCO, 7 July 2011.

Issue	ASIC approach
Surveillance of market manipulation—algorithmic program strategies being used to manipulate trading.	We have no tolerance for any form of market misconduct irrespective of whether it originates from HFTs, other algorithmic programs or other market participant trading strategies. We expect market operators to cooperate with ASIC in monitoring trading. We discuss this in Issue C2, and we propose that clients, intermediaries and algorithms are identified on real-time orders and trades: see Proposal E1 (1).
Enforcement actions over foreign market participants.	We have proposed in CP 166 that non-AFS licensee foreign market participants be subject to a minimum presence requirement to facilitate enforcement actions against market participants that are incorporated offshore.
Message traffic—pressure on entire system to cope with large volumes of orders or cancellations. Options being considered overseas include: • minimum order sizes; • fees for order cancellations or a maximum order–to-trade ratio; • limits on the speed of messaging; and • minimum resting periods before orders can be cancelled.[122]	Feedback on CP 145 did not indicate that this is an issue in the current Australian market. We will continue to monitor the impact of message traffic on the system and consider options if it becomes apparent that there is an adverse impact on market integrity. Where there are capacity challenges, s792A(d) of the Corporations Act requires market operators to maintain sufficient resources to operate the market properly. Market participants are required to ensure that their systems do not interfere with the efficiency and integrity of the market and the proper functioning of any trading platform: Rule 5.6.1 (ASX) and (Chi-X). Market participants are also prohibited from conduct that results in a market not being both fair and orderly: Rule 5.9.1 (ASX) and (Chi-X). We note that the Government's proposed approach to recovering ASIC's supervision costs is intended to be based on both trades and messages in ASX-listed securities.[123]
Price formation—impact of message traffic on price formation and the depth and quality of trading interest in the order book. Competitive lowering of tick sizes to attract trading volumes can make it easy for investors to step ahead of pre-trade transparent orders without offering meaningful price improvement. This may ultimately affect the price formation process on pre-trade transparent markets.[124] An issue raised domestically and abroad[125] is that HFT creates incentives for institutional investors trying to execute in large size to do so away from pre-trade transparent markets because:	Feedback on CP 145 did not indicate that the messaging traffic is an issue in the current Australian market. We will continue to monitor the impact on price formation and consider options if it becomes apparent that there is an adverse impact on market integrity. Part 6.4 (Competition) harmonises tick sizes across markets to prevent the competitive lowering of tick sizes. We propose in this paper that, if there is a significant shift of liquidity away from pre-trade transparent order books into non-block or portfolio size dark forms of liquidity, a minimum size threshold would apply to dark orders. We do not propose that the threshold should apply to the 'stub' of partially filled larger orders: see Section G, 'Pre-trade transparency and price formation'.

[122] European Commission Consultation Paper, *Review of the Markets in Financial Instruments Directive (MiFID)*, European Commission, 8 December 2010, http://ec.europa.eu/internal_market/consultations/docs/2010/mifid/consultation_paper_en.pdf; SEC Concept Release, *Equity market structure* (Release No. 34-613358), SEC, 13 January 2010.
[123] Treasury Consultation Paper, *Proposed financial market supervision cost recovery model*, Treasury, 26 August 2011, www.treasury.gov.au/contentitem.asp?NavId=037&ContentID=2138.
[124] IOSCO Consultation Report, *Regulatory issues raised by the impact of technological changes on market integrity and efficiency* (IOSCOPD354), Technical Committee of IOSCO, 7 July 2011.
[125] IOSCO Consultation Report, *Regulatory issues raised by the impact of technological changes on market integrity and efficiency* (IOSCOPD354), Technical Committee of IOSCO, 7 July 2011.

Issue	ASIC approach
• the trend toward smaller trade sizes[126] can mean a single order receives multiple fills, resulting in higher transaction costs; and • the presence of HFTs may discourage institutional investors from participating if they feel they are at a technological disadvantage to the HFTs and that HFTs may deploy strategies to detect their trading intentions.	
Market-making obligations—including: • whether there should be formal obligations to promote liquidity in securities where natural liquidity is limited to improve market efficiency, and to help maintain orderly trading conditions (e.g. to provide two-sided quotes and have limited ability to be an aggressive liquidity taker during extreme trading conditions); and • whether market makers should be entitled to short selling relief to compensate for their commitment to market efficiency.	We ask in this paper if there is merit in the existence of a formal market-making model in the Australian cash equity market: see Issues C6 (1) and C6 (2).
Maker–taker pricing—impact of this pricing model on the integrity of markets, and whether rebates should be capped.	We noted in REP 237 (our response to feedback on CP 145) that we would be concerned if pricing incentives influence behaviour in a way that is not in the best interests of clients and wider market integrity. The market integrity rules relating to best execution in Chapter 3 (Competition) should minimise situations where client orders are routed for rebates rather than the best interests of the client. We consider that market operators should consider potential market integrity implications when setting fees or rebates. If it becomes apparent that a pricing model is having a material impact on market integrity, we will consider whether a market integrity rule is needed to address this. Rule 6.5.1 (Competition) requires material changes to a market operator's procedures to be notified to ASIC to enable us to consider the impact on market integrity. This is intended to include notification of changes to pricing models: see RG 223.291–RG 223.294.

[126] The average trade size on ASX was $25,000 in 2007 and around $8,588 in July 2011: ASX Market Announcement, *ASX Group monthly activity report*, ASX Limited, July 2011, www.asxgroup.com.au/media/PDFs/110804maMonthlyActivityReportJuly2011Final.pdf.

Issue	ASIC approach
Co-location—there should be fair and equal access to co-location services for all who want access.	Consistent with IOSCO's position on this issue, we consider that there should be equality of treatment within a given connectivity option, and that differences in response time should be addressed by disclosure.[127] We consider that market operators are already required to do this under their fair, orderly and transparent obligation: s792A of the Corporations Act. However, we propose in this paper to clarify through guidance that all market participants that seek access to a market operator's systems or services (including co-location services) should have access on fair, non-discriminatory terms: see Proposal C5.

Direct electronic access—Risks

393 Table 21 details some of the challenges with DEA, taking into account those outlined in the IOSCO principles for DEA.[128]

Table 21: Risks from DEA that regulators globally are considering

Risks	Description
Trading and regulatory risk	Where client conduct is not compliant with the rules of the market, the market participant faces trading and regulatory risk because it is responsible for the regulatory and trading compliance of that conduct. In particular: • participants that provide *sponsored access* to clients may be unable to impose sufficient pre-trade risk controls where the risk management technology is designed, built, maintained or otherwise under the control of the market operator, client (or its affiliates); and • participants that provide DEA to clients and rely on the risk management controls and supervisory procedures that are developed and sculpted by *third parties* (e.g. the client or its affiliates), face increased risk because the participant does not prescribe the controls (i.e. they allow clients to develop the tools to, in effect, police themselves). This becomes a wider market risk because the integrity and confidence in the market may diminish due to the lack of compliance with the relevant requirements, resulting in increased disorderly trading conditions: see 'Market integrity risk' below in this table.
Credit risk	The market participant or its clearing participant are typically financially responsible for the trades of a client, and need to ensure they can continuously meet the financial requirements required by the regulator, and the market operator or clearing house.
Reputational risk	The market participant's name (and identifier) is ultimately attached to each trade. This reputational risk increases if clients are permitted to sub-delegate their access to third parties.

[127] IOSCO Report, *Principles for the oversight of screen-based trading systems* (IOSCOPD4), Technical Committee of IOSCO, June 1990; IOSCO Report, *Principles for direct electronic access to markets* (IOSCOPD332), Technical Committee of IOSCO, 12 August 2010.
[128] IOSCO Report, *Principles for direct electronic access to markets* (IOSCOPD332), Technical Committee of IOSCO, 12 August 2010.

Risks	Description
System risk	The combination of the speed at which trading is occurring and the high degree of interconnectivity between market operators and market participants means that one participant's systems failure has the potential to have a wide impact on the market. This could affect investor confidence in the market.
Market integrity risk	Client misconduct and aberrant systems of clients have the potential to result in disorderly trading conditions and to undermine investor confidence.

Extreme price movements

394 Section D details the regulatory proposals that we consider are necessary to mitigate the risks of extreme price movements.

International regulatory responses

395 Regulators around the world have been actively discussing the use of automated volatility controls to promote confident and informed investor participation, including the implementation of trading interruptions followed by volatility auctions and/or trading limits or collars. International considerations of volatility controls are summarised in Table 22.

Table 22: International considerations of volatility controls

United States Implements SEC pilot program for single-stock circuit breakers (June 2010) and proposes limit up–limit down control (April 2011)	There are ongoing developments in the United States in response to the 6 May 2010 'flash crash'. As an initial response, the Securities and Exchange Commission (SEC) implemented a pilot program for single-stock circuit breakers across markets that began on 16 June 2010. This initially applied to securities in the S&P 500 Index, and was subsequently expanded to include all securities in the Russell 1000 Index and certain ETFs. It has since been expanded to include all US stocks.[129] Since the pilot program has been in place, the SEC has noted its effectiveness in moderating potentially extraordinary volatility.[130] It has also noted that the single-stock circuit breakers have been triggered by erroneous trades, which has caused the national securities exchanges and the Financial Industry Regulatory Authority (FINRA) to propose a one-year pilot of a 'limit up–limit down' mechanism.[131] The proposed control would prevent trades in listed equity securities from occurring outside a specified price band—5% for stocks currently subject to the circuit breaker pilot and 10% for those not subject to the pilot—above and below the average price of the product over the preceding five-minute period. The limit up–limit down control would apply from 9.30 am to 4.00 pm—however, the percentage bands would be doubled during the opening and closing periods. Broader price bands would apply to stocks priced below $1.00. There would be a five-minute trading pause if trading were unable to occur within the price band for more than 15 seconds.

Canada IIROC proposes single-stock circuit breakers (November 2010)	Trading on marketplaces in Canada on 6 May 2010 was generally less volatile than in the United States, but a limited number of securities were significantly affected.[132] The Investment Industry Regulatory Organization of Canada (IIROC) intervened in the trading of five securities in both the cancellation or re-pricing of trades. On 29 September 2010, IIROC published the results of its regulatory review of trading events on 6 May 2010.[133] At the time, there were existing provisions for regulatory halts and regulatory interventions, and several of the marketplaces maintained different volatility parameters for their own markets. On 18 November 2010, IIROC proposed a single-stock circuit breaker that would apply to all securities listed on an exchange in Canada. Under this proposal, circuit breakers would apply from 9.50 am to 3.40 pm, as follows: • for Toronto Stock Exchange (TSX)-listed securities, the circuit breakers would halt trading for five minutes when there is a price increase or decrease of at least the greater of10% or 10 trading increments in a five-minute period; and • for securities listed on either the Toronto Venture Exchange (TSX-V) or the Canadian National Stock Exchange (CNSX) (i.e. the smaller cap securities), the circuit breakers would halt trading for 10 minutes when there is a price increase or decrease of at least the greater of 20% or 20 trading increments in a five-minute period. Under the proposal, the price of any trade that executes subsequent to the triggering of a circuit breaker would be varied to the price of the trade that triggered the circuit breaker, provided that any trade that executes at more than 5% away from the trigger price would be cancelled.[134]
Europe ESMA proposes guidelines for market operators to implement controls and arrangements to mitigate the risk of disorderly trading (July 2011)	In Europe, static and dynamic controls are applied by trading platforms, with trading usually halted if the control is breached.[135] The European Securities and Markets Authority (ESMA) proposed guidelines in its July 2011 consultation paper for trading platforms to have automatic mechanisms to constrain trading or to halt trading in a single stock, or more widely, in response to significant variations in price to prevent trading becoming disorderly. Operators of trading platforms would also need to intervene to halt trading, even if the automated mechanisms have not been triggered, if they have concerns that trading is disorderly or may become disorderly. Under the existing MiFID framework, there is no ability to require coordination between different trading platforms regarding the mechanics of the automatic controls.[136]

[129] For these Phase III securities, the price move required to trigger a trading pause is 30% or more for such securities priced at $1 or higher, and 50% or more for such securities priced less than $1: SEC Order, *Order approving proposed rule changes relating to expanding the pilot rule for trading pauses due to extraordinary market volatility to all NMS stocks* (Release No. 34-64735), SEC, 23 June 2011.
[130] SEC Press Release, *SEC announces filing of limit up-limit down proposal to address extraordinary market volatility* (2011-84), SEC, 5 April 2011.
[131] SEC Press Release, *SEC announces filing of limit up-limit down proposal to address extraordinary market volatility* (2011-84), SEC, 5 April 2011.
[132] A total of 8.5% of securities listed on the TSX and 13.8% of securities listed on the TSXV declined 10% or more from their closing price on 5 May 2010 to their low price on 6 May 2010. For more information see IIROC News Release, *IIROC announces results of regulatory review of May 6 trading in Canadian equity marketplaces*, IIROC, 9 September 2010, http://docs.iiroc.ca/DisplayDocument.aspx?DocumentID=CDCE560F49DE4C80A20E12A158740039&Language=en.
[133] IIROC News Release, *IIROC announces results of regulatory review of May 6 trading in Canadian equity marketplaces*, IIROC, 9 September 2010, http://docs.iiroc.ca/DisplayDocument.aspx?DocumentID=CDCE560F49DE4C80A20E12A158740039&Language=en.
[134] IIROC Notice, *Proposed guidance respecting the implementation of single-stock circuit breakers* (10-0298), IIROC, 18 November 2010.
[135] According to responses to ESMA's questionnaire: ESMA Consultation Paper, *Guidelines on systems and controls in a highly automated trading environment for trading platforms, investment firms and competent authorities* (ESMA/2011/224), ESMA, 20 July 2011, p. 22.

Singapore SGX proposes to introduce controls (July 2011)	Singapore Exchange (SGX) is consulting on a proposal to introduce controls on the component stocks in the Straits Times Index (STI), the MSCI Singapore Free Index (SiMSCI), ETFs based on these indices, and extended settlement contracts on these counters. The proposed controls would operate during continuous trading (from 9.00 am to 5.00 pm). They would allow trading to occur within a price band of 10% from the reference price. Orders that would result in a trade outside of the price band would be rejected and trading would be limited to within the price band for five minutes. After this period, a new price band would be established, with the reference price as either the upper or lower limit price of the initial price band that was exceeded. SGX stated its intention to implement these controls in the second half of 2011, and sought comments on the appropriate treatment of structured warrants on counters which are subject to the controls, as well as the coordination between traded products based on market indices.[137]
IOSCO consults on impact of technological change (July 2011)	See also the IOSCO Technological Change Report, which examines a range of trading control mechanisms that execution venues may have in place.[138]

Enhanced data for market surveillance

396 Section E details the regulatory proposals that we consider are necessary for ASIC's surveillance capability to keep pace with new trading strategies and changing market structure.

International initiatives

397 There have been various initiatives around the world on the data required for market surveillance. Table 23 summarises these recent international considerations.

Table 23: International considerations on data for market surveillance

Jurisdiction	Description
IOSCO—Consultation report on *market integrity and efficiency* (July 2011)	Outlines the risks posed to the financial system by the latest technological developments, including: • the fragmentation of markets; • the dispersal of trading information; • the increased speed of trading; and • the ability to gather and process increased volumes of trading data. Chapter 4 of the report focuses on the need for regulators to have additional tools to deal with these developments, including:

[136] ESMA Consultation Paper, *Guidelines on systems and controls in a highly automated trading environment for trading platforms, investment firms and competent authorities* (ESMA/2011/224), ESMA, 20 July 2011.
[137] SGX News Release, *Regulatory announcement—SGX proposes circuit breakers in securities market*, 7 July 2011, www.sgx.com/wps/wcm/connect/cp_en/site/press_room/news_releases/regulatory+announcement+-+sgx+proposes+circuit+breakers+in+securities+market?presentationtemplate=design_lib/PT_Printer_Friendly.
[138] IOSCO Consultation Report, *Regulatory issues raised by the impact of technological changes on market integrity and efficiency* (IOSCOPD354), Technical Committee of IOSCO, 7 July 2011, Annex 4.

Jurisdiction	Description
	• additional consolidated 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 transactions, by jurisdiction or geographical zone and across asset classes; and • unique entity identifiers.
A *global legal entity identifier* (LEI) system is welcomed by **FSB** and **CPSS–IOSCO** (July and August 2011)	A large group of trade associations is working with financial regulators to establish a single global system for uniquely identifying parties to financial transactions. This initiative was proposed in May 2011 by a large group of trade associations to develop an international consensus-based system that identifies requirements and standards for a viable, uniform, and global LEI solution.[139]
US–SEC large trader reporting regime (July 2011)	The SEC large trader reporting rule requires persons who, directly or indirectly, exercise investment discretion and buy or sell more than a specified amount of US-listed stocks and options through a registered broker–dealer to register with the SEC as large traders. These large traders must obtain a unique identification number and provide it to their registered broker–dealers. Registered broker–dealers must comply with monitoring, record-keeping and reporting requirements for registered large traders and persons that such broker–dealers know or have reason to know are large traders.[140]
European Commission—Consultation: Review of MiFID (December 2010)	Investment firms are currently required to report transactions on a T+1 basis, including details of the transaction and the counterparties (using unique codes, where available, such as Bank Identification Codes and, in the United Kingdom, FSA reference numbers). Investment firms in the United Kingdom must also include their unique account identifier for the client of the transaction.[141] The Review of MiFID proposes requirements for transaction reporting, including: • significantly extending transaction reporting requirements to all transactions in financial instruments that are admitted to trading or trade on a multilateral trading facility (MTF) or organised trading facility or in derivatives; • requiring transaction reports to include a means of identifying the person making the investment (a client identifier) and the trader who executes the transaction; • enabling direct reporting by investment firms to a reporting mechanism at European Union level; and • requiring crossing systems to be identified on transaction reports.[142]

[139] FSB Press Release, *Meeting of Financial Stability Board* (33/2011), FSB, 18 July 2011; Joint Bank of International Settlements–IOSCO Consultative Paper, *Report on OTC derivatives data reporting and aggregation requirements* (CPSS96), Committee on Payment and Settlement Systems and Technical Committee of IOSCO, 24 August 2011.
[140] SEC Press Release, *SEC adopts large trader reporting regime* (2011-154), SEC, 26 July 2011.
[141] Article 25, MiFID, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:241:0001:0025:EN:PDF; FSA User Pack, *Transaction reporting user pack*, FSA, 21 September 2009, www.fsa.gov.uk/pubs/other/trup.pdf.
[142] European Commission Consultation Paper, *Review of the Markets in Financial Instruments Directive (MiFID)*, European Commission, 8 December 2010, http://ec.europa.eu/internal_market/consultations/docs/2010/mifid/consultation_paper_en.pdf.

Jurisdiction	Description
US—SEC proposal for a consolidated audit trail system (May 2010)	The SEC has proposed a new rule requiring self-regulatory organisations to establish a consolidated audit trail system that would enable regulators to track information related to trading orders received and executed across the securities markets.
This is supported by the Joint CFTC–SEC Advisory Committee on Emerging Regulatory Issues (February 2011).	This rule would provide for a phased approach to implementation and would be fully implemented within two years of approval of the proposed rule.[143] This is consistent with a recommendation by the Joint CFTC–SEC Advisory Committee on Emerging Regulatory Issues, in February 2011, that the SEC proceed to implement a consolidated audit trail for the US equity markets and that the CFTC similarly enhances its existing data collection for orders and executions.[144]

Pre-trade transparency and price formation

398 Section G details the regulatory proposals that we consider are necessary to balance pre-trade transparent liquidity and dark liquidity so as not to undermine the price formation process on public markets.

IOSCO principles for dark liquidity

399 On 20 May 2011, IOSCO published its final report, *Principles for dark liquidity*, setting out principles to assist regulators to address issues concerning dark liquidity.[145] We consider that the proposals in this consultation paper, together with the existing regulatory framework, would more closely align the Australian regime to the principles issued by IOSCO. Table 24 outlines the proposed Australian regime compared with the six principles issued by IOSCO.

[143] SEC Press Release, *SEC proposes consolidated audit trail system to better track market trades* (2010-86), SEC, 26 May 2010.
[144] Joint CFTC–SEC Report, *Recommendations regarding regulatory responses to the market events of May 6, 2010*, Joint CFTC–SEC Advisory Committee on Emerging Regulatory Issues, 18 February 2011, www.cftc.gov/ucm/groups/public/@aboutcftc/documents/file/jacreport_021811.pdf.
[145] IOSCO Report, *Principles for dark liquidity* (IOSCOPD353), Technical Committee of IOSCO, May 2011.

Table 24: Australian regulatory framework compared with the IOSCO principles for dark liquidity

IOSCO principles	Australian regulatory approach
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.	Part 4.1 (Competition) requires pre-trade information to be made available continuously and in real time (subject to exceptions). After reviewing the exceptions, we have decided to propose in this paper that the exceptions should be limited to larger-sized orders or to where the client receives 'meaningful price improvement': see 'G4: Block trades' at paragraph 357 and 'G2: Meaningful price improvement' at paragraph 310.
Principle 2: Information about trades, including those executed in dark pools, or as a result of dark orders entered on transparent markets, should be transparent to the public. In relation to the specific information that should be made transparent, regulators should consider both the positive and negative impact of identifying a dark venue and/or the fact that the trade resulted from a dark order.	Part 5.1 (Competition) requires post-trade information to be made available continuously and in real time (subject to delays for large facilitated trades). Part 4.3 (Competition) requires crossing systems to report daily aggregate stock-by-stock order and trade data to ASIC on a monthly basis. We propose in this paper for execution venues (including those for transactions executed off-order book—i.e. crossing systems) to be identified on all trade reports for ASIC's surveillance purposes: see Proposal E1 (1).
Principle 3: In 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.	Rule 4.1.7 (Competition) requires that displayed orders on an order book have time priority over hidden orders. The proposals in this paper provide incentives to display orders, including: • to require that dark orders cannot step ahead of pre-trade transparent orders at the same price (i.e. by requiring meaningful price improvement) (see Proposal G2); • to review or increase the minimum trade size for dark orders if there is a significant shift of liquidity into dark forms of liquidity (see Proposal G3 (2)); and • to clarify that non-discretionary client orders should be executed immediately or displayed on a pre-trade transparent market (see Proposal G8).
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.	ASIC receives information from licensed market operators in real time for its surveillance functions; and, since May 2011, through Part 4.3 (Competition), we now also receive monthly reports from crossing system operators.
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.	Market operators are already obliged under Part 7.2 of the Corporations Act to operate a fair, orderly and transparent market. We expect them to make information about order handling available to market participants. Crossing systems are typically operated by market participants solely for their clients and there is disclosure to clients about the manner in which their orders are executed.

IOSCO principles	Australian regulatory approach
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.	ASIC monitors the trading activity on licensed markets as part of its real-time surveillance functions. Through Part 4.3 (Competition), we now also review the nature of crossing systems before their commencement and monitor their activity once they commence.

Appendix 2: Charts and tables relevant to Section G: Pre-trade transparency and price formation

Trends overseas

400 The introduction of competition for trading services in overseas markets has led to innovation in the nature and types of trading facilities offered to investors and traders in these markets. A common feature of this innovation has been the development of venues offering non-transparent or 'dark' trading facilities. This appendix offers an overview of the development of these venues in overseas markets. Information on the nature of the venues and statistics on the level of trading activity executed on these venues is provided.

United States

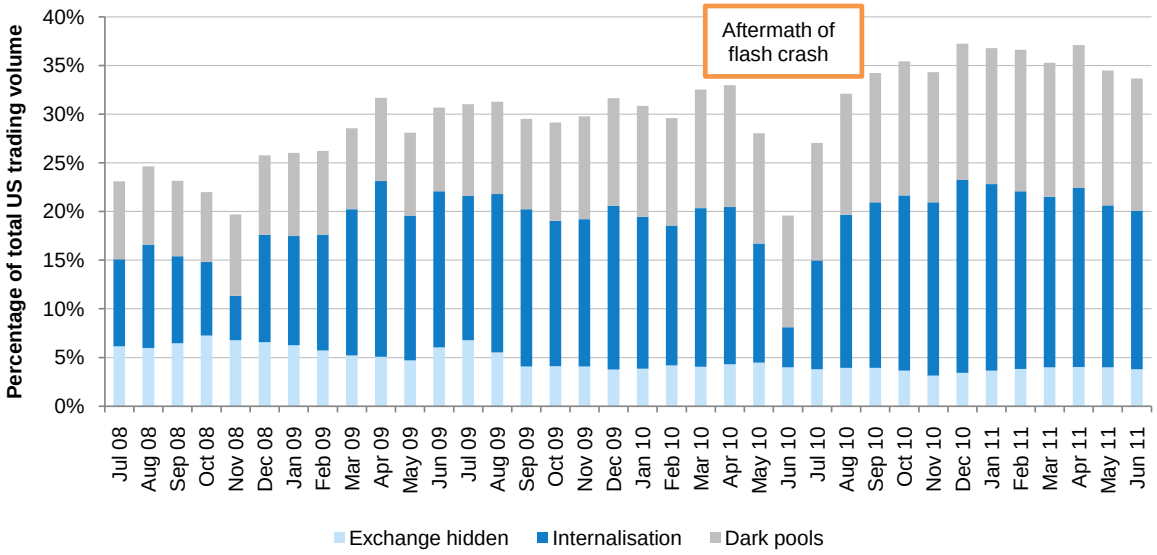
401 In the United States, the total volume of dark liquidity has increased by 67% in the 2.5 years between July 2008 and June 2011 (from 21% to 35% of total US consolidated volume):

(a) the volume of trading done on dark pools has increased from around 4.5% to over 13%;

(b) a further 17–18% of volume is internalised by broker–dealers without any pre-trade transparency, up from around 11%; and

(c) fully hidden orders executed on exchanges account for around 4% of volume, down from 6%: see Figure 3.

Figure 3: United States—Dark liquidity by segment



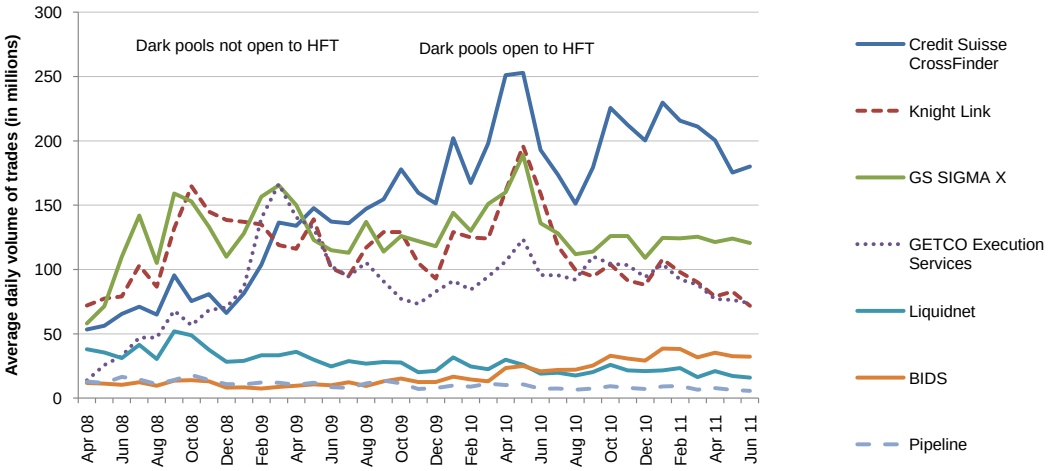
Source: Data provided to ASIC by Rosenblatt Securities Inc.

402 Figure 3 shows the percentage of US consolidated volume executed using dark trading facilities. 'Exchange hidden' represents hidden order types offered by exchanges; 'Internalisation' represents trades internalised by broker–dealers; and 'Dark pools' represents trades executed on dark pools which are voluntarily reported to Rosenblatt Securities Inc.

403 In the United States, dark pools that are operated by, or open to, high-frequency traders (HFTs)/automated market makers have grown volumes faster than those that are unfriendly to high-frequency trading (HFT): see Figure 4. The markets with the lowest levels of growth are the least HFT-friendly markets. Liquidnet and Pipeline offer block execution services, and BIDS has little HFT presence.

404 Figure 4 shows the growth in trading activity for seven US dark pools over the period April 2008 to June 2011. The figure shows that the pools that are not HFT friendly (Liquidnet, Pipeline and BIDS) have exhibited the lowest levels of growth over the period.

Figure 4: United States—Dark pools and HFT



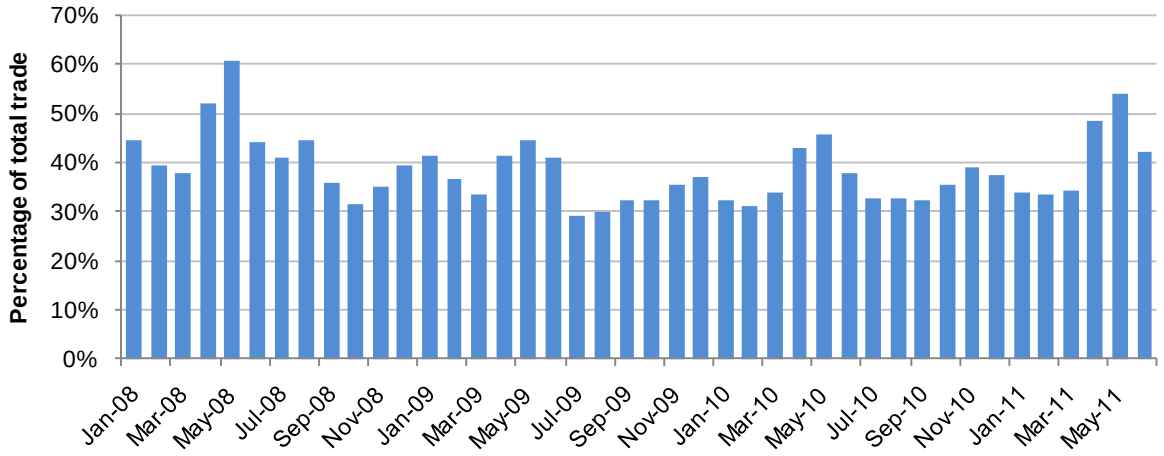
Source: Data provided to ASIC by Rosenblatt Securities Inc.

Europe

405 In Europe, off-exchange trading has remained relatively constant at around 40% between January 2008 and June 2011: see Figure 5. Dark pools (crossing systems and multilateral trading facilities) account for less than 3% of this: see Figure 6.

406 Figure 5 shows the proportion of European consolidated volume that is executed off-order book over the period January 2008 to June 2011.

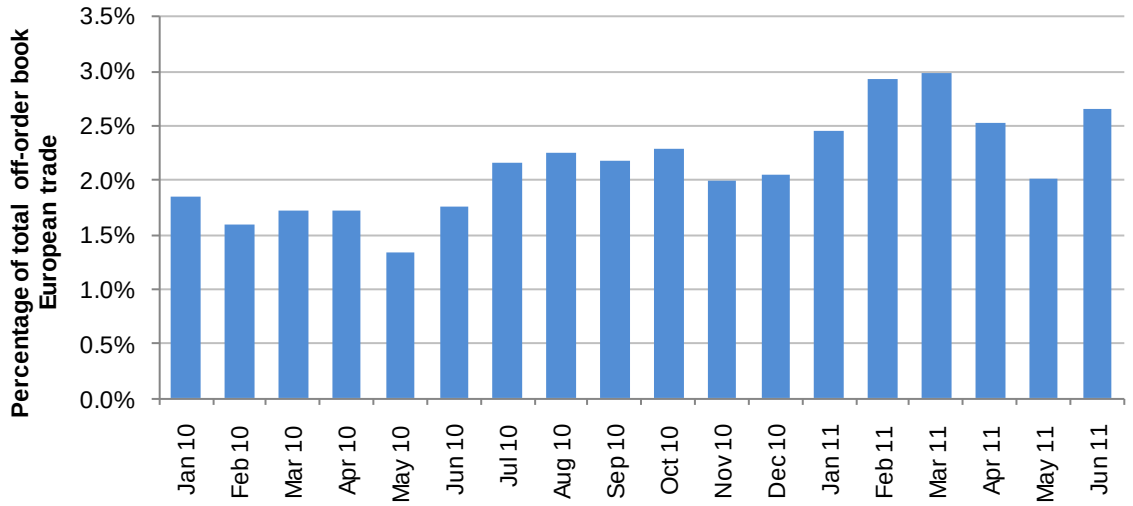
Figure 5: Europe—Consolidated turnover traded off-order book



Source: Data provided to ASIC by Rosenblatt Securities Inc.

407 Figure 6 shows the proportion of European consolidated volume executed in dark pools that voluntarily report to Rosenblatt Securities Inc. This chart does not include all European dark pools. Rosenblatt estimates that dark pools account for around 4.5% of turnover in Europe.

Figure 6: Europe—Dark pools: Rosenblatt universe



Source: Data provided to ASIC by Rosenblatt Securities Inc.

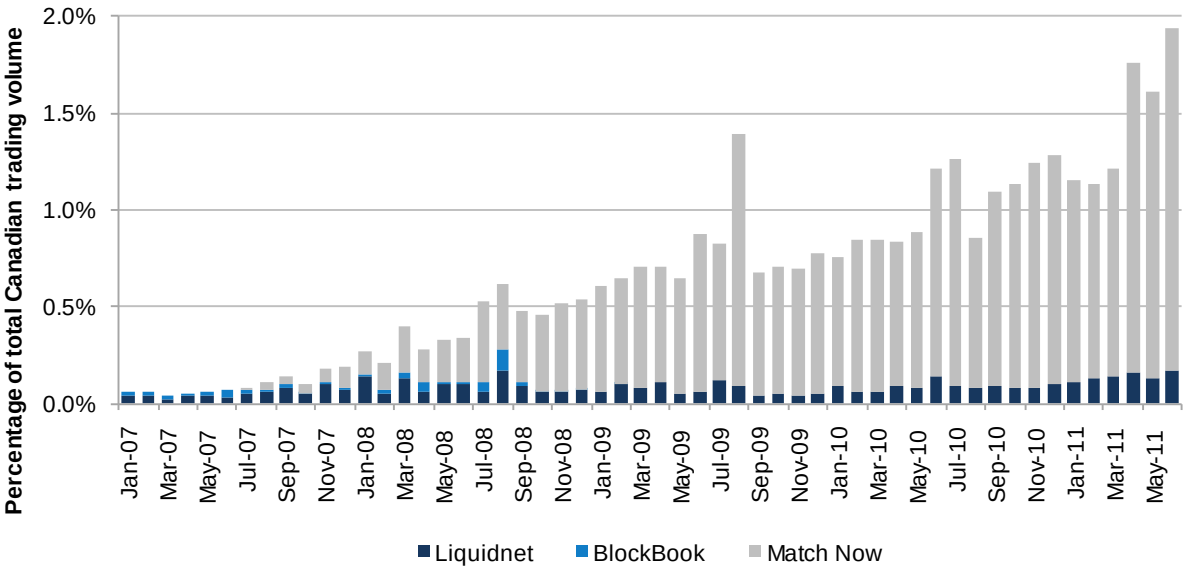
Canada

408 In Canada, dark pool volumes accounted for around 2% of total volume in June 2011 and this is growing: see Figure 7. However, the proportion of total volume is closer to 3–3.5% if the TSX Venture stocks are excluded, which is a more representative measure because the TSX Venture stocks are low priced and, given that the data is based on shares traded, they skew the data. The 3.5% is also a better comparison for the Australian market, given that

we do not have a venture exchange. Internalisation (or broker preferencing in Canada) is not identified in reports so it is not known what proportion this represents of total trading.

409 Figure 7 shows the proportion of consolidated Canadian volume executed in three dark pools over the period January 2007 to June 2011.

Figure 7: Canada—Dark pool activity



Source: Data provided to ASIC by Rosenblatt Securities Inc.

Japan

410 The use of dark pools in Asia is currently limited. In Japan, however, the number of internal crossing systems operated by large institutional brokers appears to be increasing. Off-exchange trades accounted for 9.3% of total trades by value for the week ending 26 August 2011.[146] Although block trades are also included in this statistic, it can be inferred that dark pool trades are no longer insignificant.[147]

411 This compares with Hong Kong, where dark pool crossing systems account for about 1–4% of the total market turnover, and Singapore, where dark pools account for less than 0.5% of the total market turnover.[148]

[146] Fidessa, *Fidessa Fragmentation Index*, http://fragmentation.fidessa.com/venuestats/?venue=XTK1&venuedesc=ToSTNet-1&region=JP.
[147] IOSCO Report, *Principles for dark liquidity* (IOSCOPD353), IOSCO, May 2011.
[148] IOSCO Report, *Principles for dark liquidity* (IOSCOPD353), IOSCO, May 2011.

Trends in Australia

412 The introduction of competition for trading services has come much later in Australia than in many of the markets discussed above. As a result, the developments in dark trading venues have also come later in Australia, and there has not yet been a significant growth in the level of dark trading.

413 In Australia, the number of crossing systems has trebled since 2009[149] to 15: see Table 25.

Table 25: Australia—Crossing systems registered with ASIC

Operator of crossing system	Date of commencement
J.P. Morgan Securities Limited	Scheduled for third quarter 2011
Deutsche Securities Australia Limited—Crossing System 2	June 2011
Commonwealth Securities Limited	May 2011
Instinet Australia Pty Limited	April 2011
Macquarie Securities (Australia) Limited	September 2010
Merrill Lynch Equities (Australia) Limited	August 2010
Deutsche Securities Australia Limited—Crossing System 1	June 2010
ITG Australia Limited	May 2010
Morgan Stanley Australia Limited	March 2010
Goldman Sachs & Partners Australia Pty Ltd	January 2010
Credit Suisse Equities (Australia) Limited—Crossing System 2	May 2009
Liquidnet Australia Pty Ltd	February 2008
Credit Suisse Equities (Australia) Limited—Crossing System 1	April 2006
Citigroup Global Markets Australia	February 2006
UBS Investment Bank	August 2005

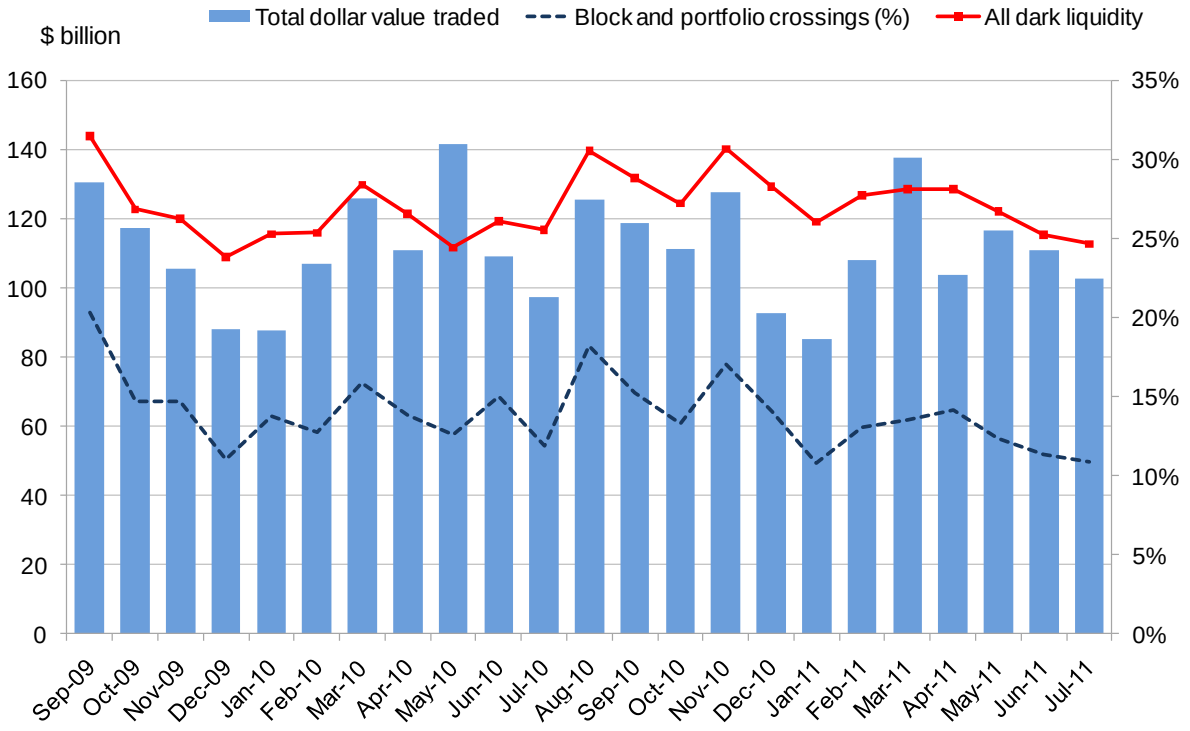
Source: ASIC data

414 Three crossing systems account for over 70% of total crossing system turnover. In June 2011, $2.84 billion was executed through the registered crossing systems. This represents approximately 3% of total Australian equity market dollar trading value.[150] It is too early to indicate the rate at which trading is growing on crossing systems as ASIC has only been collecting data on crossing system activity since the second quarter of 2011.

[149] The number of crossing systems in 2009 was derived from the reports made to ASIC under Rule 4.3.1 (Competition) since May 2011. These reports indicated the time at which each crossing system commenced.
[150] Sourced from the crossing system reports provided to ASIC under Part 4.3 (Competition). The definition of crossing system is broad and captures any automated service provided by a market participant that matches or executes client orders (i.e. it is not limited to a 'pool' of liquidity).

415 Figure 8 shows the monthly dollar value traded on ASX over the period September 2009 to July 2011. It also shows the proportion of trading value that was executed as block and portfolio crossings and the proportion of total dark liquidity. The total dark liquidity includes block and portfolio crossings, priority crossings, Centre Point priority crossings, Centre Point trades and accidental crossings.

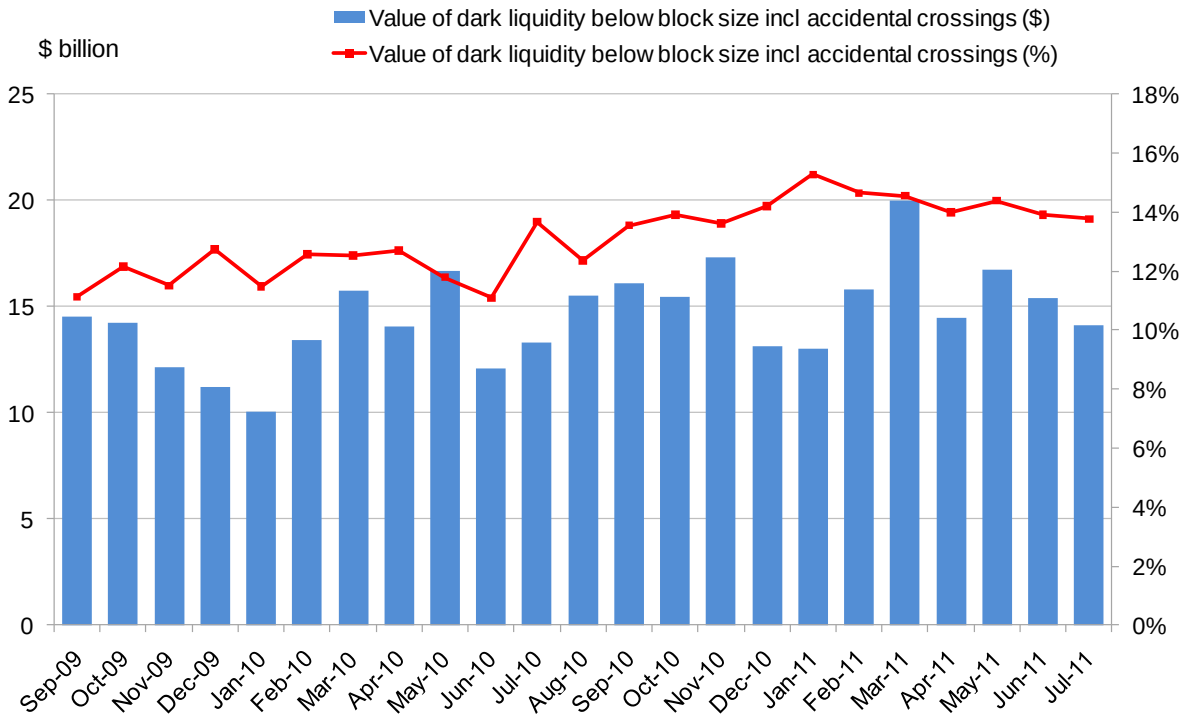
Figure 8: Australia—Dollar value traded on ASX and proportion of dark liquidity (equities)



Source: ASX

416 Figure 9 shows the dollar value and the proportion of value of dark liquidity below block size for the period September 2009 to July 2011. Dark liquidity below block size includes priority crossings, Centre Point priority crossings, and Centre Point trades. Although they are not dark liquidity, the data in this chart also includes accidental crossings.

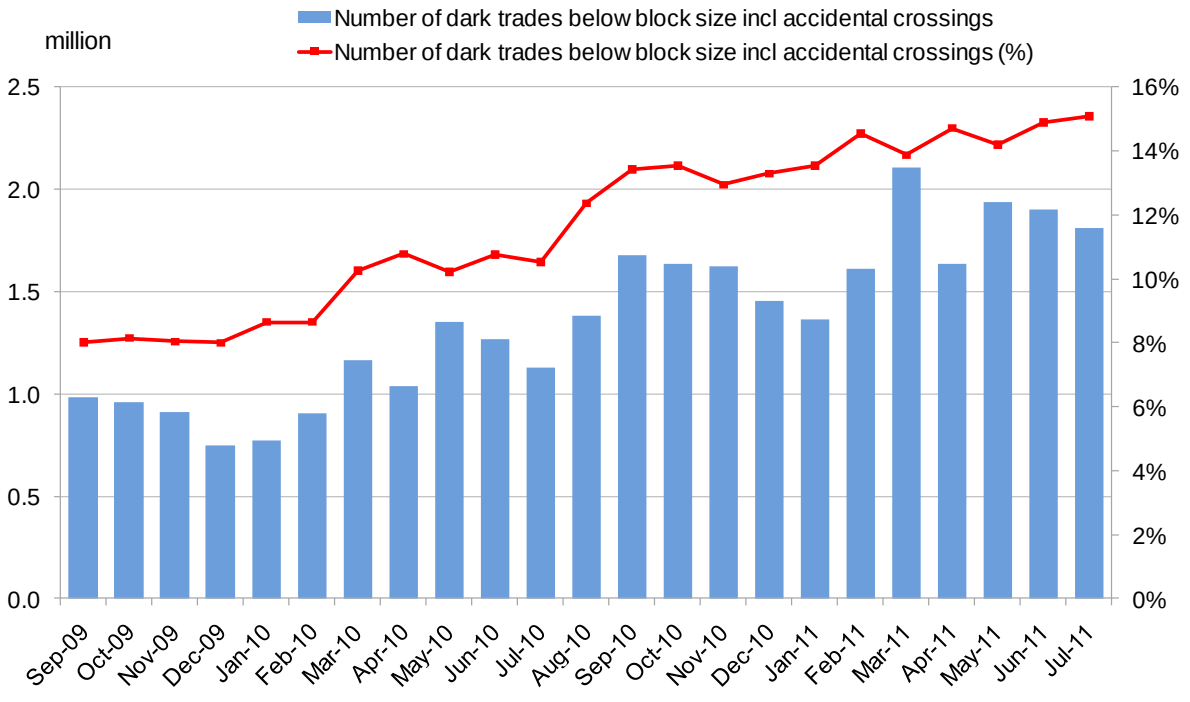
Figure 9: Australia—Value of dark liquidity below block size (equities)



Source: ASX

417 Figure 10 shows the number and the proportion of dark trades below block size for the period September 2009 to July 2011. Dark liquidity below block size includes priority crossings, Centre Point priority crossings, and Centre Point trades. Although they are not dark liquidity, the data in this chart also includes accidental crossings.

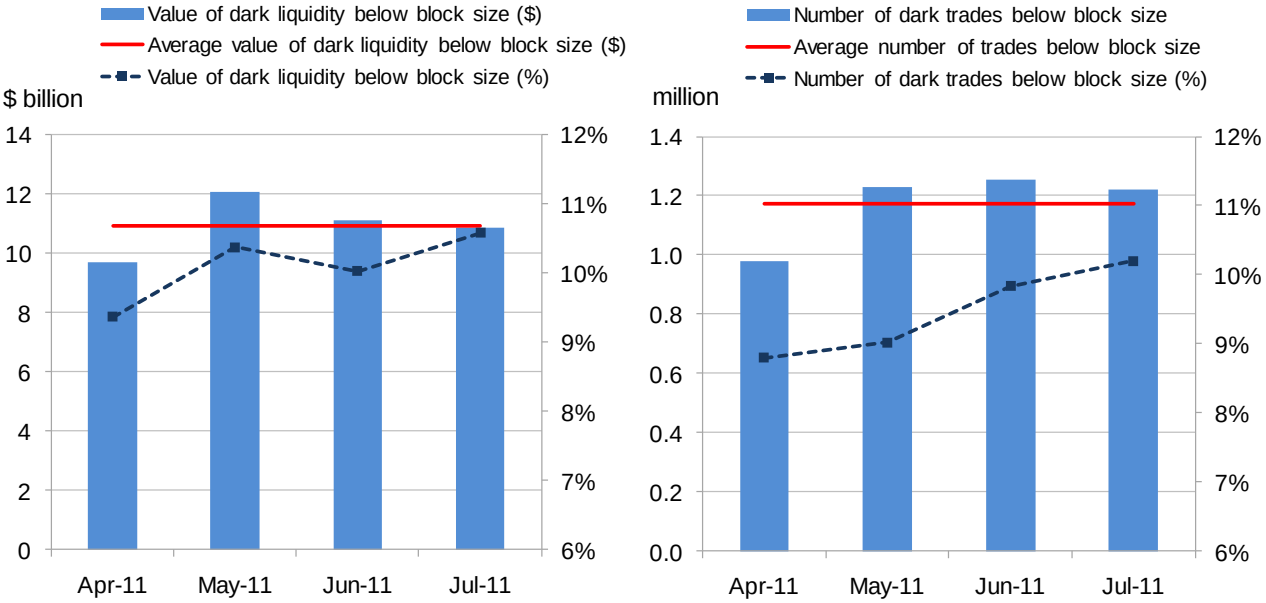
Figure 10: Australia—Number of dark trades below block size (equities)



Source: ASX

418 Figure 11 shows the dollar value and proportion of dark liquidity below block size (left-hand side), and the number and proportion of dark trades below block size (right-hand side), for the period April 2011 to July 2011. Unlike in Figure 9 and Figure 10, the data in these charts exclude accidental crossings from the value of dark liquidity below block size. Dark liquidity includes priority crossings, Centre Point priority crossings and Centre Point trades.

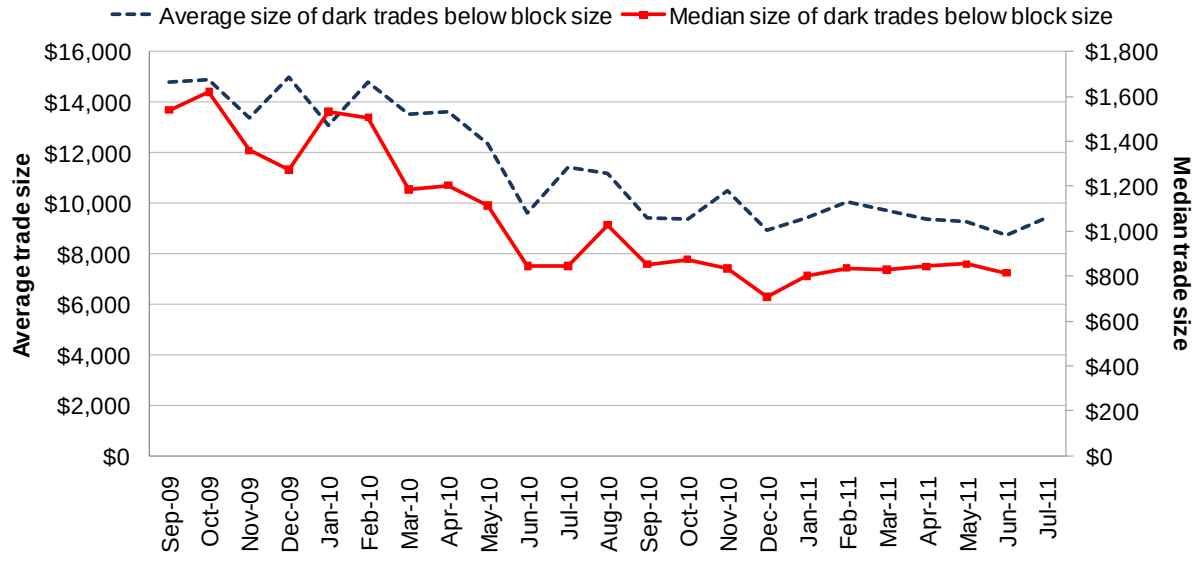
Figure 11: Australia—Value (LHS) and number (RHS) of dark trades below block size (equities)



Source: ASX

419 Figure 12 shows average and median trade sizes for dark trades below block size for the period September 2009 to July 2011. Dark trades below block size include priority crossings, Centre Point priority crossings, and Centre Point trades. Although they are not dark liquidity, the data in this chart also includes accidental crossings.

Figure 12: Australia—Average and median trade size of dark trades below block size (equities)



Source: ASX

Meaningful price improvement

420 Figure 13 shows the dollar value and percentage of potential price improvement for a sample of three stocks with different levels of liquidity: Telstra Corporation Limited (TLS), Pacific Brands (PBG) and Jetset Travelworld Ltd (JET). Four scenarios are considered:

(a) the US model, where price improvement is typically 0.01 cents per share;

(b) the Canadian model, where price improvement is typically 20% of the spread; and

(c) the proposed Australian 'meaningful price improvement' of either:

(i) the midpoint price; or

(ii) 1 tick price improvement.

421 Price improvement is calculated for an average-sized trade of $8,000, based on the opening price for each stock on 30 May 2011 and the average bid–ask spread calculated over May 2011. For example, for TLS, the opening price was $3.02, the number of shares traded was 2,649 and the average bid–ask spread was 1 cent. Therefore, the price improvement is:

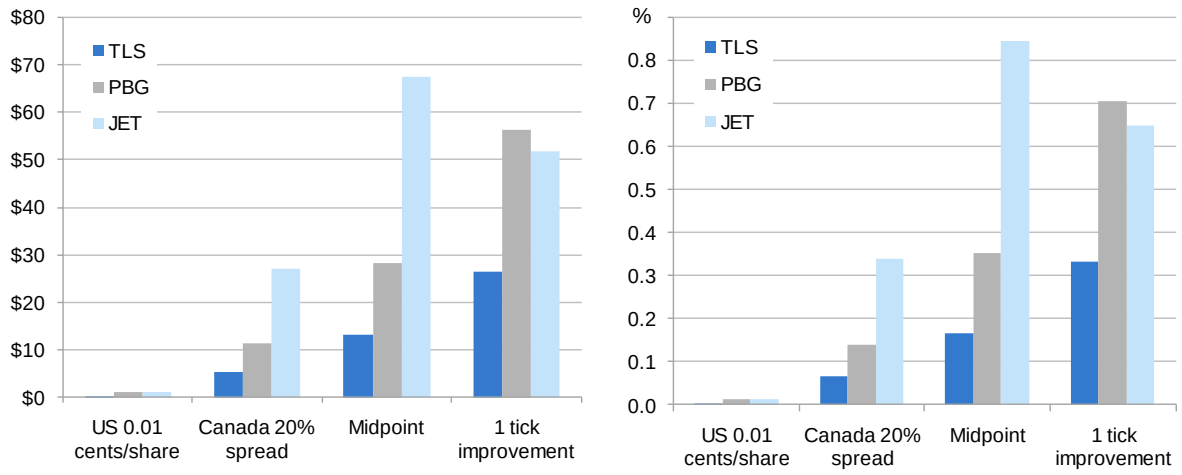
(a) $0.26 (2,649 shares at 0.01 cents) for the US model;

(b) $5.30 (2,649 shares at 0.2 cents) for the Canadian model;

(c) $13.25 (2,649 shares at 0.5 cents) for midpoint price improvement; and

(d) $26.49 (2,649 shares at 1 cent) for 1 tick price improvement.

Figure 13: Comparison of price improvement for various stocks in average size (by dollar value and percentage of overall cost)



Note 1: TLS = Telstra Corporation Limited; PBG = Pacific Brands; JET = Jetset Travelworld Ltd.

Note 2: TLS and PBG are unlikely to see tick size price improvements as they have an average spread near the minimum tick size.

Source: ASIC

Minimum size for dark orders

422 Table 26 shows a range of statistics for passive and aggressive orders. Aggressive orders are orders that are partially or fully executed immediately, while passive orders are orders that are placed in the order book without any immediate execution. These statistics are based on all new orders entered during May 2011.[151] Amendments and deletions are not included in these statistics.

Table 26: Australia—Passive and aggressive orders on ASX's TradeMatch (May 2011)

	Passive orders	Aggressive orders
Average size ($)	$11,098	$15,679
Median size ($)	$2,000	$1,400
Average daily new order value ($)	$14 billion	$4.6 billion
Average daily number of new orders	1.3 million	293,000

Source: ASIC

423 Table 27 shows information about the proportion of new orders and the value of new orders exceeding four size thresholds: $20,000, $35,000, $50,000 and $100,000. Statistics are reported separately for aggressive and passive orders. These statistics are based on all new orders entered during May 2011. Amendments and deletions are not included in these statistics.

Table 27: Australia—Proportion of passive and aggressive orders by threshold (May 2011)

Threshold	Passive orders		Aggressive orders	
	% of orders	% of value	% of orders	% of value
>$100,000	1.1%	23.9%	3.1%	54.9%
>$50,000	4.2%	44.1%	6.2%	69.2%
>$35,000	7.9%	58.2%	8.6%	75.6%
>$20,000	14.1%	73.0%	13.5%	83.8%

Source: ASIC

[151] Data from May 2011 was the most recent data available at the time the analysis was done. It was not practical to analyse a period longer than a month.

424 Table 28 shows the number of stocks where the value or number of dark trades below block size exceeds specified thresholds, based on trading during May 2011. The results are reported separately for ASX 200 stocks and non-index stocks. Dark liquidity below block size includes priority crossings, Centre Point priority crossings and Centre Point trades. The results show, for example, that there are 38 ASX 200 stocks where dark trading below block size accounted for more than 15% of the total value traded, and there are 41 ASX 200 stocks where dark trading below block size accounted for more than 15% of the number of trades.

Table 28: Australia—Number of stocks with proportion of dark trading below block size above a specified percentage for May 2011

Stocks with threshold above specified percentage	15%	20%	25%	30%	35%	40%	50%
ASX 200 stocks							
Dark trades below block size (by value)	38	17	8	5	2	0	0
Dark trades below block size (by number)	41	16	7	3	1	0	0
Non-index stocks							
Dark trades below block size (by value)	52	28	14	12	7	3	2
Dark trades below block size (by number)	19	10	5	4	4	2	2

Source: ASIC Office of the Chief Economist

Key terms

Term	Meaning in this document
accidental crossing	A type of crossing that occurs when a bid or offer entered or amended using an AOP system matches with a pre-existing bid or offer from the same market participant. The same person is not permitted to enter both sides of the crossing
(ACOP) automated client order processing	See 'DEA'
AFS licence	An Australian financial services licence under s913B of the Corporations Act that authorises a person who carries out a financial services business to provide financial services Note: This is a definition contained in s761A of the Corporations Act.
AFS licensee	A person who holds an Australian financial services licence under s913B of the Corporations Act Note: This is a definition contained in s761A of the Corporations Act.
agency	Where a market participant acts on behalf of a client
aggressive order	An order that is priced so that it is immediately executable (i.e. priced to buy at or above the current offer, or to sell at or below the current bid). An example of an aggressive order is a market order
algorithm/algorithmic trading	Electronic trading activity where specific execution outcomes are delivered by predetermined parameters, rules and conditions
algorithmic program	Automated strategies using programmable logic/system-generated orders (rather than human-generated orders) based on a set of predetermined parameters, logic rules and conditions. These include algorithmic trading, automated order generation, HFT and automated market making
allowable tolerance	A permitted margin of difference between the time on an entity's clock and the time on the Universal Time Clock
AOP (automated order processing)	The process by which orders are registered in a market participant's system, which connects it to a market. Client or principal orders are submitted to an order book without being manually keyed in by an individual (referred to in the rules as a DTR). It is through AOP systems that algorithmic programs access our markets
arbitrage	The process of seeking to capture pricing inefficiencies between related products or markets

Term	Meaning in this document
ASIC	Australian Securities and Investments Commission
ASIC Market Integrity Rules (ASX)	ASIC Market Integrity Rules (ASX Market) 2010—rules made by ASIC under s798G of the Corporations Act for trading on ASX
ASIC Market Integrity Rules (Chi-X)	ASIC Market Integrity Rules (Chi-X Australia Market) 2011—rules made by ASIC under s798G of the Corporations Act for trading on Chi-X
ASIC Market Integrity Rules (Competition)	ASIC Market Integrity Rules (Competition in Exchange Markets) 2011—rules made by ASIC under s798G of the Corporations Act that are common to markets dealing in equity market products quoted on ASX
ASX	ASX Limited (ACN 008 624 691) or the exchange market operated by ASX Limited
ASX 24	The exchange market formerly known as Sydney Futures Exchange (SFE), operated by Australian Securities Exchange Limited
ASX Operating Rules	ASX Limited's new operating rules, which replace the pre-existing ASX Market Rules
ASX SPI 200 Index Future (SPI Future)	The ASX 24 futures contract listed with S&P/ASX 200 as the underlying product
Australian domestic licensed financial market	A financial market licensed under s795B(1) of the Corporations Act
Australian market licence	Australian market licence under s795B of the Corporations Act that authorises a person to operate a financial market
best available bid and offer	See 'NBBO'
best bid or offer	The best available buying price or selling price
best execution	Where a market participant achieves the best trading outcome for its client
bid–ask spread	The difference between the best bid and the best offer
block crossing/trade	A crossing where the consideration for the transaction is not less than $1 million (pre-trade transparency exception in competition market integrity rules)
CDI (CHESS Depository Interest)	An instrument used by non-Australian companies to support electronic registration, transfer and settlement of their products listed on ASX
Centre Point	An ASX-operated execution venue that references the midpoint of the bid–ask spread on ASX's CLOB

Term	Meaning in this document
Centre Point priority crossing	A type of crossing that occurs on Centre Point, allowing an ASX market participant to match orders at the midpoint of the prevailing best bid and offer on the ASX CLOB
CGS (Commonwealth Government Securities)	Means all securities issued by the Australian Government, comprising treasury bonds, treasury notes, treasury indexed bonds and, previously, treasury adjustable rate bonds. These securities are issued either by tender or syndication
Chapter 6 (ASX) and (Chi-X)	A chapter of the ASIC Market Integrity Rules (ASX) and ASIC Market Integrity Rules (Chi-X) (in this example, numbered 6)
Chapter 2 (Competition)	A chapter of the ASIC Market Integrity Rules (Competition) (in this example, numbered 2)
CHESS	Clearing House Electronic Subregister System
Chi-X	Chi-X Australia Pty Limited or the exchange market operated by Chi-X
circuit breaker	A mechanism that pauses trading in a product if it exhibits extreme price movement in a defined period of time. Circuit breakers can either apply to individual products or can be market wide, based on an index's movement
CLOB (central limit order book)	A central system of limit orders, where bids and offers are typically matched on price–time priority
CFTC	Commodity Futures Trading Commission
CMCRC	Capital Markets CRC Limited
co-location	Facility offered by a market operator whereby market participants (and possibly clients of market participants) are able to place their trading processing servers within the same physical location as the market operator's processing servers to minimise latency
Corporations Act	*Corporations Act 2001*, including regulations made for the purposes of that Act
CP 145	ASIC consultation paper *Australian equity market structure: Proposals*, released 4 November 2010
crossing	A type of transaction where the market participant is the same for both the buyer and the seller. The market participant may be acting on behalf of the buying client and the selling client, or acting on behalf of a client on one side of the transaction and as principal on the other side of the transaction

Term	Meaning in this document
crossing system	An automated service provided by a market participant to its clients that matches or executes client orders with orders of the market participant (i.e. against the participant's own account) or with other clients of the market participant. These orders are not matched on a pre-trade transparent order book
CSA	Canadian Securities Administrator
dark liquidity	Non-pre-trade transparent orders
dark liquidity/trading below block size	Trades using the 'at or within the spread' exception to pre-trade transparency. These include priority crossings, Centre Point priority crossings, and Centre Point trades
dark pool/venue	Non-pre-trade transparent, electronically accessible pools of liquidity
dark trades/trading	See 'off-order book trading/transactions'
DEA (direct electronic access)	Electronic access to markets via the electronic infrastructure of a market participant. Also known as ACOP in Australia, DEA is the process by which an order is submitted by a client, agent or participant representative into a market participant's AOP system directly without human intervention. DEA enables a client to access a market without being a direct market participant and without being directly bound by the operating rules of the market they are accessing
DTR	Representative of the market participant that has been authorised by the participant to submit trading messages to the execution venue on behalf of the participant
ELP (electronic liquidity provider)	Typically, HFTs or algorithmic traders who attempt to profit by providing continuous two-sided quotes for liquid securities on an unofficial basis to capture the bid–ask spread of a product
equity market	The market in which shares are issued and traded, either through exchange markets or OTC markets
equity market products	Shares, managed investment schemes, the right to acquire by way of issue shares and managed investment schemes, and CDIs admitted to quotation on ASX
ESMA	European Securities and Markets Authority
ETF special trade (exchange-traded fund special trade)	Has the meaning given to the term 'ETF Special Trade' by the ASX Operating Rules

Term	Meaning in this document
exchange market	A market that enables trading in listed products, including via a CLOB Note: Not all exchange markets offer primary listings services.
execution venue	An execution venue is a facility, service or location on or through which transactions in equity market products are executed and includes: • each individual order book maintained by a market operator; • a crossing system; and • a market participant executing a client order against its own inventory otherwise than on or through an order book or crossing system. This includes an order book and other matching mechanisms
extreme cancellation range	Range within which trades are required to be cancelled, as outlined in Chapter 2 (Competition)
financial market	As defined in s767A of the Corporations Act. It encompasses facilities through which offers to acquire or dispose of financial products are regularly made or accepted
financial product	Generally a facility through which, or through the acquisition of which, a person does one or more of the following: • makes a financial investment (see s763B); • manages financial risk (see s763C); and • makes non-cash payments (see s763D) Note: See Div 3 of Pt 7.1 of the Corporations Act for the exact definition.
fragmentation	The spread of trading and liquidity across multiple execution venues
fully hidden order	An order on an order book that is not pre-trade transparent
HFT (high-frequency trading)	While there is not a commonly agreed definition of HFT, we characterise it as: • the use of high-speed computer programs to generate, transmit and execute orders; • the generation of large numbers of orders, many of which are cancelled rapidly; and • typically holding positions for very short time horizons and ending the day with a zero position
HFTs	High-frequency traders that adopt a specialised form of algorithmic trading characterised by the use of high-speed computer programs

Term	Meaning in this document
institutional investor	Advising institutions typically concerned with buying, rather than selling, assets or products. The most common types of institutional investors include private equity funds, mutual funds, unit trusts, hedge funds, pension funds and proprietary trading desks
IIROC	Investment Industry Regulatory Organization of Canada
indirect market participant	A broker that is not itself a market participant, but that accesses the market through a market participant
internalisation	Where a client order is transacted against a market participant's own account
IOSCO	International Organization of Securities Commissions
issuer	A company that has issued shares
large portfolio trade	A transaction that includes at least 10 purchases or sales, the market participant acts as agent for both the buyer and seller of the portfolio or as principal buys from or sells to the client, and the consideration of each is not less than $200,000 and the aggregate consideration is not less than $5 million. This has the same definition as 'portfolio crossing'
latency	An expression of how much time it takes for data to get from one point to another
LEI	legal entity identifier
limit order	An order for a specified quantity of a product at a specified price or better
limit up–limit down	A control mechanism that aims to address volatility in markets by preventing trades in products from occurring outside a specified price band over a period of time. Sometimes referred to as a 'collar'
liquidity	The ability to enter and exit positions with a limited impact on price
managed investment scheme	As defined in s9 of the Corporations Act
market impact	The effect on the formation of price, volume and market depth created by order flow or trading activity. This includes the associated cost incurred when the execution price differs from the target price, or when the liquidity required by the execution is different from the liquidity available
market integrity rules	Rules made by ASIC, under s798G of the Corporations Act, for trading on domestic licensed markets

Term	Meaning in this document
market licence	An Australian market licence
market maker	An entity that provides liquidity to a market when it is generally absent or weak, and manages short-term buy and sell imbalances in customer orders by taking the other side of transactions. Market makers often take on this role in return for rebates and/or various information and execution advantages
market manipulation	As defined in Pt 7.10 of the Corporations Act
market operator	A holder of an Australian market licence that is the operator of a financial market on which equity market products are quoted
market order	An order at the best price currently available
market participant	An entity that is a participant of a financial market on which equity market products are quoted
meaningful price improvement	Where the trade is for a volume less than or equal to the volume displayed at the best available price, we consider 'meaningful' price improvement to be a one tick size price improvement or the midpoint of the best available bid and best available offer. Where the trade is for a volume greater than the volume available at the best bid and offer across the pre-trade transparent order books, price improvement may take into account the volume-weighted average price of the available orders rather than best prices only
MiFID	Markets in Financial Instruments Directive
NBBO (national best bid and offer)	The highest bid (best buying price) and the lowest offer (best selling price) for a product that is available across all pre-trade transparent order books at the time of the transaction. The best bid and best offer may not necessarily be on the same order book. It may be that the best bid is on the order book of Market X and the best offer is on the order book of Market Y
NMI	The National Measurement Institute division of the Commonwealth Department of Innovation, Industry, Science and Research
off-order book trading/transactions	Transactions that take place away from a CLOB and that are not pre-trade transparent. It is often referred to as 'dark liquidity' or 'upstairs trading'. It includes bilateral OTC transactions and transactions resulting from a market participant matching client orders or matching a client order against the participant's own account as principal. When this type of trading is done in an automated way and is part of a pool of liquidity, it is referred to as a 'dark pool'

Term	Meaning in this document
operating rules	As defined in s761A of the Corporations Act
order book	An electronic list of buy orders and sell orders, maintained by or on behalf of a market operator, on which those orders are matched with other orders in the same list
OTC	Over-the-counter
Part 5.6 (ASX) and (Chi-X)	A part of the ASIC Market Integrity Rules (ASX) and ASIC Market Integrity Rules (Chi-X) (in this example numbered 5.6)
Part 4.3 (Competition)	A part of the ASIC Market Integrity Rules (Competition) (in this example numbered 4.3)
partly disclosed order	An order on an order book that is pre-trade transparent with the exception of either price or volume
passive order	The unfilled balance of an active order, or any limit price order which is not immediately executable (i.e. priced to buy below the current offer, or priced to sell above the current bid)
portfolio crossing	See 'large portfolio trade'
post-trade transparency	Information on executed transactions made publicly available after transactions occur
pre-trade transparency	Information on bids and offers being made publicly available before transactions occur (i.e. displayed liquidity)
price formation	The process determining price for a listed product through the bid and offer trading process of a market
price step	The difference in price of one tick size
price–time priority	A method for determining how orders are prioritised for execution. Orders are first ranked according to their price; orders of the same price are then ranked depending on when they were entered
priority crossing	A type of crossing on ASX's CLOB that is transacted at or within the spread with time priority
PureMatch	An ASX-operated low latency order book that provides trading in a subset of ASX-listed securities (intended for commencement in the Australian market in the fourth quarter of 2011)
REP 215	ASIC report *Australian equity market structure*, released 4 November 2010
RG 223 (for example)	An ASIC regulatory guide (in this example numbered 223)

Term	Meaning in this document
Rule 5.6.3 (ASX) and (Chi-X) (for example)	A rule of the ASIC Market Integrity Rules (ASX) and ASIC Market Integrity Rules (Chi-X) (in this example, numbered 5.6.3)
Rule 6.5.1 (Competition) (for example)	A rule of the ASIC Market Integrity Rules (Competition) (in this example numbered 6.5.1)
S&P/ASX 200 Index or S&P/ASX 200	An index of the largest 200 shares listed on ASX by market capitalisation
SPI Future	ASX SPI 200 Index Future
s912 (for example)	A section of the Corporations Act (in this example numbered 912), unless otherwise specified
SEC	Securities and Exchange Commission (US)
settlement	The exchange of payment and delivery for purchased securities
SFE	The market formerly known as Sydney Futures Exchange (now ASX 24)
short selling	The practice of selling financial products that are not owned by the seller, with a view to repurchasing them later at a lower price. Short sales can be naked or covered
spread	The difference between the best bid and offer prices
stub	The residual volume from a partly filled order
synchronised clock	A system time clock that matches a reference source clock
T+1	Refers to the business day following the transaction date
tick size	The minimum increment by which the price for an equity market product may increase or decrease
trade report	An electronic message created when a transaction is executed, detailing the terms of the transaction
trade-through	A model and rule that embeds price–time priority across multiple pre-trade transparent venues to protect displayed bids and offers from being bypassed
trading halt or suspension	A temporary pause in the trading of a product for a reason related to market integrity, such as when an announcement of price-sensitive information is pending (this does not include a halt or suspension caused by a technical problem, including a power outage, affecting a market operator's trading system)
two-sided quote	A quote to buy and sell
Universal Time Clock	A clock that is referenced to UTC(AUS)

Term	Meaning in this document
UTC(AUS)	The output of the caesium atomic clock designated by the NMI as UTC(AUS)
volatility	Fluctuation in a product's price
volatility control	A post-order control that prevents certain orders from being matched beyond set price limits. These controls aim to limit the disruptive effect of anomalous trades
VolumeMatch	An ASX-operated execution venue that facilitates the matching of anonymous large orders with reference to the last price on ASX's CLOB