

Competition in Clearing Australian Cash Equities: Conclusions

A report by the Council of
Financial Regulators

DECEMBER 2012

Contents

1. Introduction and Executive Summary	1
2. Background	7
3. Competition in Clearing: Stakeholders' Views	12
4. Safe and Effective Competition	18
5. Conclusions and Recommendations	30

Appendix A: Current Clearing and Settlement Arrangements
for ASX Securities

Appendix B: International Evidence on
Trading and Post-trade Fees

Appendix C: Conditions Imposed on the Maple Group

APRA



RESERVE BANK
OF AUSTRALIA



© Australian Prudential Regulation Authority, Australian Securities and Investments Commission, Reserve Bank of Australia and the Department of the Treasury 2012. All rights reserved.

The contents of this publication shall not be reproduced, sold or distributed without the prior consent of the Australian Prudential Regulation Authority, Australian Securities and Investments Commission, Reserve Bank of Australia and the Department of the Treasury.

ISBN 978-0-9873620-9-4 (Online)

1. Introduction and Executive Summary

On 15 June, the Council of Financial Regulators (the Council) released a discussion paper on competition in the clearing and settlement of Australian cash equities. This work, carried out by the Australian Securities and Investments Commission (ASIC), the Reserve Bank of Australia (the Bank) and the Australian Treasury, in collaboration with the Australian Competition and Consumer Commission (ACCC) – collectively, the Agencies – arose out of the Council's broader review of financial market infrastructure regulation. The particular focus of the work has been the clearing of ASX-listed equities, reflecting interest emerging from several potential alternative providers in offering competing central counterparty (CCP) services in this market.

This paper presents the Agencies' conclusions from analysis of stakeholder responses to the discussion paper. Sixteen submissions were received from a range of stakeholders, including clearing and settlement infrastructure providers, service providers, industry associations and users of clearing and settlement services. Having analysed these submissions, the Agencies have held a number of meetings with both respondents and other interested stakeholders (including end-users of the financial markets and buy-side market participants) to explore several of the issues raised.

After first providing some background, the paper discusses messages from these submissions relevant to each agency's responsibilities. It draws out some key matters for consideration in understanding the implications of competition and assessing licence applications from competing providers of CCP services. Based on analysis of the issues raised, the paper makes recommendations to government on how to approach competition in clearing and settlement of the Australian cash equity market.

Stakeholders' Views on Competition in Clearing

Most respondents to the consultation viewed cash equity clearing as contestable, having seen competition emerge in Europe. Several were strongly in favour of competition in clearing, citing the following benefits:

- *Lower clearing fees.* According to an in-depth study of the European market conducted in 2011 by an economic consultancy, Oxera, clearing fees on a per transaction value basis fell for most CCPs. For those CCPs, the declines were between 7 and 59 per cent, and averaged more than 30 per cent.
- *Increased innovation and user responsiveness.* Those in favour of competition argued that it would encourage innovation. Several stakeholders also anticipated that competition would encourage enhanced user input to the ongoing development of the clearing and settlement infrastructure for the cash equity market. This would ensure that its design and functionality continued to meet participants' needs, including in response to global developments in messaging protocols and value-added services such as custody.

- *Support for competition in trading.* By providing an alternative to the vertically integrated incumbent, competition in clearing could improve the terms of access for competing trading platforms, increasing their viability and allowing the benefits of competition in trading to be more fully realised.
- *Flow-on effects.* The flow-on effects of competition in clearing to the market more generally are difficult to quantify, but to the extent that the combination of factors above lowered the costs of participating in the market, it was suggested that, over time, increased interest might emerge from international investors, contributing to deeper liquidity and tighter spreads.

Others were less convinced that competition in cash equity clearing would deliver a net benefit. While supportive of competition in principle, these respondents noted that a multi-CCP environment may entail additional costs to industry. A number of specific concerns were raised:

- *The scale of the Australian market.* To date, competition in clearing has been almost exclusively a European phenomenon, with the primary driver being greater integration of European markets. Some stakeholders questioned whether this experience was relevant to the Australian context, particularly since European markets are significantly larger in aggregate than the Australian market. Given that the total revenue from cash market clearing earned by the incumbent CCP, ASX Clear Pty Ltd (ASX Clear), was \$46 million in 2011/12, a 30 per cent reduction in clearing fees (which is not implausible, given the experience in Europe) would yield aggregate direct savings for the industry of around \$15 million.
- *Operational costs.* Respondents were concerned that there might be large up-front fixed costs associated with upgrades to connectivity, information technology or staff, and ongoing costs associated with duplication in processes and a loss of netting efficiencies. A particular concern was that such costs could fall on the industry as a whole, especially given the application of best execution rules.
- *Costs of regulation.* Partly informed by their perceptions of cost recovery for cross-market supervision, and in the absence of details of a prospective supervision model, participants were also mindful of a potential increase in regulatory costs in a multi-CCP scenario.

A clear theme from consultation with stakeholders was that currently difficult market conditions could exacerbate the impact of any operational and regulatory costs associated with the introduction of competition in equity clearing at this time. Stakeholders highlighted the presently low level of trading activity, the magnitude of regulatory reforms recently undertaken or still underway, and the consequent pressure on technology budgets and firm profitability. There was, therefore, little appetite and capacity in the industry to accommodate significant further change.

Safe and Effective Competition

Since the existing legislative framework envisages multiple providers of clearing services, the discussion paper took openness to competition as the starting point for its analysis. In particular, the paper considered how regulators could ensure that the benefits of competition could be realised without adverse implications for financial system stability or the effective functioning of financial markets.

In accordance with this approach, the Agencies have examined actions that might need to be taken, should competition emerge, to address the various issues identified in the discussion paper. Such actions may be cast in terms of 'minimum conditions' for safe and effective competition.

- *Adequate regulatory arrangements.* To ensure that competition did not compromise financial stability or market functioning, appropriate regulatory arrangements should be in place. In particular:

- All facilities, irrespective of their scale or domicile, should be rigorously overseen against new Financial Stability Standards (FSSs) determined by the Bank and other requirements, including licence conditions, under the *Corporations Act 2001*.
- The Council’s framework for regulatory influence over cross-border clearing and settlement (CS) facilities should be applied. Recently, the Bank has released new FSSs and ASIC has updated its *Regulatory Guide 211 Clearing and settlement facilities: Australian and overseas operators*. These reflect new international standards developed by the Committee on Payment and Settlement Systems (CPSS) and the International Organization of Securities Commissions (IOSCO), as well as the Council’s framework for cross-border regulatory influence. In accordance with this framework, if competition emerged from an overseas-based CCP and its market share reached a specified threshold, the CCP would be expected to establish a domestic legal and operational presence. Given the central role played by the cash equity market in the Australian financial system and a competing CCP’s potential connections to other components of the domestic financial market infrastructure, this threshold would be set at a relatively low level.
- *Ex ante* wind-down plans should be established. These plans should be supported by a commitment to a notice period of no less than one year prior to any commercially driven exit, and additional capital sufficient to cover one year of operating expenses, calculated on a rolling basis. A competing CCP should also contribute to cross-market arrangements to ensure continued provision of clearing services for less liquid securities. Such measures would facilitate orderly exit should a commercial decision be taken to withdraw from the market.
- *Appropriate safeguards in the settlement process*. The cash equity settlement model in an environment with multiple CCPs should seek as far as possible to preserve the efficiencies of the existing settlement infrastructure, while affording materially equivalent priority to trades cleared through a competing CCP. It should also minimise financial interdependencies between the competing CCPs in the settlement process and facilitate appropriate default management actions. This would require significant modifications to the existing settlement model, although on the basis of preliminary discussions with stakeholders it should be feasible to develop a model with these characteristics.
- *Access to the existing securities settlement infrastructure on non-discriminatory and commercial terms*. Given that competition in the provision of settlement services is unlikely to emerge, a competing CCP would require access to the vertically integrated incumbent settlement facility, ASX Settlement Pty Limited (ASX Settlement). For competition to be effective, such access would need to be attainable on non-discriminatory and commercial terms. It is recognised that regulatory action might be necessary to fully achieve this.

The Agencies consider that establishing such minimum conditions is necessary to support policy objectives around financial stability, and the integrity and efficiency of financial markets. Outlining these conditions also provides guidance and certainty to potential new entrant CCPs on the regulatory requirements they will face. That is, providing a statement of these conditions should allow potential entrants to make commercial decisions on the economic viability of entry to the Australian market, and the nature of any service offerings.

The Agencies have also considered the implications of interoperability between CCPs. A number of respondents to the consultation agreed with the proposition in the discussion paper that giving participants of multiple trading venues a choice of clearing through a single interoperable CCP could be a means of mitigating some costs associated with a multi-CCP environment including the need to establish duplicate clearing connections. Implementing interoperability would, however, introduce costs and risks and take considerable time. As

seen in European markets in which interoperability has emerged, the interests of the parties negotiating an interoperability agreement are unlikely to be aligned; it can therefore be difficult to reach mutually acceptable commercial terms without regulatory intervention. Given the associated complexities and risks, the case for any regulatory intervention to facilitate interoperability would need to be considered carefully and the implications fully understood by the Agencies.

Conclusions and Recommendations

As a matter of principle, the Agencies are open to competition in financial markets and would expect competition to deliver efficient outcomes in terms of pricing, innovation and user responsiveness. This reflects the existing legislative framework for clearing and settlement facilities in Australia, which sets out a licensing regime that contemplates multiple service providers. It also reflects a general, underlying policy position that competition is the most effective means of contributing to efficiency, innovation and productivity across the economy.

The Agencies have consulted widely and have listened to the views of stakeholders. While many stakeholders agreed that, in principle, competition for the clearing of cash equities could be expected to deliver benefits, there was also scepticism around whether those benefits would outweigh any associated costs. Perceptions about these costs and benefits have been influenced by recent experiences with the introduction of competition in the trading of ASX-listed securities, and the attendant changes to industry and regulatory arrangements. The Agencies are also aware that some views about the costs and benefits of CCP competition in the Australian market may reflect individual commercial interests in the outcomes of the Council's work.

The Agencies recognise that making changes in accordance with the minimum conditions to support CCP competition will involve costs, and that the benefits of competition in the clearing of cash equities may not be readily quantifiable. For instance, implementing safeguards in the settlement process would entail costs for both ASX Group (ASX) and participants, including due to flow-on changes to participants' internal processes and systems. Also, while the absolute direct benefits in terms of reductions in clearing fees alone may appear modest, it is more difficult to gauge the magnitude of other benefits such as from product or service innovation, or flow-on benefits to related markets.

These uncertainties are not, however, reasons to rule out the prospect of competition for the clearing of cash equities entirely. The current legislative settings contemplate competition, and a conclusion that CCP competition should not occur at all would represent a significant change in policy; the scope of the current work has not extended to considering such a fundamental reform.

At the present time, however, the Agencies acknowledge feedback from stakeholders that now may not be the appropriate time for changes that will have further cost implications for industry, especially given current market conditions and existing pressures on participants to cut costs. The Agencies also recognise the magnitude of regulatory changes already underway, not least in relation to Basel III and over-the-counter (OTC) derivatives clearing and trade reporting.

Recommendation 1: Taking these factors into account, the Agencies recommend that a decision on any licence application from a CCP seeking to compete in the Australian cash equity market be deferred for two years.

Deferring a decision on any licence application from a competing CCP recognises the legitimate industry concerns that have been raised. While it is recommended that a licence decision be deferred, the Agencies'

work has nonetheless clarified minimum conditions for a new entrant CCP. The statement of these requirements should inform decision-making by a potential entrant about whether entry to the market is commercially viable.

Postponing CCP competition would, however, defer the benefits that the market might expect from competition in clearing Australian cash equities. For example, by perpetuating a *de facto* monopoly in cash equity clearing and settlement, alternative market operators have no choice of supplier for those essential inputs to their service. In other markets a regulated outcome is commonly sought in these circumstances. If a decision were taken to rule out entirely the prospect of competition for the clearing (or settlement) of cash equities, a presumption in favour of some form of regulation of ASX's CS facilities could arise.

At this point in time, however, the Agencies favour a mechanism that preserves the prospect of competition and/or further regulation in the future, while seeking to address the principal concerns raised by stakeholders in the near term.

Recommendation 2: The Agencies recommend that ASX work with industry stakeholders to develop a Code of Practice for Clearing and Settlement of Cash Equities in Australia (Code). Developing the Code would give industry stakeholders, including ASX, an opportunity to address the issues that have been raised during the Agencies' consultation. In the immediate term, prior to the establishment of the Code, there would be a strong case for ASX to commit publicly to the process by endorsing a set of principles developed by the Agencies to govern the conduct and organisation of its cash equity market clearing and settlement operations. These principles reflect merger conditions and access provisions that have been developed in recent years to govern the conduct of similar integrated market infrastructure providers in other markets, including Canada and Europe, and would form the basis for the Code.

Importantly, these arrangements would apply only in the case of the Australian cash equity market, and would not apply in relation to clearing and settlement services supporting either exchange-traded or OTC derivatives markets or OTC debt markets. Indeed, the Council reiterates its openness to the provision of OTC derivatives services by one or more domestic or overseas-based CCPs, subject to those CCPs meeting all regulatory requirements.

The Agencies see merit in setting ASX a clear timetable to implement the Code. It would seem reasonable to set an expectation that the terms of the Code be finalised within six months. This paper sets out some elements that the Agencies would, in accordance with the principles, expect to be included in the Code. It would be strongly preferred that ASX reach agreement on the Code with all relevant stakeholders prior to submission to the Council for approval. An appropriate mechanism would then be established by the Agencies to monitor ASX's adherence to the finalised terms of the Code.

It is proposed that the principles, forming the basis for the Code, would include:

- *User input to governance.* To ensure responsiveness to users' evolving needs, a formal mechanism should be established within ASX's governance framework to give users a strong voice in strategy-setting and system design, and to make ASX's CS facilities for cash equities directly accountable to users. Users should be broadly defined to include not only clearing and settlement participants, but also end-users, alternative market operators, technology service providers and other relevant stakeholders. As part of this, ASX should engage with users to establish a clear and transparent medium-term program of investment

in the core clearing and settlement infrastructure, including the Clearing House Electronic Sub-Register System (CHES), that is directed towards users' needs and adopts (if not exceeds) relevant international best practice wherever practicable.

- *Transparent and non-discriminatory pricing of clearing and settlement services.* ASX should strengthen transparency in the pricing of its services by publishing detailed financial statements for its cash equity clearing and settlement subsidiaries. Further, all prices of individually unbundled clearing and settlement services, including rebates, revenue-sharing arrangements and discounts applicable to the use of these services, should:
 - be transparent to all users of the services, including end-users and alternative market operators
 - not discriminate between ASX-affiliated and other users of clearing and settlement services
 - be made available to stakeholders in a form such that the impact of pricing changes can be readily understood, including the extent to which they have the potential to materially shift revenue streams between trading, clearing and settlement services.

Further, the Code should ensure there is a process for establishing an appropriate internal cost allocation model and policies to govern the allocation of costs or transfer of prices between ASX group entities. Compliance with these policies would be expected to be subject to internal audit review, as well as periodic external review.

- *Access to clearing and settlement services.* In the absence of alternative providers of cash equity clearing and settlement services, ASX should facilitate access to the CHES infrastructure on non-discriminatory and transparent terms. In particular, ASX should adhere to a protocol for dealing fairly and in a timely manner with requests for access, including timeframes for responding to enquiries.

The Agencies acknowledge that ASX has recently made some advances in areas contemplated by these principles and has committed to considerable investment in its post-trade services. There has, for instance, been a high level of user engagement in ASX's development of its proposed clearing service for OTC interest rate derivatives and detailed fee schedules across ASX's businesses are already publicly available. Furthermore, notwithstanding some dissatisfaction with the length and nature of commercial negotiations around access for alternative market operators, and certain contractual terms, access has in practice been granted via ASX's Trade Acceptance Service (TAS). The Agencies, however, recommend seeking a public and transparent commitment to adhere to a Code which embeds and enhances these practices, in accordance with the principles.

Recommendation 3: It is proposed that, at the end of the two years, the Agencies carry out a public review of the Code's implementation and effectiveness, and ASX's adherence to it. At the same time, the Agencies would review the prospect of granting a licence to a competing CCP, or of pursuing other regulatory outcomes.

Without pre-judging outcomes (which may be influenced by a range of factors), possible recommendations from this review could be to maintain the Code for a further period, to propose alternative regulatory arrangements for ASX, or to propose granting a licence to a competing CCP. Experience and evidence gathered during the preceding two year period will be considered in determining the outcome.

2. Background

In the course of its work on reform proposals for the regulation of financial market infrastructures (FMIs) during 2011, the Council identified a number of issues for consideration around competition in clearing and settlement. At the same time, interest had emerged from a number of CCP operators in providing competing CCP services for ASX-listed equities. As a result, in its October 2011 consultation paper on reforms to the regulation of financial market infrastructures, the Council noted that it would be working with the ACCC on further analysis of these issues.

The particular focus of the Agencies' deliberations has been competition in the *clearing* of Australia's largest cash equity market, the market for ASX-listed equities, and the potential implications for both the effective functioning of the market and broader financial stability. It is in this market that interest from potential competing CCPs has emerged, in the first instance to clear for the Chi-X Australia (Chi-X) market which commenced operations in October 2011 and currently captures around a seven per cent share of daily turnover in ASX-listed equities. The Agencies have also considered the contestability of *settlement* in the Australian cash equity market. Competition in the clearing or settlement of other market segments is out of scope for this work.

2.1 The Legislative Framework

The licensing regime for CS facilities in Australia is outlined in Part 7.3 of the Corporations Act. A licensing regime for CS facilities was first proposed in the *Financial Markets and Investment Products – Promoting Competition, Financial Innovation and Investment* (known as CLERP 6), which was the government's response to recommendations from the 1997 Financial System Inquiry (the Wallis Inquiry).¹ The objectives of CLERP 6 were to:

- remove unnecessary distinctions between financial products
- increase competition through having a competitively neutral regulatory regime
- facilitate product innovation
- reduce compliance costs
- ensure consistent consumer protection.²

The intention of facilitating competition is embodied in the use of broadly stated licence criteria, which are designed to be sufficiently flexible to accommodate different market structures. The intention of facilitating competition, including between multiple clearing and settlement service providers, was explicitly mentioned

¹ CLERP 6 is available at <<http://archive.treasury.gov.au/documents/286/PDF/full.pdf>>. The Wallis Inquiry's final report is available at <<http://fsi.treasury.gov.au/content/FinalReport.asp>>.

² The Treasury (1999), 'Financial Products, Service Providers and Markets – An Integrated Framework', 3 March, p56. Available at <<http://archive.treasury.gov.au/documents/196/PDF/round4.pdf>>.

in the Explanatory Memorandum to the *Financial Services Reform Bill 2001*, which inserted Part 7.3 in its current form into the Corporations Act.³

The legislation was drafted at a time when traditional market structures were beginning to face competition from international exchanges and innovative market facilities.

Prior to 2001, competition in clearing and settlement between ASX and Sydney Futures Exchange (SFE) was precluded by market operator rules that required products to be cleared by an in-group clearing facility. This arrangement, which constituted 'third line forcing' under the *Trade Practices Act 1974* (as it then was), had been authorised by the ACCC in 1995 for a period of five years. In November 2000, both ASX and SFE applied for that authorisation to be renewed. However, acknowledging the intent of the CLERP 6 work, ACCC determined that authorisation would be extended only for one year. In a 2000 discussion paper, authors from the Bank and industry noted the international trend towards consolidation, including the cross-border provision of services, and considered the possible outcomes of removing actual or prospective impediments to competition.⁴ The paper focused on the possibility of competition between CS facilities owned by the SFE and ASX. Possible outcomes of a competitive environment were compared against an optimal 'clean sheet' market structure. The report suggested that the most efficient market structure might be a single, unified system for clearing and settling all securities, since this would maximise economies of scale. Nevertheless, the report left it to the market to determine the outcome. Three possible paths were identified:

- no effective competition eventuates between the clearing and settlement systems operated by SFE and ASX;
- effective competition continues indefinitely (although the stylised model of competition analysed in the paper suggests this outcome is unlikely); or
- a single system emerges from competition.

Faced with the prospect of competition in clearing, and in light of broader consideration of the costs associated with duplication of infrastructure, a merger of the SFE and ASX groups was contemplated. This ultimately occurred in July 2006.

More recently, the Australian Government report, *Australia as a Financial Centre: Building on Our Strengths* (the Johnson Report), noted that 'openness to new entrants is an essential condition for competition, efficiency and innovation'.⁵ Consistent with a recommendation of the report, the emergence of competition between market operators offering trading in ASX securities has been seen as a catalyst for lower trading costs and increased innovation.

2.2 The Existing Market Structure for Clearing and Settlement in Australia

To date, there has been no effective competition in the clearing and settlement of ASX-listed equities. Prior to 1998, ASX and SFE were separate, mutualised entities. Between them, ASX and SFE controlled all of the major CS facilities (except for the Reserve Bank Information and Transfer System (RITS), which at that time was also

3 Available at <http://www.austlii.edu.au/au/legis/cth/bill_em/fsrb2001252/memo1.html>. See in particular Chapters 2 and 8.

4 See Hall, Hamilton, Veale and Payne (2000), *The Future of Clearing and Settlement in Australia* March. Available at <<http://www.rba.gov.au/payments-system/resources/publications/payments-au/future-clearing.pdf>>.

5 See Australian Centre Forum (2009), *Australia as a Financial Centre: Building on our Strengths*, Final Report, November. Available at: <http://archive.treasury.gov.au/afcf/content/final_report.asp>.

used to settle transactions involving government securities). ASX owned the only CS facility for cash equities and also provided a clearing facility for derivatives referencing securities listed on its exchange. SFE controlled the clearing facility for all derivatives listed on its exchange, as well as Austraclear Limited (Austraclear), which settles trades involving debt and other fixed income securities. Given the different financial products serviced, ASX and SFE did not compete in relation to trade or post-trade services.⁶

As noted, ASX and SFE have since demutualised, and ultimately merged, bringing all of the CS facilities under one corporate group. Nevertheless, ASX continues to operate four legally separate CS facilities:

- ASX Clear, which provides CCP services for a range of financial products traded on the ASX market, including cash equities and equity options.
- ASX Settlement, which provides for the settlement of equities and other deliverable products traded on the ASX market.
- ASX Clear (Futures) Pty Limited (ASX Clear (Futures)), which provides CCP services for derivatives traded on the ASX 24 market (formerly SFE), including futures and options on interest rate, equity, energy and commodity products.
- Austraclear, which offers securities settlement services for trades in debt securities (including government securities, which are no longer settled in RITS).

Currently all ASX securities are cleared by ASX Clear and settled through ASX Settlement; there are currently no other facilities providing clearing or settlement of Australian cash equities. Although these two entities are legally separate, they are operationally integrated, with clearing and settlement of ASX securities occurring through a shared operating system, CHES. The integration between ASX Clear and ASX Settlement has also been reflected in fee structures, with a settlement fee for transactions cleared through ASX Clear only being proposed from the start of 2013.

Until recently, ASX represented a vertically integrated silo from trading through to settlement. In response to the prospect of alternative trade execution facilities for ASX securities, ASX developed the TAS. The TAS allows trades executed on approved market operators' platforms to be submitted to ASX Clear and ASX Settlement using CHES. ASX makes the TAS available under a published set of contractual terms of service. Each market operator is required to periodically certify that it is compliant with these terms. Any failure to comply must be notified immediately to ASX Clear and ASX Settlement, and may trigger suspension. Currently, trades on the market operated by Chi-X are cleared and settled by ASX Clear and ASX Settlement, respectively, via the TAS. The National Stock Exchange of Australia also uses the TAS to submit trades to ASX Settlement, though these trades are not novated to ASX Clear. ASX Settlement also provides a transfer service for the delivery of securities traded on the Asia Pacific Exchange and the SIM Venture Securities Exchange. The transfer service is provided under the published contractual terms of service outlined in a Transfer Service Agreement.

Under current arrangements, trades in 'on-market' ASX securities are submitted to CHES; after validation, trades are novated to ASX Clear. As a result of novation, ASX Clear becomes the buyer to every seller and the seller to every buyer, allowing participants to net these exposures. Settlement of on-market trades occurs three business days after the date of trade (T+3) through ASX Settlement.

⁶ See ACCC (2006), *Public Competition Assessment: Proposed merger between Australian Stock Exchange Limited and SFE Corporation Limited*, 7 July. Available at <<http://www.accc.gov.au/content/item.phtml?itemId=760733&nodeId=afdfcb312ad2b3af1ebaa1014597102&fn=Australian%20Stock%20Exchange's%20proposed%20acquisition%20of%20SFE%20Corporation%E2%80%947%20July%202006%E2%80%94Finance%20and%20investment.pdf>>.

ASX Settlement uses a Delivery versus Payment (DvP) 3 model of settlement. This involves the simultaneous transfer of net payment and net securities obligations between buyers and sellers at the end of the settlement cycle. These net obligations also include 'off-market' trades (i.e. bilaterally negotiated trades that are not novated to ASX Clear), primary market activity (such as initial public offers), and non-ASX securities traded on alternative platforms. As the outcome of this process, ASX Settlement participants face a net cash settlement obligation to or from ASX Settlement and a net securities settlement obligation in respect of each line of stock. Once participants' net obligations have been calculated, ASX Settlement confirms that sufficient securities are available in each participant's securities account in CHES. The transfer of securities within the system is then restricted until the settlement process has been completed. Net cash payment obligations are forwarded for settlement in RITS, across Exchange Settlement Accounts (ESAs). Once cash settlement has been confirmed, ASX Settlement effects the net transfer of securities within CHES. See Appendix A for a more detailed explanation of the current arrangements.

2.3 The Agencies' Discussion Paper

The first phase of the Council's current work was completed in the first half of 2012, with the publication of a discussion paper on 15 June. Submissions from interested stakeholders were invited by 10 August.

Since existing legislative settings envisage multiple providers of clearing services, the discussion paper took openness to competition as the starting point for its analysis, presenting a preliminary assessment of the potential implications of competition for the Agencies' responsibilities: the effective functioning of markets (ASIC), financial stability (the Bank), and competition and access (ACCC). The Agencies sought feedback on possible policy responses that might allow the benefits of competition to be pursued while managing any adverse consequences. In particular, the discussion paper drew out the following:

- *Market functioning.* Competition between CCPs could have implications for the functioning of the market for ASX securities, with potential inefficiencies arising from un-netting, liquidity fragmentation and duplication in operational costs. One possible response to these issues would be to introduce interoperability between CCPs, such that the two sides of a trade could be cleared via different CCPs. This would potentially allow a participant to clear trades executed across multiple trading venues via a single CCP, thereby avoiding the cost of multiple connections.⁷
- *Financial stability.* A number of potential stability considerations also arise. One fundamental concern is that CCPs may compete on the basis of less stringent risk controls. Another is that any exit of clearing providers in a competitive environment implies some potential for market disruption. The discussion paper also raised the possibility of risks arising from financial interdependencies between competing CCPs within the settlement process.
- *Competition and access.* The discussion paper also noted the possibility of an 'essential facilities' scenario arising from the existing market structure. That is, assuming that settlement remained a monopoly service, any new entrant provider of clearing services would require effective access to the vertically integrated settlement facility.

⁷ Interoperability is discussed further in Section 4.3.

The Agencies received 16 written submissions in response to the discussion paper. These written submissions were complemented by a number of meetings with respondents and other interested stakeholders.⁸ The Agencies sought meetings with each stakeholder that provided a written submission, and also sought meetings with other parties who did not provide written submissions but who the Agencies felt had important perspectives on the issues under consideration.

⁸ Non-confidential written consultation responses were received from ABN Amro Clearing, Australian Financial Markets Association, Asia Pacific Stock Exchange, ASX Limited, CCZ Statton Equities Pty Ltd, Chi-X Australia Pty Ltd, Commonwealth Securities Limited, Computershare, GetCo, and LCH.Clearnet Ltd. Face-to-face meetings or conference calls were held with these respondents, in addition to: Australian Investment Exchange Ltd, CBA Equities Ltd, National Stock Exchange of Australia, UBS Securities Australia Limited, Citigroup, Financial Services Council, Australian Custodial Services Association, Australian Council of Superannuation Investors, Colonial First State Global Asset Management, Stockbrokers Association of Australia, Australian Shareholders Association, and one party who preferred to remain anonymous.

3. Competition in Clearing: Stakeholders' Views

Given the prevailing legislative settings, which envisage multiple providers of clearing services, the focus of the discussion paper was primarily on the implications of competition for stability and the effective functioning of markets and the potential regulatory measures that might need to be taken to ensure that competition could occur in a safe and effective way. While there was useful input on these matters (see Section 4), many respondents to the consultation also expressed strong views on the broader case for competition.

Most respondents to the consultation viewed cash equity clearing as contestable, as demonstrated by the emergence of competition in Europe and genuine interest from prospective providers of CCP services in the Australian market. The core settlement function, by contrast, was widely seen as being optimally delivered by a single provider.⁹ Indeed, it was suggested that there could be further consolidation in the ancillary registry function. Several respondents were strongly in favour of competition in clearing, citing the following benefits:

- *Lower clearing fees.* Some respondents argued that Australia had higher clearing fees than in many overseas cash equity markets, particularly those in which competition in clearing had emerged. There was therefore thought to be considerable scope for clearing fee reductions. According to an in-depth study of the European market (Oxera, 2011),¹⁰ there were significant falls in clearing fees of between 7 and 59 per cent across European CCPs, on a per transaction value basis, over the period between 2006 and 2009 when competition in clearing first emerged. If competition emerged from an overseas-based CCP, some international participants also perceived significant cost savings arising from the ability to leverage synergies with their international business.
- *Increased innovation and user responsiveness.* Those in favour of competition argued that competition would encourage increased innovation, spurring increased investment in the clearing and settlement infrastructure to meet the evolving needs of the Australian financial system and promoting adherence to global best-practice standards. It was observed that competition in trading had encouraged innovation in trading products, and therefore competition in clearing could similarly be expected to foster innovation. Further, should competition encourage greater responsiveness to users and increased investment in the clearing and settlement infrastructure, additional financial benefits might accrue over time.¹¹ Several

⁹ Some settlement-related functions might, however, be contestable (see Section 4.1.3).

¹⁰ Oxera (2011), *Monitoring prices, costs and volumes of trading and post-trade services*, May. Available at <http://ec.europa.eu/internal_market/financial-markets/docs/clearing/2011_oxera_study_en.pdf>.

¹¹ Not all respondents saw innovation as necessarily being a material benefit to all industry participants. One buy-side stakeholder, for instance, expressed concern that innovation itself may come with costs, and that these costs may be borne by participants who do not realise the corresponding benefits. Furthermore, as the earlier discussion paper noted, while competition may deliver benefits, the entry of additional CS facilities to a market such as that for ASX securities could bring about significant changes in the operating environment for banks, securities dealers, issuers and investors. Other sources of innovation in financial markets have given rise to policy concerns – for instance, around increased use of automated trading and complex trading strategies, and the use of dark pools – and have placed strain on market participants and investors in keeping up with change.

stakeholders, including both participants and market operators seeking to connect to the incumbent clearing and settlement infrastructure, felt that ASX was insufficiently responsive to users' demands, and did not negotiate on commercial terms. There was also a general sense that there had over the years been insufficient investment in the core CHES architecture, which supports both clearing and settlement functions.

- *Support to competition in trading.* It was argued that, by providing an alternative to the incumbent, competition in clearing would improve the terms of access for competing market operators, allowing the benefits of competition in trading to be more fully realised.
- *Flow-on effects.* It was also recognised that there might be flow-on effects from competition in clearing to the market more generally. While these were difficult to quantify, to the extent that the combination of factors above lowered the costs of participating in the market, it was suggested that the market might over time see increased interest from international investors, deeper liquidity and tighter spreads. More generally, since clearing is an input service, competitive benefits could over time be expected to flow through to related markets and services.

Others were less convinced, arguing that while competition may be conceptually appealing, the case had not yet been made that the benefits of a multi-CCP environment would outweigh the costs. A number of concerns were raised:

- *The scale of the Australian market.* CCP clearing is a scale business and several respondents argued that economies of scale might not be realised if trading flow was fragmented. It was questioned whether evidence of sustainable competition in clearing in Europe was relevant to the Australian context, particularly given that competition in Europe has been largely driven by the cross-border integration of European markets, which provided for economies of scale.
- *Operational costs.* Direct costs to participants might include up-front technology costs, costs of duplicating operational processes, and costs associated with un-netting both participants' CCP exposures and their settlement obligations. These could fall on the industry as a whole, especially given the application of best execution rules. Particularly in an environment of shrinking cash market revenues and expanding technology investment, a number of brokers and end-investors were concerned that sizeable costs might be imposed on the industry, for an uncertain and possibly intangible benefit. Parties felt that the various less-tangible benefits might therefore have to be quite large to outweigh the costs of adjusting to a multi-CCP environment.
- *Costs of regulation.* Particularly in light of the recent introduction of cross-market supervision, and in the absence of details of a prospective supervision model, participants were also mindful of a potential increase in regulatory costs arising from a multi-CCP setting.

The Agencies have considered these issues further, drawing on both stakeholder responses and evidence from overseas markets.

3.1 Clearing Competition in the Australian Context

The cost structure of supplying a clearing service entails high fixed costs and low variable costs. Clearing is a technology-intensive business, requiring significant up-front and ongoing investment in operational capacity to manage position-keeping and risk-management processes, and to ensure continuity of service provision through robust business continuity arrangements. The marginal cost to a CCP of accommodating an additional participant, or processing an additional transaction, is relatively low.

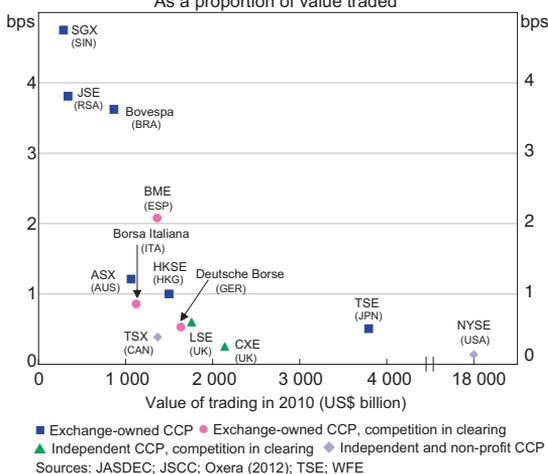
Network externalities and netting benefits are also important considerations. In the absence of interoperability between CCPs (see Section 4.3), a participant can only submit a trade for clearing if it has been executed with another participant of the same CCP. Furthermore, since through novation a CCP becomes the counterparty to every trade that a participant submits for clearing, irrespective of the original counterparty, buy and sell transactions across all of its counterparties are multilaterally netted down to a single exposure per line of stock. The effectiveness of this netting process increases with the number of traders that participate in the CCP and the share of each participant’s transactions that is submitted to the CCP.

The economics of CCP clearing therefore imply a tendency towards relatively few providers in any given market. A given market may, however, be able to support more than one provider where:

- market size is sufficiently large that the fixed costs of providing a CCP service may be shared across a sizable volume of trades;
- competing CCPs can leverage technology and operational capacity that supports clearing services in other products or markets;
- the market is segmented and each provider serves a distinct niche; and/or
- network externalities and netting benefits are preserved through interoperability between CCPs.

These factors may influence a commercial decision by a potential new entrant CCP as to the attractiveness of entering the market to clear Australian cash equities. They may also have implications for the sustainability of competition and the potential for fee reductions should entry occur. By comparison with international markets, the Australian market is relatively small. With a total trading value of US\$1.2 trillion in 2011, the Australian market is less than 4 per cent of the size of the US market, and 10 per cent of the size of the European market. The scale of the Australian market is more comparable to that of Canada, Brazil and Hong Kong, which range between total share trading values of US\$0.9 trillion and 1.5 trillion.¹²

Graph 1
Cost of Trading and Post-trading
As a proportion of value traded



In the financial year ending June 2012, ASX earned revenue from cash market clearing of \$46 million, relative to total cash market revenue (including clearing and settlement) of \$125 million. Notwithstanding the claims of some respondents that Australia is an expensive market in which to trade equities, an international comparison of trading and post-trade fees in Graph 1 suggests that ASX’s fees are broadly comparable to those of other markets of a similar scale. Other factors may also be relevant in comparing trading and post-trade fees across markets, including the intensity of competition at the trading level, the integration of clearing and settlement with trading, and the ownership and governance structure of CS facilities (see Appendix B).

¹² These data are sourced from World Federation of Exchanges statistics on the value of share trading, available at <<http://www.world-exchanges.org/statistics>>.

Nevertheless, if competition were to reduce overall clearing costs by 33 per cent, which as discussed in Appendix B is the average magnitude of per transaction value fee reductions in a sample of European CCPs following the introduction of competition, gross annual cost savings for the industry would be around \$15 million. Indirect savings from innovation or flow-on effects to related markets are more difficult to quantify.

Given the high fixed costs of developing new clearing infrastructure, entry may be most likely to arise from an existing overseas-based CCP seeking to expand its operations into new markets. Such a competitor would be able to leverage existing infrastructure, information technology and personnel to keep down both entry costs and ongoing operational costs. Any new entrant would need to gain market acceptance and then establish and maintain a competitive advantage. An international competitor, for instance, may be able to differentiate itself through new products and services or pricing models, based on its existing overseas offerings.

Many of these matters would be for a new entrant CCP to determine for itself, having regard to its commercial objectives. It is neither the role, nor the intention, of the Agencies to pre-judge commercial decisions of this type.

3.2 Operational Cost Implications for Clearing and Settlement Participants

A number of respondents were concerned that the costs associated with the introduction of competition in clearing might outweigh the potential benefits. Respondents were concerned that there might be large up-front fixed costs associated with upgrades to connectivity, information technology or staff, and ongoing costs associated with duplication in processes and a loss of netting efficiencies. Respondents were also concerned as to how such costs might be distributed among participants. Several sources of potential increases in cost were identified:

- *Best execution.* The best execution obligation requires a market participant to take reasonable steps when handling and executing an order in equity market products to obtain the best outcome for the client.¹³ For a retail client, the best outcome means the best total consideration (which market participants may interpret as best price), taking into account client instructions and including clearing and settlement costs.¹⁴ In an environment with more than one CCP, but without interoperability, the application of best execution rules is relatively clear: participants would either have to establish the capability to clear via either CCP, or else demonstrate that best execution was achieved under their existing arrangements.¹⁵ In principle, the best execution rules also contemplate interoperability. However, additional guidance could be required to clarify how the rules would apply in this environment.
- *Un-netting.* As noted, netting efficiencies can drive concentration in CCP clearing. Un-netting arising from fragmentation of the flow of trades across two CCPs can have a number of cost implications. For instance, costs could increase as the share of trade flow directed to an alternate CCP increased. One respondent estimated that, at a 15 per cent market share for an alternate CCP, these costs could amount to \$20-30 million per annum, distributed across the industry. The particular sources of these costs include:

13 See Competition Rule 3.1.1 of the ASIC Market Integrity Rules (Competition in Exchange Markets). Available at <<http://www.asic.gov.au/asic/ASIC.NSF/byHeadline/Market%20integrity%20rules#competition-mirs>>.

14 Total consideration is defined as the purchase price paid by the client (for a buy order) (i.e. unit price multiplied by volume) plus transactions costs, or the sale price received (for a sale order) (i.e. unit price multiplied by volume) minus transaction costs.

15 Issues such as the exposure of clients, especially retail clients, to the insolvency regimes of offshore clearing participants would need careful consideration and may require additional ASIC guidance or other regulatory action.

- *Exposures and margin obligations.* For a given volume of trade flow, un-netting would lead to an increase in aggregate exposure if trades were distributed across two CCPs relative to the case in which trades were concentrated in a single CCP. Initial margin obligations associated with this exposure would therefore rise commensurately.¹⁶
- *Default fund contributions.* Any direct connection to an alternative CCP would entail an obligation to meet any required participant contributions to the default fund. Again, for a given volume of trade flow, un-netting would be expected to increase the required aggregate size of CCP default resources if trades were distributed across two CCPs.¹⁷
- *Settlement netting.* Depending on the settlement model ultimately applied, it is likely that clearing via multiple CCPs could impact settlement efficiency. One settlement model that might be contemplated (see Section 4.2.2) would involve settlement participants seeking separate payment authorisations and maintaining separate settlement (entrepot) accounts in relation to the flows directed via each CCP. Such a model would limit any financial interdependencies between CCPs generated through the settlement process.
- *Duplication in processes.*
 - *Settlement instructions.* Re-directing a portion of trade flow to an alternative CCP would entail an increase in the total volume of settlement instructions generated across the industry. Maintaining separate settlement entrepot accounts would also increase the complexity of pre-positioning of securities for settlement, with a possible proportionate increase in the possibility of settlement fails.
 - *Operations.* Managing a second work-flow to accommodate an alternate CCP would entail some duplication in operational processes and resourcing, including managing multiple accounts and carrying out reconciliations.
 - *Legal and documentation.* Dual CCP memberships – whether direct or indirect – would necessitate duplication in contractual arrangements, with associated legal and compliance costs.

The competitive offering of a new entrant CCP would need to take into account some of these cost implications in order to be a compelling proposition for market participants. Some of these costs could also potentially be limited or avoided by implementing interoperability between competing CCPs. For instance, most industry participants could avoid costs associated with building and maintaining multiple linkages to CCPs. Interoperability would, however, introduce other cost and risk considerations; these are considered further in Section 4.3.

Although the costs detailed above would be borne initially by a combination of the CCPs themselves, clearing participants and brokers, respondents were generally of the view that costs would ultimately be passed on to end-investors. Buy-side respondents expressed a general concern that any benefits from competition in clearing could be offset by the impact of additional implementation costs or a higher regulatory burden.

¹⁶ ASX Clear does not yet collect initial margin on cash equity exposures, but is developing this capability. This is expected to be in place by June 2013.

¹⁷ ASX Clear does not currently collect paid-up participant contributions to its default fund, relying instead on own funds and a subordinated, defeasing loan from a commercial bank.

3.3 Regulation of a Multi-CCP Environment

Some respondents suggested that significant regulatory change could be required in a multi-CCP environment, analogous to the changes that were introduced at the time of the introduction of market competition in 2010, when ASX's market supervision function was partly transferred to ASIC. Together with significant staff and resources, ASIC took on a new function of writing market integrity rules to govern the conduct and operation of market operators and market participants, to sit alongside market operators' rulebooks. In particular, respondents queried whether a similar supervisory approach would need to be taken by ASIC (and the Bank) in a multi-CCP environment, and if so, how this might be implemented and funded. One stakeholder suggested that there were potential arguments for supervision by ASIC and the Bank in the areas of default management arrangements, capital requirements, client agreements and the establishment of agreements between CCPs. This respondent also outlined a potential case for ASIC to be given the power to write a form of 'clearing integrity rules' for CCPs.

The Agencies' preliminary view is that the case for ASIC and the Bank to assume a supervisory role in respect of the conduct of CCPs and their participants in a multi-CCP environment would hinge on the level of additional regulatory risk introduced by allowing competing CCPs to continue independently supervising their respective participants. At this stage the Agencies do not consider that a strong case has been made that a transfer of supervision would be necessary, particularly since in contrast to trading platforms, CCPs' supervision of participants is an integral element of the management of the financial risk CCPs assume as principal. The Agencies acknowledge, however, the need to ensure that the regulatory settings remain appropriate for the prevailing market structure, and would seek to clarify this position in good time ahead of any competition.

4. Safe and Effective Competition

The existing legislative framework envisages multiple providers of clearing services, and accordingly, the discussion paper took openness to competition as the starting point for its analysis. The Agencies have examined actions that might need to be taken, should competition emerge, to address the various issues identified in the discussion paper relevant to each agency's specific responsibilities. Such actions may be cast in terms of 'minimum conditions for safe and effective competition'; that is, conditions that would ensure that CCP competition did not have adverse implications for financial system stability or the effective functioning of markets.

This section summarises stakeholders' views on the matters raised in the discussion paper specifically related to each agency's regulatory responsibilities. It goes on to articulate a set of minimum conditions for safe and effective competition.

4.1 Safe and Effective Competition: Stakeholders' Views

4.1.1 Market functioning

Many respondents to the consultation agreed with the proposition in the discussion paper that the emergence of competition could potentially give rise to changes in the participation structure arising from the uneven distribution of operational costs.

A particular concern in relation to the participation structure was the likelihood that costs would be imposed on all market participants, irrespective of the benefits they expected to derive from competition in clearing. As noted in Section 3, best execution rules currently require market participants to consider the net benefit to clients of accessing multiple exchanges. If competing exchanges were served by different CCPs, with no interoperability, market participants would need to consider whether best execution would be achieved by accessing a competing CCP even if they ultimately cleared little or no business through that CCP. Overall, therefore, at least some participants in the industry could face higher operational costs, and costs associated with accessing a competing CCP, for little direct benefit. Some also expressed concern at the potential for segmentation of liquid and illiquid securities between trading venues, which would have important implications for the profile of exposures to be managed by each CCP. There were, however, mixed views as to the probability of this risk crystallising.

Interoperability was widely regarded as a potentially effective means of reducing the operational costs of adjusting to a multi-CCP setting, and avoiding material changes in the participation structure of the market. It could also help to address possible liquidity fragmentation. Some respondents to the consultation noted, however, that in Europe it had taken several years to implement interoperability between CCPs. This reflected not only the time taken for interoperating CCPs to conclude commercial negotiations, but also the time taken

for CCP regulators to gain a degree of comfort with the risk management of inter-CCP exposures arising from such arrangements (see Section 4.3).

4.1.2 Financial stability

Respondents to the consultation generally took the view that competition in clearing was unlikely to lead to a 'race to the bottom' on risk management standards. It was observed that market participants would not use a CCP that was perceived to have weak risk controls. Furthermore, the prevailing regulatory framework, including assessment against internationally consistent financial stability standards, was seen to be adequate to mitigate the risk of a weakening of CCPs' risk controls. Nevertheless, a high level of supervisory vigilance was seen to be necessary, particularly where a competing provider was operating from overseas.

In this regard, there was broad-based support for application of the Council's framework for ensuring adequate regulatory influence over CS facilities with cross-border operations. As foreshadowed in the discussion paper, many stakeholders considered it most likely that competition would involve the entry of a CCP already clearing cash equities in an overseas market. This could give rise to additional regulatory challenges, as acknowledged in the Council's review of FMI regulation in October 2011. Most respondents acknowledged the need for a graduated approach to ensuring adequate influence, depending on the systemic importance and domestic connection of the CS facility, although one respondent argued strongly that in the case of the cash equity market, domestic incorporation and offshore outsourcing restrictions should apply from the outset. Further, there should be clarity and transparency as to the triggers for escalation of measures under the framework.

Issues around mitigating financial stability risks in the settlement process in a multi-CCP environment also attracted mixed views. Several respondents stressed that CHESS serves the industry well and that competition in clearing should not be allowed to compromise the netting and operational efficiencies in its design. Some respondents noted that if a competing CCP had lower priority in default management than the incumbent, its business proposition would not gain market acceptance. Others took a different view, suggesting that access to ASX Settlement via a commercial settlement bank should suffice, particularly if a competing CCP had a low market share. Indeed, this model has been widely used by CCPs in the European context.

It was, however, clear that to achieve 'material equivalence' in settlement models for competing CCPs, and to mitigate potential interdependencies between CCPs settling in the same multilateral net batch, would require fundamental changes. Such changes could be costly and would most likely require a relatively long lead time for implementation.

There was greater consensus among stakeholders on the potential for market disruption arising from entry and exit of CCPs in a competitive environment. It was generally agreed that mitigating actions, such as a notice period for any planned exit, and *ex ante* capital commitments, should be considered. Several respondents also noted that the introduction of interoperability could introduce additional risks, which would need to be carefully understood and managed.

4.1.3 Competition and access

A number of respondents to the consultation expressed strong views on issues around competition and access.

The discussion paper raised the issue of the contestability of settlement services for cash equities. The paper noted that in overseas equity markets, despite the emergence of competition at the trading and clearing levels, settlement functions typically continued to be performed by a single entity. The paper also noted that an advantage in having a single settlement facility is that it can maintain a central record of title to securities.

The Agencies' preliminary view was that there may be less scope for competition in relation to the settlement of securities than in relation to clearing. Responses to the discussion paper generally supported this view, particularly in the short to medium term. Some parties did not, however, rule out the possibility of some competition in the settlement space, particularly over the longer term. More significantly, several stakeholders saw a need to unpack the concept of 'settlement services', to define more specifically which of those services may be contestable in Australia. It is possible that particular services provided by CHESSE could be susceptible to competition (or increased competition), particularly over the long term, including from custodian banks offering corporate actions services (e.g. dealing with dividends or rights issues) and settlement across their own books.

The Agencies take the view that, in a conceptual sense, the core settlement function is the transfer of title. In connection with ASX-listed securities, this function is performed by only one party, ASX Settlement, via the electronic platform CHESSE. In essence, electronic messages sent via CHESSE effect the transfer of title between participants. Other services also occur via CHESSE in connection with this 'title transfer' function and include corporate actions processing, sub-registry services and payment facilitation.

The extent to which any of these functions are, or may be, characterised as 'core functions' or 'contestable' and susceptible to competition, is open to debate. For instance, in relation to sub-registry services, it is clear that the CHESSE sub-register is not the sole record of title for ASX-listed securities. Instead, the complete record of title is held across the CHESSE sub-register and issuer-sponsored sub-registers. This contrasts with other jurisdictions where the title transfer function is performed by an entity that is also the sole repository of title, and is therefore a central securities depository (CSD) in the traditional sense. Given existing arrangements in Australia, CHESSE is not strictly a CSD. Issues of market definition and service description would be important considerations under sections of the *Competition and Consumer Act 2010*, which parties could in the future seek to invoke. The particular facts and circumstances of each case would be highly relevant, and it is not the intention of the Agencies to pre-judge any particular outcome from such proceedings.

Fundamentally, it is clear that CHESSE is a strategically significant part of Australia's financial market infrastructure. A broad spectrum of market participants, either directly or indirectly, are connected to or reliant upon CHESSE, including brokers, fund managers, institutional investors and market operators. As a result, CHESSE exhibits significant network effects. There is a degree of customer stickiness around the use of CHESSE; market participants are very familiar with the system, having used it for many years, and many participants and service providers have implemented bespoke IT systems to interface with CHESSE. Indeed, given that the CHESSE messaging protocol is unique to Australia, these IT systems have some CHESSE specificity. CHESSE is generally seen as an efficient and effective system; the integrated nature of the system may itself be a source of efficiency. There would therefore most likely be considerable barriers to any alternative operator seeking to enter the Australian market to replicate the suite of services provided by CHESSE.

Given that ASX is expected to remain the sole provider of core settlement services, and that access to ASX Settlement would be necessary to enable CCP competition, most respondents commented on the possibility of access being frustrated and competition being undermined. Parties felt that this could occur in several ways, such as via the imposition of non-commercial terms of access (both price and non-price), or delays in establishing access arrangements. A key concern was also that settlement costs could rise to offset any reduction in clearing fees, undermining any price benefit from competition in clearing. Stakeholders responding on behalf of end-users were particularly vocal on this point and more generally expressed the view that the benefit of clearing fee reductions might not be passed on.

The Agencies were therefore encouraged to consider potential regulatory responses. A wide range of options were suggested, such as operating the CHESSE facility as a public utility, re-mutualisation, and regulating access and prices for the non-contestable services offered by ASX. Some respondents argued that the regulators should consider introducing a mechanism for user governance of ASX's CS facilities.

Relatedly, the consultation revealed some concerns around the level of ongoing investment in CHESSE. While regarded by many stakeholders as being efficient and effective, it was noted by some that CHESSE was an ageing system and in need of an upgrade. The design of CHESSE was also seen as idiosyncratic to the Australian market, meaning participants needed to make CHESSE-specific investments to operate in the Australian equity market, thereby limiting the scope to leverage efficiencies from operational processes in other international markets. One such investment related to the Australia-specific nature of the messaging protocols used by CHESSE. Usage of the SWIFT protocol in many overseas jurisdictions allows international companies to leverage existing IT systems to connect with FMI's in new markets. The uniqueness of the CHESSE protocols may be an impediment to parties seeking to participate in Australian markets. The Agencies were encouraged to give consideration to how sustained and ongoing investment in CHESSE might best be achieved, with greater responsiveness to user requirements seen as necessary to create a more effective system.

4.2 Minimum Conditions for Safe and Effective Competition

Based on consideration of the issues set out above, as well as additional analysis carried out by the Agencies, a number of minimum conditions for safe and effective competition may be identified.

1. ***Adequate regulatory arrangements.*** To ensure that competition did not compromise financial stability or market functioning, appropriate regulatory arrangements should be in place. These should include:
 - (a) rigorous oversight against new financial stability standards and other requirements under the Corporations Act;
 - (b) application of the Council's framework for regulatory influence over cross-border CS facilities, with a competing CCP based overseas required to incorporate locally once it had hit a certain market share of cleared values in the Australian cash equity market;
 - (c) *ex ante* wind-down plans, supported by commitment to a notice period of no less than one year prior to any planned exit, and additional capital sufficient to cover one year of operating expenses, calculated on a rolling basis; and
 - (d) a competing CCP should also contribute to cross-market arrangements to ensure continued provision of clearing services for less liquid securities.
2. ***Appropriate safeguards in the settlement process.*** The cash equity settlement model applied in an environment with multiple CCPs should seek as far as possible to preserve the efficiencies of the existing model, while:
 - (a) affording materially equivalent priority to trades from a competing CCP;
 - (b) minimising financial interdependencies between the competing CCPs; and
 - (c) facilitating appropriate default management actions.

- 3. Access to the existing securities settlement infrastructure on non-discriminatory and commercial terms. Given that competition in the provision of settlement services is unlikely to emerge, a competing CCP would require access to the vertically integrated incumbent settlement facility, ASX Settlement. For competition to be effective, such access would need to be made available on non-discriminatory and commercial terms.**

As noted, several stakeholders also called for enhanced mechanisms for user input to the ongoing development of the settlement infrastructure, so as to ensure that its design and functionality continued to meet participants' needs. While this is not specific to the issue of competition in clearing, the Agencies agree that there is a strong case for such mechanisms.

Each of the minimum conditions identified above is considered in greater detail in the remainder of this section.

4.2.1 Adequate regulatory arrangements

(a) Rigorous oversight against new financial stability standards and other requirements under the Corporations Act

Under the Corporations Act, ASIC and the Bank have co-regulatory responsibility for CS licensees. Within this arrangement, the Bank has the power to determine FSSs and to report to the Minister at least annually on licensees' compliance with the FSSs, as well as on whether licensees are doing all other things necessary to reduce systemic risk. The Bank recently determined new FSSs aligned with the CPSS-IOSCO *Principles for financial market infrastructures* that establish a higher benchmark for the risk management and operation of CS facilities.¹⁸ ASIC has similarly revised its *Regulatory Guide 211 Clearing and settlement facilities: Australian and overseas operators* (RG211).¹⁹ It is the Agencies' view that equivalent application of the revised oversight standards across competing CCPs would be sufficient to limit any scope for competition on the basis of less onerous risk controls. Nevertheless, the Agencies acknowledge the need for close vigilance at the margins of the standards, including cost-cutting measures and product-development processes.

(b) Application of the Council's framework for regulatory influence over cross-border CS facilities

Since it is likely that any competing CCP would be seeking to leverage existing capabilities in other cash equity markets internationally, it would be important to apply the Council's framework for ensuring adequate regulatory influence where a licensed facility had cross-border operations. In July 2012, the Council articulated an approach to regulating cross-border CS facilities, including incremental measures depending on the nature and characteristics of a facility's activities in Australia. The Bank's new FSSs and ASIC's revised RG211 are the principal vehicles for implementing these measures, with some legislative change also recommended to provide certainty to the exercise of the triggers. Perhaps most relevant here are requirements for CS facilities deemed to have a *strong domestic connection*. Such facilities would be required to hold a domestic CS facility licence (and hence submit to primary regulation by Australian regulators) and would face restrictions on offshore outsourcing of critical functions, including systems, data and staffing. Such facilities may also be required to establish a domestic legal presence.²⁰

18 CPSS-IOSCO (2012), *Principles for financial market infrastructures*, April. Available at <<http://www.bis.org/publ/cpss101a.pdf>>

19 Consultation paper available at <<http://www.asic.gov.au/asic/asic.nsf/byheadline/12-221MR+ASIC+consults+on+amendments+to+clearing+and+settlement+facilities+guidance?openDocument>>.

20 Council of Financial Regulators (2012), *Ensuring Appropriate Influence for Australian Regulators over Cross-border Clearing and Settlement Facilities*, July. Available at <<http://www.treasury.gov.au/ConsultationsandReviews/Submissions/2012/cross-border-clearing>>.

Assuming a new CCP initially gained a market share of clearing equivalent to the (on-market) trading market share of Chi-X (Graph 2), with the prospect of continued growth, it could soon become integral to the functioning of the Australian cash equity market. Therefore, on the basis of the framework articulated by the Council, it might soon be regarded as having a strong domestic connection.

More generally, in the case of the Australian cash equity market, a number of factors argue in favour of setting the threshold for application of the requirement to establish a domestic legal and operational presence at a relatively low level:

- the importance and profile of the Australian cash equity market
- the central role of the Australian cash equity market in the Australian financial system
- the high level of retail participation in the Australian cash equity market
- the connections that a competing CCP would have to other components of the domestic financial market infrastructure.

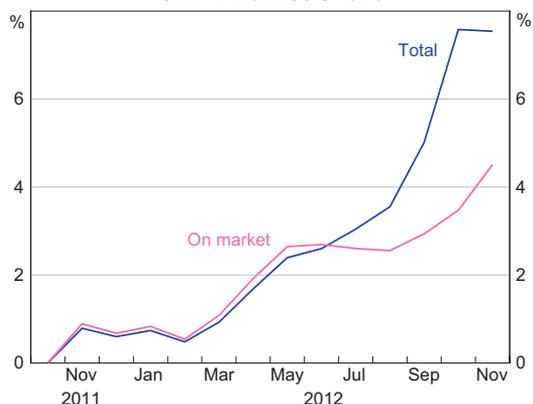
The level of the threshold or other allied arrangements could also be expected to take account of stakeholder expectations as to the handling of client monies related to Australian equity trades. The precise threshold would be discussed and agreed with any competing CCP. The threshold would also be made transparent to market participants, market operators and ASX Clear, so as to ensure that all stakeholders were able to formulate business plans with certainty.

(c) Ex ante wind-down plans and associated commitments

The discussion paper noted that a multi-CCP environment for clearing services could involve both entry and exit of CCPs, noting that any exit would necessarily disrupt the segment of market activity that it cleared. For example, participants of an exiting CCP would need to make alternative clearing arrangements, imposing costs and creating uncertainty. Moreover, if the CCP provided the only clearing facility for a given trading platform, its exit would necessarily disrupt activity on that platform. The discussion paper suggested two possible mitigants: (i) CCPs wishing to clear ASX securities could be required to commit *ex ante* to a specified notice period prior to any planned exit from the market; and (ii) such commitments might be supported by setting aside some capital to cover the notice period. In a similar vein, it was noted that *ex ante* plans could be made to ensure continued provision of clearing services for less liquid securities in the event of the exit of the incumbent CCP for those securities.

The Agencies see a case to include such measures among the minimum conditions. In particular, a notice period of at least one year should be given ahead of any planned exit by a CCP. This should be supported by ring-fenced capital sufficient to cover operating expenses for the notice period, calculated on a rolling basis, as well as clearly articulated wind-down plans which would be discussed with ASIC and the Bank. Such requirements could potentially be imposed through licence conditions.

**Graph 2
Chi-X Market Share**



Source: ASIC

CCPs are familiar with such requirements, with similar provisions included in existing UK requirements for recognised clearing houses and investment exchanges, as well as in new European regulations for FMIs and the *Dodd-Frank Wall Street Reform and Consumer Protection Act* in the United States. The CPSS-IOSCO *Principles for financial market infrastructures* also set requirements for orderly wind-down. Principle 15 on general business risk requires that 'at a minimum, a financial market infrastructure should hold liquid net assets funded by equity equal to at least six months of current operating expenses'. Principle 15 is reflected in the new Standard 14 of the FSSs for CCPs. The minimum condition stated here extends the timeframe for orderly wind down envisaged in the international principle. This reflects that the minimum condition is intended to provide for planned exit, while the international principle seeks to protect against exit due to the crystallisation of business risk.

Further, the Agencies would work with competing CCPs and relevant market operators to establish *ex ante* contingency arrangements to ensure continued provision of clearing services for less liquid securities in the event of the exit of the incumbent CCP for those securities.

4.2.2 Appropriate safeguards in the settlement process

As described in Section 2.2 and Appendix A, settlement of most transactions in ASX securities occurs in a single daily batch process run by CHES, the core clearing and settlement engine employed by ASX Clear and ASX Settlement. These settlement arrangements have been in place for many years, and are generally regarded as highly efficient and effective.

Some stakeholders suggested that a 'settlement agent' model could be used to accommodate a competing CCP. Under such a model, a competing CCP would submit novated trades as bilateral settlement instructions via a settlement participant of ASX Settlement, rather than via a direct feed equivalent to that of ASX Clear. A model on these lines was established for trades executed on the now non-operational Chi-East platform and cleared by LCH.Clearnet Limited. Such arrangements are also relatively widely observed in European markets where competing CCPs have sought access to multiple securities settlement facilities across the region. While the arrangement for Chi-East was ultimately never used, it demonstrates a model by which access to settlement services provided by CHES could feasibly be provided relatively quickly and at low cost.

A settlement agent model could, however, present financial stability risks for the Australian market if the share of trades cleared by the alternative CCP became relatively large. It would place a high level of reliance (both financial and operational) on the commercial settlement bank that acted as the conduit to ASX Settlement. In addition, and on the basis of the current design of the settlement model in CHES, it would afford the competing CCP a lower priority than ASX Clear in the settlement algorithm and in default management scenarios. This would not only be a concern from a regulatory perspective, but may also be unacceptable to many participants.

The Agencies therefore see a case to set minimum conditions around the design of the settlement model, ensuring that as far as possible it preserves the efficiencies of the existing model, while affording material equivalent priority to a competing CCP. It should also minimise financial interdependencies between CCPs in the settlement process and facilitate appropriate default management actions.

The Agencies consider that, if competition were likely to emerge, it would be appropriate for ASX to initiate an industry dialogue to design a settlement model that met these criteria, perhaps building on the high-level

discussion of alternative settlement models in ASX's submission to the Agencies' consultation.²¹ A possible model might include the following features:

- A single net settlement batch, with a single delivery obligation per line of stock and single multilateral net settlement of funds. This would preserve the efficiencies of the existing single batch settlement process, which the Bank concluded was desirable in its *Review of Settlement Practices for Australian Equities* in 2008.²²
- Separate payment authorisations and separate settlement (entrepot) accounts. To minimise financial interdependencies between CCPs, and in particular to enable ASX Settlement to identify to which CCP a payments default or failed stock delivery should be allocated, settlement participants could be required to maintain separate securities accounts and separate payment authorisations for each CCP. Notwithstanding that final settlement would entail a single delivery per line of stock and a single payment flow, settlement participants would need clear and identifiable access to sufficient stock to meet delivery obligations to each CCP independently, as well as authorisation from money settlement agents that funding obligations to each CCP could be met independently.

While such arrangements would meet the criteria set out in this condition, they would necessarily result in some loss of efficiency compared to the current model. Since securities for delivery would need to be pre-positioned in the appropriate accounts prior to settlement, there would be some un-netting of delivery obligations and potentially an increase in securities borrowing and lending activity ahead of settlement. It may also be necessary for settlement participants to seek increased credit limits with money settlement agents. These potential consequences would need to be fully considered by the Agencies prior to an alternative settlement model being introduced.

4.2.3 Access to ASX Settlement on non-discriminatory and commercial terms

Given the lack of an existing alternative provider of settlement services, and the low likelihood of one emerging, access to CHES would be necessary for a new entrant CCP. The discussion paper identified that this may create an 'essential facilities' scenario. That is, where a vertically integrated firm supplies a monopoly service to a related market in which that firm also competes, it may have an ability and incentive to foreclose competition in that related market. This could be manifested in any number of ways, including in discrimination of supply of the service by the monopolist to its downstream competitor.

Given the existing post-trade market structure for cash equities, most respondents noted the potential for access to be frustrated and for competition to be undermined. Some stakeholders reported specific difficulties negotiating access arrangements with ASX, citing examples of delay, non-responsiveness and unreasonable contract terms. Concerns were also raised by many stakeholders that ASX could seek to recoup losses from increased competition in clearing by increasing fees for settlement services or other services in relation to which it faced less competition.

ASX currently offers access to CHES services via a TAS for ASX-listed securities, and via a Transfer Service for CHES-eligible but non ASX-listed financial products. Details of these arrangements are available on ASX's website. Parties have succeeded in concluding contracts with ASX for access to settlement services, including the transmission of trade flow from Chi-X via the TAS and the submission of DvP settlement instructions by

21 ASX (2012), Submission to the Council of Financial Regulators' consultation on competition in the clearing and settlement of the Australian cash equity market, 10 August. Available at <http://www.treasury.gov.au/~media/Treasury/Consultations%20and%20Reviews/2012/Competition%20in%20the%20clearing%20and%20settlement%20of%20the%20Australian%20cash%20equity%20market/Submissions/PDF/ASX_Group.ashx>.

22 See RBA (2008), *Review of Settlement Practices for Australian Equities*, May. Available at <<http://www.rba.gov.au/payments-system/clearing-settlement/review-practices/index.html>>.

participants of the National Stock Exchange of Australia. Respondents suggested that those contracts may not, however, reflect the type of mutually acceptable commercial bargain that could be struck in a competitive environment, nor was the process of negotiating those contracts consistent with experience in more competitive markets.

While the Agencies maintain a preference for commercial negotiations to determine terms and conditions of access, it is recognised that the availability of some form of regulatory oversight or intervention may contribute to more mutually acceptable outcomes.

The National Access Regime in Part IIIA of the Competition and Consumer Act sets out processes by which parties may seek to gain access to services provided by significant infrastructure facilities. One avenue involves 'declaration' of a service, followed by binding arbitration in the event that the parties cannot reach agreement on terms and conditions of access. A party seeking declaration applies to the National Competition Council (NCC), which makes a recommendation to the Minister after consideration of specific statutory criteria. Once a service has been declared, arbitrations are conducted by the ACCC.

To date this avenue has not been pursued in connection with services provided by CHESSE. The NCC has stated that it is not possible to reach a conclusion on whether services provided by CHESSE would be declared in the absence of a specific application. Nonetheless, the NCC has pointed out that the question of whether clearing and settlement services would fall within Part IIIA is not settled as a matter of law, with uncertainty arising from existing case law. Additionally, the NCC has noted that an issue that may arise is whether it would be appropriate for the ACCC to resolve questions relating to access to clearing and settlement services (via an arbitration), rather than the Bank or ASIC.²³

While these issues may not be insurmountable, they suggest that pursuing access to services provided by CHESSE via the declaration/arbitration provisions of Part IIIA may not be straightforward.

The current process has highlighted the interaction between matters relevant to financial stability, market functioning and access. Financial services markets are already subject to extensive regulation, with oversight by ASIC and the Bank. The Corporations Act includes a licensing regime for financial services providers, including operators of clearing and settlement facilities. That Act specifies obligations providers must comply with, and further duties may be imposed via licence conditions. ASIC and the Bank have regulatory functions, including the issuance of regulation and guidance and the setting of FSSs. Issues considered in any access arbitration under Part IIIA would therefore most likely require consultation with ASIC and the Bank. The service provider itself also produces rules and protocols to govern use of the facility (such as the ASX Settlement Rules, with associated Guidance Notes and Procedures). Any access regulation would need to take into account this existing landscape. Indeed, an alternative approach to the generic provisions of Part IIIA could be an access regime tailored to the circumstances of financial markets, taking into account the existing regulatory frameworks. Designing a tailored regime would allow for more appropriate involvement of all relevant Agencies, and could better contemplate the treatment of issues where competition, access, financial stability and market functioning considerations converge.

Based on these various factors, given that ASX Settlement is the only provider of cash equity settlement services, the Agencies consider that access to the CHESSE facility on commercial, non-discriminatory terms is a necessary condition to support competition for cash equity clearing.

²³ NCC (2012), Annual Report 2011-12, pp 25-27. Available at <<http://www.ncc.gov.au/images/uploads/AR1112-001.pdf>>.

4.3 Cost Implications of Minimum Conditions

The Agencies recognise that implementing these minimum conditions could have implications for the commercial decisions of potential entrants around the economic viability of entry to the Australian market, and the nature of any competing services. For instance, it is acknowledged that requiring a CCP to establish a domestic presence at a relatively low market share may limit the capacity of an overseas-based CCP to exploit economies of scale. The Agencies nonetheless consider that establishing such minimum conditions is necessary to support policy objectives around financial stability, integrity and efficiency. Setting out these conditions also clarifies for potential new entrant CCPs what regulatory requirements are to be expected in the Australian context.

The Agencies also recognise that establishing these minimum conditions may entail costs to stakeholders, including market participants and end-users. For instance, the required safeguards in the settlement process would involve significant costs (possibly in the order of several millions of dollars) and a long development timeframe associated with reconfiguration of the settlement model to afford materially equivalent priority to trades cleared through a competing CCP, with likely flow-on effects to participants' internal systems. Additionally, devising and implementing a tailored regulatory response to ensure non-discriminatory access to the settlement infrastructure, should that be required, would involve further time and cost.

Throughout the consultation process, many stakeholders described the magnitude of change already underway, current pressure on information technology budgets and heightened sensitivity to any up-lift in the costs of doing business in current market conditions. Accordingly, they argued that now may not be the appropriate time for changes that will impose further one-off and ongoing costs on industry, even if there was likely to be a net benefit over time.

A number of respondents to the consultation agreed with the proposition in the discussion paper that giving participants of multiple trading venues a choice of clearing through a single interoperable CCP could be a means of mitigating some costs associated with a multi-CCP environment, including the need to establish duplicate clearing connections. Implementing interoperability would, however, take considerable time. Furthermore, interoperability may also give rise to additional complexities and risks which need to be carefully managed by the CCPs concerned, and also fully understood by participants and regulators (see Box A).

As seen in European markets in which interoperability has emerged, the interests of the parties negotiating an interoperability agreement are unlikely to be aligned; it can therefore be difficult to reach mutually acceptable commercial terms without regulatory intervention. Given the complexities and risks involved, the case for any regulatory intervention to facilitate interoperability would need to be considered carefully by the Agencies. Implications for best execution obligations would also need to be examined; in particular, additional guidance would be required to clarify how the relevant rules apply in an environment with interoperable CCPs.

Box A

Interoperability and the European Experience

Interoperability between CCPs allows a participant of one CCP to execute a cleared trade with a participant of another. This makes it possible for a participant to maintain a single CCP membership and transact in multiple markets or financial products which would otherwise require membership of multiple CCPs. Interoperability thereby, in principle, allows participants to avoid duplicating the fixed costs of CCP participation, such as membership fees, technical connections and default fund contributions. Interoperability also allows a participant to concentrate its exposures to a single CCP, maximising the scope for the netting of incoming and outgoing obligations related to its centrally cleared activity.

There are two main challenges associated with establishing effective interoperability:

- *Competing CCPs must negotiate and implement the necessary operational and contractual arrangements.* An incumbent CCP that clears a large share of activity on a given market has little private incentive to establish interoperability with a potential competitor, since interoperability, while beneficial to participants, will necessarily enable that competitor to attract business and market share away from the incumbent. Even if interoperability is ultimately established, a disparity in bargaining power between an incumbent and a new entrant competitor may lead to an agreement on non-commercial terms.
- *Exposures are generated between interoperable CCPs that must be risk managed.* Each interoperable trade establishes a contract between the two linked CCPs, in addition to the contracts established between each participant and its CCP. The risk to the CCPs arising from these exposures must be managed, typically through the exchange of margin between the CCPs and/or the maintenance of additional financial resources.²⁴

Over the past decade, interoperability has been encouraged in Europe as part of wider reforms to promote the integration of financial markets formerly fragmented along national lines. Following a lack of response to calls for more widespread interoperability in the clearing of European equities markets in the early and mid 2000s, regulators raised the prospect of legal reforms to mandate open access between CCPs. To avoid this outcome, in 2006 the industry signed a code of conduct which contained voluntary undertakings to establish interoperability with other signatories upon request (see Box B).²⁵ Ultimately, partly reflecting the misalignment of incentives described above, relatively few of the interoperability links requested under the Code have to date been established.

Recently, however, access obligations between CCPs have been strengthened. New regulations for market infrastructures in Europe state that a CCP seeking entry into an interoperability arrangement with another CCP 'shall be rejected or restricted, directly or indirectly, only in order to control any risk arising from that arrangement or access'.²⁶

24 See Garvin N (2012), 'Central Counterparty Interoperability', *RBA Bulletin*, June, pp 59-68. Available at <<http://www.rba.gov.au/publications/bulletin/2012/jun/bu-0612-7a.html>>.

25 See the *European Code of Conduct for Clearing and Settlement*, available at <http://ec.europa.eu/internal_market/financial-markets/docs/code/code_en.pdf>.

26 Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, Title V, Article 51. Available at <<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:201:0001:0059:EN:PDF>>.

The emergence of interoperability has also been slowed somewhat by European regulators' assessments of the implications for financial stability of networks of linked CCPs. As noted, interoperability creates a contract – and thus a credit exposure – between CCPs. Managing the size of this exposure at any time can be difficult, particularly where trades novated across a link are being executed on an open-offer market. Regulators have to date therefore been cautious in approving interoperability links, and have required CCPs to post conservatively large amounts of collateral against their inter-CCP exposures. For example, in 2009 Swiss regulators identified that an interoperability link with LCH.Clearnet Limited was resulting in excessive inter-CCP exposures for the Swiss CCP, SIX X-clear. Subsequently, in 2010, CCP regulators from the Netherlands, Switzerland and the United Kingdom released a statement acknowledging that interoperability introduces additional risks into the financial system, and presented several conditions that CCPs must fulfil in managing these risks. One of these conditions was that, to cover inter-CCP credit risk, linked CCPs must hold additional (pre-funded) collateral above what would normally be held to mitigate counterparty risk against participants. Given that this collateral is ultimately collected from participants, this diminishes some of the cost-reduction benefits of interoperability.

5. Conclusions and Recommendations

5.1 Conclusions

As a matter of principle, the Agencies are open to competition in financial markets and would expect competition to deliver efficient outcomes in terms of pricing, innovation and user responsiveness. This reflects the existing legislative framework for CS facilities in Australia, which sets out a licensing regime that contemplates multiple service providers. It also reflects a general, underlying policy position that competition is the most effective means of contributing to efficiency, innovation and productivity across the economy.

The Agencies have consulted widely and have listened to the views of all stakeholders. While many stakeholders agreed that, in principle, competition for the clearing of ASX-listed equities could be expected to deliver benefits, there was also scepticism around whether those benefits would outweigh any associated costs. Perceptions about these costs and benefits have been influenced by recent experiences with the introduction of competition for the exchange trading of ASX-listed securities, and the attendant changes to industry and regulatory arrangements. The Agencies are also aware that some views about the costs and benefits of CCP competition in the Australian market may reflect individual commercial interests in the outcomes of the Council's work.

The Agencies recognise that making changes to support CCP competition would involve costs, and that the benefits of competition may not be readily quantifiable. For instance, implementing the required safeguards in the settlement process would entail costs for both ASX and participants, including due to flow-on changes to participants' internal processes and systems. Also, while the direct benefits in terms of reductions in clearing fees appear modest, it is more difficult to gauge the magnitude of other benefits such as from product or service innovation, or flow-through benefits for related markets.

These uncertainties are not, however, reasons to rule out the prospect of competition for the clearing of cash equities entirely. The current legislative settings contemplate competition, and a conclusion that CCP competition should not occur at all would represent a significant change in policy; the scope of the current work has not extended to considering such a fundamental reform.

At the present time, however, the Agencies acknowledge feedback from stakeholders that now may not be the appropriate time for changes that will have further cost implications for industry, especially given current market conditions and existing pressures on participants to cut costs. The Agencies also recognise the magnitude of regulatory changes already underway, not least in relation to Basel III and OTC derivatives clearing and trade reporting.

Recommendation 1: Taking these factors into account, the Agencies therefore recommend that a decision on any licence application from a CCP seeking to compete in the Australian cash equity market be deferred for two years.

Deferring a decision on any licence application from a competing CCP recognises the legitimate industry concerns that have been raised. While it is recommended that a licence decision be deferred, the Agencies' work has nonetheless clarified minimum conditions for a new entrant CCP. The statement of these requirements should inform decision-making by a potential entrant about whether entry to the market is commercially viable.

Postponing CCP competition would, however, defer the benefits that the market might expect from competition in clearing Australian cash equities. For example, by perpetuating a *de facto* monopoly in cash equity clearing and settlement, alternative market operators have no choice of supplier for those essential inputs to their service. In other markets regulatory outcomes are commonly sought in such circumstances. If a decision were taken to rule out entirely the prospect of competition for the clearing (or settlement) of cash equities, a presumption in favour of some form of regulation of ASX's CS facility (notably CHESSE) could arise.

At this point in time, however, the Agencies favour a mechanism that preserves the prospect of competition and/or further regulation, while seeking to address the principal concerns raised by stakeholders in the near term.

Recommendation 2: The Agencies recommend that ASX work with industry stakeholders to develop a Code of Practice for Clearing and Settlement of Cash Equities in Australia (Code). Developing the Code would give industry stakeholders, including ASX, an opportunity to address the issues that have been raised during the Agencies' consultation. In the immediate term, prior to the establishment of the Code, there would be a strong case for ASX to commit publicly to the process by endorsing a set of principles developed by the Agencies to govern the conduct and organisation of its cash equity market clearing and settlement operations. These principles reflect merger conditions and access provisions that have been developed in recent years to govern the conduct of similar integrated market infrastructure providers in other markets, including Canada and Europe, and would form the basis for the Code.

Importantly, these arrangements would apply only in the case of the Australian cash equity market, and would not apply in relation to clearing and settlement services supporting either exchange-traded or OTC derivatives markets or OTC debt markets. Indeed, the Council reiterates its openness to the provision of OTC derivatives services by one or more domestic or overseas-based CCPs, subject to those CCPs meeting all regulatory requirements.

The Agencies see merit in setting ASX a clear timetable to implement the Code. It would seem reasonable to set an expectation that the terms of the Code be finalised within six months. This section sets out some elements that the Agencies would, in accordance with the principles, expect to be included in the Code. It would be strongly preferred that ASX reach agreement on the Code with all relevant stakeholders prior to submission to the Council for approval. An appropriate mechanism would then be established by the Agencies to monitor ASX's adherence to the finalised terms of the Code.

Recommendation 3: It is proposed that, at the end of the two years, the Agencies carry out a public review of the Code's implementation and effectiveness, and ASX's adherence to it. At the same time, the Agencies would review the prospect of granting a licence to a competing CCP, or of pursuing other regulatory outcomes.

These recommendations are discussed further in the remainder of this section.

5.2 The Principles

The Agencies have identified three broad principles that should form the basis for the Code. These have been identified with reference to the key concerns raised by stakeholders during the consultation. As discussed in Section 3, these include:

- *Innovation and user responsiveness.* Notwithstanding that ASX innovates actively and often engages with users through consultation and other fora, a number of respondents saw a need for a regular, formalised mechanism for user input to governance of the cash equity clearing and settlement infrastructure, dedicated to issues around ongoing investment in and the design and development of the infrastructure supporting this market.
- *Clearing and settlement fees.* Many stakeholders felt that ASX's clearing and settlement fees were high by international comparison. Further, there was concern that revenue streams could be shifted between trading, clearing and settlement services, given ASX's vertically integrated structure.
- *Support for competition in trading.* As the sole provider of clearing and settlement services for cash equities, ASX's vertically integrated structure was seen as a potential barrier to achieving non-discriminatory and commercial terms of access for competing trading platforms.

In light of these concerns, it is proposed that the principles would include the following:

- (a) *User input to governance.* To ensure responsiveness to users' evolving needs, a formal mechanism should be established within ASX's governance framework to give users a strong voice in strategy-setting and system design, and to make ASX's CS facilities for cash equities directly accountable to users. Users should be broadly defined to include not only clearing and settlement participants, but also end-users, alternative market operators, technology service providers and other relevant stakeholders. As part of this, ASX should engage with users to establish a clear and transparent medium-term program of investment in the core clearing and settlement infrastructure, including CHES, that is directed towards users' needs and adopts (if not exceeds) relevant international best practice wherever practicable.**
- (b) *Transparent and non-discriminatory pricing of clearing and settlement services.* ASX should strengthen transparency in the pricing of its services by publishing detailed financial statements for its cash equity clearing and settlement subsidiaries. Further, all prices of individually unbundled clearing and settlement services, including rebates, revenue-sharing arrangements and discounts applicable to the use of these services, should:**
 - be transparent to all users of the services, including end-users and alternative market operators
 - not discriminate between ASX-affiliated and other users of clearing and settlement services
 - be made available to stakeholders in a form such that the impact of pricing changes can be readily understood, including the extent to which they have the potential to materially shift revenue streams between trading, clearing and settlement services.

Further, the Code should ensure there is a process for establishing an appropriate internal cost allocation model and policies to govern the allocation of costs or transfer of prices between group entities. Compliance with these policies would be expected to be subject to internal audit review, as well as periodic external review.

(c) Access to clearing and settlement services. In the absence of alternative providers of cash equity clearing and settlement services, ASX should facilitate access to the CHES infrastructure on non-discriminatory and transparent terms. In particular, ASX should adhere to a protocol for dealing fairly and in a timely manner with requests for access, including timeframes for responding to enquiries.

5.3 Implementing the Principles: A Code of Practice for Clearing and Settlement of Cash Equities in Australia

It is proposed that the Code would translate the principles into a more specific set of undertakings, establishing a formal and transparent commitment to industry.

The Agencies acknowledge that ASX has recently made some advances in areas contemplated by these principles and has committed to considerable investment in its post-trade services. There has, for instance, been a high level of user engagement in ASX's development of a proposed clearing service for OTC interest rate derivatives, and detailed fee schedules across ASX's businesses are already publicly available. Furthermore, notwithstanding some dissatisfaction with the nature of commercial negotiations around access for alternative market operators, access has in practice been granted via the TAS. The Agencies, however, recommend seeking a public and transparent commitment to adhere to a Code which embeds and enhances these practices, in accordance with the principles.

It would be strongly preferred that ASX reach agreement on the Code with all relevant stakeholders prior to submission to the Council for approval. This section sets out some of the matters that the Agencies would expect ASX to include in the Code, drawing on the specific issues raised by respondents in consultation, and evidence from arrangements in other industries and jurisdictions. There is international precedent for a Code in clearing and settlement, with a Code of Conduct for Clearing and Settlement (European Code) having been agreed by European clearing and settlement facilities in 2006. Consistent with the principles set out in Section 5.2, the European Code established commitments in the areas of access, price transparency and service-unbundling (see Box B).

Also relevant to the Agencies' considerations are conditions recently imposed on the Maple Group in Canada in the context of its acquisition of the Canadian Depository for Securities (CDS), which provides clearing and settlement services to trading platforms for Canadian cash equities. While these conditions have been imposed by regulators as conditions in the acquisition, rather than having been adopted on a voluntary basis, the objectives and coverage of the conditions are similar in many respects to those of the principles in Section 5.2. Accordingly, these too provide useful precedent in establishing the specifics of the Code (see Appendix C).

The remainder of this section identifies, for each principle, some matters that ASX would be expected to consider in developing the Code.

Box B

The European Code of Conduct for Clearing and Settlement

The European Code is an industry-agreed set of principles with the objective of promoting investor choice and integration in European cash equities markets. It was signed in 2006 by all members of the Federation of European Securities Exchanges (FESE), the European Association of CCP Clearing Houses (EACH) and the European Central Securities Depository Association (ECSDA).

The European Code was implemented in three phases: applying price transparency; establishing conditions for access and interoperability; and unbundling services and implementing accounting separation. The first phase was introduced in December 2006 with the objective of enabling participants of trading, clearing and settlement facilities to better understand the services they received and the prices they paid. The second phase was introduced in June 2007 and involved the creation of guidelines to support the development of new links between trading platforms, CCPs and settlement systems. The guidelines provide for organisations from any EU Member State to access on a non-discriminatory basis, at any stage of the value chain, systems in the same or another EU Member State. The third and final phase was introduced in January 2008. The objective was to unbundle the services offered to participants, providing participants with more transparency and flexibility when choosing which services to use.

Although a voluntary agreement, the industry adopted the European Code largely in response to regulatory pressure. Following the introduction of the European Monetary Union in 1999, European authorities had begun to take steps to further harmonise European financial markets. In 2001, a working group of the European Commission identified 15 'barriers to efficient cross-border clearing and settlement'.²⁷ One of the barriers identified was the prevalence of exclusive, vertical tie-in arrangements between trading, clearing and settlement facilities within national boundaries. The Markets in Financial Instruments Directive (MiFID), enacted in 2004 and implemented by 2007, went some way towards overcoming this barrier by allowing for cross-border and multi-market provision of trading and clearing services. By 2006, the European Commission was of the view that, despite MiFID and other developments, progress in improving the efficiency of European clearing and settlement infrastructure had been insufficient. However, rather than implement another directive, it was decided that the industry be encouraged to develop the European Code.

In a 2009 review of the European Code's first three years of operation, it was found that the European Code had 'significantly enhanced price transparency' and that 'users are now formally able to buy separate trading, clearing and settlement services', suggesting that the provisions around price transparency and service unbundling had been largely effective.²⁸ The European Code was, however, found to have been less effective in promoting widespread integration of the clearing and settlement infrastructure. Although it had assisted in the introduction of interoperability in some cases, the number of links established was a relatively small share

²⁷ Giovannini Group (2001), *Cross-Border Clearing and Settlement Arrangements in the European Union*, First Report, November. Available at <http://ec.europa.eu/internal_market/financial-markets/docs/clearing/first_giovannini_report_en.pdf>.

²⁸ See the European Commission's 2009 report on *The Code of Conduct for Clearing and Settlement: Three Years of Experience*, available at <http://ec.europa.eu/internal_market/financial-markets/docs/code/2009-11-06-code-report-ecofin_en.pdf>.

of the number of access requests that have been made. Signatories are under no legal obligation to facilitate links with each other, and therefore individual CCPs had been reluctant to create links that would open up their markets to (further) competition (see Section 4.3 and Box A).

5.3.1 User input to governance

In implementing this principle, the Code would be expected to provide for the establishment of a formal and permanent user group, or forum (the Forum). At a minimum, the Code would be expected to clarify the objectives of the Forum, its composition and operating processes, and its interaction with ASX's Clearing and Settlement Boards:

- *Objectives.* The objectives of the Forum would, at a minimum, be expected to include:
 - The provision of consistent and formal input to the ASX Clearing and Settlement Boards from the full range of users to assist in the development of medium- to long-term strategic plans for new services and products, as well as the design and operation of the clearing and settlement services supporting the Australian cash equity market and ongoing investment to meet the evolving needs of users.
 - To establish formal mechanisms for accountability of the ASX Clearing and Settlement Boards to users, in relation to the Boards' strategic decisions.
- *Composition and operating processes.* The composition of the Forum should aim to establish an appropriate balance among the interests of the different users of the ASX's clearing and settlement services and facilities in the cash equity market. The Code would be expected to set out clearly the composition of the Forum, including not only the total number of members, but also the minimum number representing each category of user. Users represented on the Forum should include, at a minimum, direct users of clearing infrastructure (clearing participants), direct users of settlement infrastructure (settlement participants), alternative market operators, back office service providers, and end-users.
- *Interaction with the Clearing and Settlement Boards.* To ensure the effectiveness of the Forum, it is critical that the Code establishes a formal, publicly available and auditable mechanism by which the ASX Clearing and Settlement Boards are accountable to the Forum. A number of (non-mutually exclusive) mechanisms might be considered:
 - The Forum could be chaired by an ASX Clearing and Settlement Board member, ensuring that users' views articulated in the Forum were considered at the highest level. Further, a report of Forum discussions, delivered by the Chair of the Forum, could be a regular item on the agenda of the ASX Clearing and Settlement Boards.
 - Individual members of the Forum could have the right to place items on the meeting agenda. Agendas and minutes of Forum meetings could be made publicly available.
 - The Chair of the Forum could feed back to the Forum the outcome of Board discussions relevant to matters considered by the Forum and explain how recommendations of the Forum were being addressed. This could include feedback on matters such as product development programs, operational enhancements, and the forward investment program for CHESS. Where recommendations were not being pursued, the Chair, or other invited executives of the ASX Clearing and Settlement Boards, would be expected to articulate to the Forum the reasons for not doing so.

In developing the Code, ASX should also consider establishing review processes, designed to ensure the effectiveness of the Forum in achieving its objectives. For instance, recently established arrangements for CDS in Canada specify that an independent review of governance arrangements should take place within three years (see Appendix C).

5.3.2 Transparent and non-discriminatory pricing

The Code would be expected to provide for ASX's commitment to a minimum level of transparency of pricing across the range of individually unbundled clearing and settlement services. In particular, consistent with the relevant principle, the Code would be expected to set out the scope of fees captured by the Code, provide for accessibility of the fees to users, and establish both a commitment to non-discriminatory pricing and appropriate internal cost allocation models and policies.

- *Scope.* The Code would be expected to provide for the publication, in a clear and accessible form, of the full range of applicable fees for its unbundled clearing and settlement services, including those for: transaction-related services (e.g. clearing, DvP settlement, free-of-payment transfers and assignments); custody services; and ancillary services (e.g. corporate actions). All discounts, rebates and revenue-sharing schemes, and applicable eligibility criteria, would be expected to be clearly specified.
- *Accessibility.* The code would also be expected to provide for additional tools and information to be made available to enable customers to gauge the impact of any pricing changes, including the extent to which they materially shift revenue streams between trading, clearing and settlement services. This could include information on expected cost impacts associated with new products and initiatives, example calculations, or a 'price simulator' or similar tool to enable customers to calculate the impact of discounts, rebates and revenue-sharing schemes for different activity profiles.
- *Non-discriminatory pricing.* The Code could provide for annual internal audit review, and periodic external review, of pricing schemes to establish that these do not discriminate across prices between ASX-affiliated and other users of clearing and settlement services.
- *Cost allocation.* The Code should articulate a process for establishing an appropriate internal cost allocation model and policies to govern the allocation of costs or transfer of prices between group entities. Compliance with these policies would be expected to be subject to internal audit review, as well as periodic external review.

In developing the Code, ASX should also consider carrying out a regular review of how its services, pricing and fees compare with those of CS facilities in other markets. Such a review could be presented to ASX's Clearing and Settlement Boards, the Forum and the Agencies. A report of this type was required, for example, under the conditions imposed in relation to the Maple Group's acquisition of CDS.

5.3.3 Access to clearing and settlement services

Given that ASX is the sole provider of clearing and settlement services for cash equities in Australia, access to those services (and any other related services) on a non-discriminatory and transparent basis is necessary for alternative market operators. Importantly, the Code would not override alternative avenues for obtaining access, such as under Part IIIA the Competition and Consumer Act. Instead, its objective should be to support parties reaching agreement on mutually acceptable terms and conditions via commercial negotiation. The Code could seek to do this by addressing the following features:

- *Access requests:* The Code should publicly state a protocol in accordance with which access requests can be made and be expeditiously considered by ASX. Information of a confidential or commercially-sensitive

nature communicated in connection with an access request or an access agreement should be treated appropriately.

- *Contractual terms:* Proposed terms and conditions of access, including (indicative) prices, would be expected to be publicly available.
- *Dispute resolution:* The Code should recognise the possible use of alternative dispute resolution options, such as mediation in the event of the parties coming into dispute or failing to reach agreement in relation to access.
- *Review:* The Code should provide for regular internal audit review and periodic external reviews to examine whether ASX has adhered to the protocol.

5.4 Monitoring Adherence to the Code

ASX's Clearing and Settlement Boards should commit to providing such information as is necessary for the Agencies to monitor ongoing compliance with the Code, including copies of relevant internal documents, accounts, audit reports, external reviews, and notification of complaints or disputes. All reasonable requests would be expected to be met on a timely basis.

In addition, a high level public statement should be released annually on a 'comply or explain' basis, on a frequency to be agreed by the Agencies.

ASX should ensure that effective arrangements are in place for the investigation and resolution of complaints arising in connection with the Code. These arrangements should be accessible and transparent and should provide for the prompt handling of complaints.

5.5 Scope of the Code

Importantly, the Code would apply only in the case of the clearing and settlement infrastructure supporting the Australian cash equity market, and would not apply in relation to clearing and settlement services supporting either exchange-traded or OTC derivatives markets or OTC debt markets. While the Agencies' review of competition in clearing and settlement did not expressly 'carve out' derivatives or debt instruments from consideration, the focus of the Agencies has been the Australian cash equity market, reflecting the interest from potential competing providers that has already emerged.

The Agencies regard the characteristics of the cash equity market and the prevailing competitive dynamics to be very different from those in other markets. A number of matters may be highlighted:

- The cash equity market (arising in part from its link to domestic issuers and, typically, a domestic listing exchange) is largely domestically oriented, with a high level of retail participation. Derivatives markets, and in particular OTC derivatives markets, are more wholesale and international in nature. In the case of OTC derivatives markets, international competition in clearing is already evident.
- A cash security represents a unique claim on the issuer's balance sheet and is associated with a particular listing exchange and securities settlement arrangements. Choices taken in respect of clearing venue by a market operator may therefore have implications for other components of the financial market infrastructure.
- Derivatives, by contrast, do not represent a unique claim. Any exchange or trading platform could, in principle, develop a derivatives contract to compete with contracts quoted on an incumbent exchange and clear such contracts via an alternative CCP. In the case of OTC derivatives, there is even less dependence

on other components of the infrastructure. Contracts may be developed by derivatives dealers and cleared according to the preferences of the bilateral counterparties without directly affecting the functioning of the broader market or imposing direct costs on other market participants.²⁹

Furthermore, given the international orientation of OTC derivatives markets, policy decisions in one jurisdiction may have implications for stability and market functioning in other jurisdictions. Again, this contrasts with the cash equity market, in which there are fewer evident international interlinkages. International standard setting bodies, including the Financial Stability Board and IOSCO are currently leading the regulatory reform agenda for the OTC derivatives market to ensure that a consistent international regulatory approach is taken by each jurisdiction, precisely due to the international nature of the market.

5.6 Review

It is proposed that, at the end of the two years, the Agencies carry out a public review of the Code's implementation and effectiveness, and ASX's adherence to it. At the same time, the Agencies would review the prospect of granting a licence to a competing CCP, or of pursuing other regulatory outcomes. Without pre-judging outcomes (which may be influenced by a range of factors), possible recommendations from this review could be to maintain the Code for a further period, to propose alternative regulatory arrangements for ASX, or to propose granting a licence to a competing CCP. Experience and evidence gathered during the preceding two year period will be considered in determining the outcome.

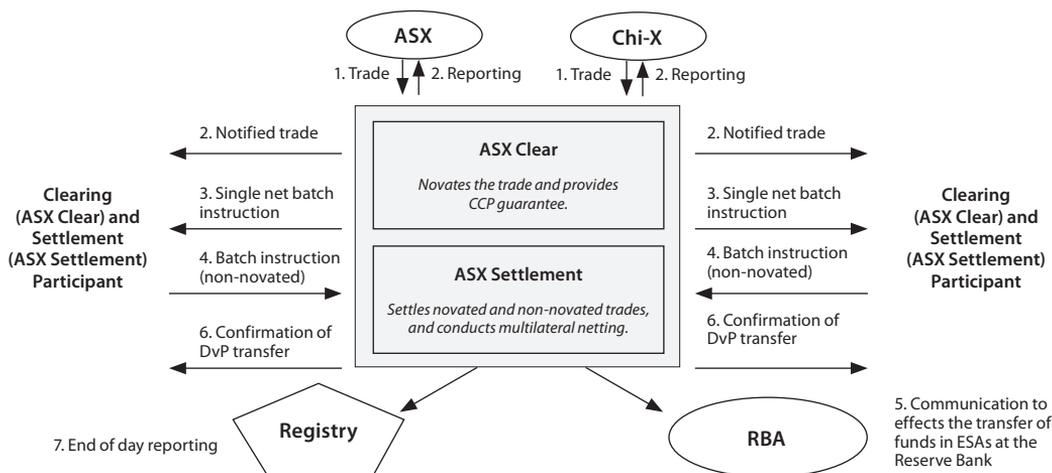
29 Council of Financial Regulators (2012), *Ensuring Appropriate Influence for Australian Regulators over Cross-border Clearing and Settlement Facilities*, July. Available at <<http://www.treasury.gov.au/ConsultationsandReviews/Submissions/2012/cross-border-clearing>>.

Appendix A

Current Clearing and Settlement Arrangements for ASX Securities

Currently, ASX securities are traded on both the ASX and Chi-X markets. Once these trades are submitted to CHES they are treated identically. Figure 1 sets out each step of the clearing and settlement process for ASX securities, with the simplifying assumption that each ASX Clear participant is also an ASX Settlement participant.

Figure 1
Current ASX Clearing and Settlement Arrangements



Step 1: Once a trade has been executed on either the ASX or Chi-X markets, a trade-related instruction is sent to CHES.

Step 2: Once CHES validates these trades they are novated in real time to ASX Clear and CHES sends messages to the authorised market operator and the relevant clearing participants, notifying them that the trade has been accepted and cleared. Trades which have the same clearing participant as buyer and seller, known as clearing crossings, are not novated, netted or scheduled for settlement in the CHES batch. To facilitate the remaining back office processes for these trades, CHES sends a single message to the clearing participant confirming the trade's details. The settlement of clearing crossings are negotiated bilaterally between brokers and their clients and occur when securities are transferred between broker and client settlement accounts.

Step 3: At T+1, CHES generates a single net batch instruction reflecting the net position of each participant's novated trades in each line of stock. Before netting, clearing participants can mutually agree to block a transaction from netting, or delete or modify existing novated transactions. If matching instructions are sent

from both clearing participants that are counterparty to the trade, CHESs sends messages to the clearing participants confirming instructions have been processed.

Step 4: Between T+1 and T+3, participants can also instruct CHESs to include additional non-novated (off-market) transactions in the batch at T+3. Non-novated trades mainly arise from three types of activities: securities lending to cover a short sale or a shortfall in a participant's securities account; off-market trades; and pre-positioning transfers of securities across accounts. Pre-positioning involves transferring securities to a participant's entropot settlement account (i.e. a centralised settlement account).

Step 5: On the evening before settlement, ASX Settlement notifies each participant of its projected net cash and securities settlement obligations. Participants have until 10.30 am to negotiate any additional non-novated transfers necessary to 'prime' their accounts for settlement. After the cut-off for new instructions, transfer of securities positions is blocked in CHESs and participants' Payment Providers are requested to fund the net cash obligations of settlement participants. Payment Providers hold ESAs at the Bank and act on behalf of settlement participants.

If, due to a shortfall of either securities or funds, a participant is unable to settle its scheduled obligations in the batch, ASX Settlement's rules allow for all or some of the transactions of the affected participant to be 'backed out'. These transactions are then rescheduled for settlement on the next settlement day. The precise parameters of the back-out process depend upon whether or not the failing participant is in default (i.e. has a shortfall of funds). If the participant is in default, ASX Clear may assume an obligation for novated settlements in accordance with its default management arrangements. ASX Settlement's back-out algorithm seeks to remove as few transactions from the batch as possible, maximising settlement values and volumes, while minimising the spillover to other participants. Transactions unrelated to novated settlement obligations are typically backed out first.

Step 6: Payment obligations are settled between Payment Providers in RITS as a single daily multilateral net batch. Immediately upon confirmation from RITS that the funds transfers have been settled, ASX Settlement completes the net securities transfers in CHESs, thus ensuring DvP settlement. This typically occurs at around noon. CHESs then notifies the participants that settlement has been completed successfully.

Step 7: At the end of the day CHESs reports net movements on each sub-register to the holder of the issuer's complete register.

Appendix B

International Evidence on Trading and Post-trade Fees

Competition in Clearing in Europe

Competition in clearing has emerged in relatively few countries internationally and, with the exception of some competition between vertical silos in India, is largely a European phenomenon.³⁰ Competition in clearing in Europe accompanied the emergence of alternative trading platforms following the implementation of MiFID in 2007.

As an example, prior to the implementation of MiFID, the London Stock Exchange (LSE) was the dominant exchange for the UK equities market and cleared through LCH.Clearnet Limited. Since MiFID, a number of alternative trading platforms have emerged, also stimulating competition at the clearing level: in June 2007, Chi-X Europe entered the market, with clearing provided by the European Multilateral Clearing Facility; in August 2008, Turquoise entered the market, with clearing provided by EuroCCP, a subsidiary of the US Depository Trust and Clearing Corporation (DTCC); other platforms followed. Since September 2008, the LSE has permitted clearing by either LCH.Clearnet Limited or the Swiss CCP, SIX X-Clear. Other platforms clearing UK equities now permit clearing by one of four CCPs. Oxera (2011) shows that the per transaction cost of centrally clearing equities in the UK fell by 78 per cent between 2006 and 2009, which many attribute to the emergence of competition.

Looking across the region more generally, Oxera (2011) considers costs over the years from 2006 to 2009, during the early years of competition and integration of European markets. The analysis shows an average reduction in clearing fees of CCPs surveyed of around 73 per cent, on a per transaction basis. In part, this reflects a trend towards smaller transactions, with clearing costs *per value* of transaction falling in some cases, but rising in others. For those facilities in which clearing costs fell on a per transaction value basis, however, costs declined by 7 to 59 per cent, with an average decline of 33 per cent across those facilities.

In a separate study, the Committee of European Securities Regulators (CESR) found that, further to the introduction of MiFID, direct trading fees for trading have declined as competition has intensified.³¹ However, there were concerns that end-users did not receive the full benefit of cost savings at the post-trade level, with

30 The majority of equities trades in India are executed on the National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE), which clear through their subsidiaries National Securities Clearing Corporation Ltd and BOI Shareholder Limited respectively. There are two CSDs for equities settlement: the Central Depository Services Ltd (CDSL), of which BSE is the majority shareholder; and the National Securities Depository Ltd (NSDL), of which NSE is a minority shareholder. Both CSDs are used by NSE and BSE for settlement, with about 27 per cent of total listed companies listed on both exchanges. Since it began operation in 1994, NSE quickly attracted market share and stimulated competition. NSE reduced delivery times significantly and exchange membership fees fell dramatically. BSE was demutualised in 2005. In July 2012, MCX-SX was cleared by regulators to begin trading in equities, having formerly limited its business to currency derivative markets. MCX-SX will operate its own CCP and plans to access the NSDL and CDSL in order to effect settlement.

31 Committee of European Securities Regulators (2009), *Impact of MiFID on equity secondary markets functioning*, June. Available at <http://www.esma.europa.eu/system/files/09_355.PDF>.

benefits largely accruing to intermediaries. At the clearing level, CESR reported that the benefits of reduced fees by incumbent CCPs were partly offset by the costs of linking and posting collateral to multiple CCPs.

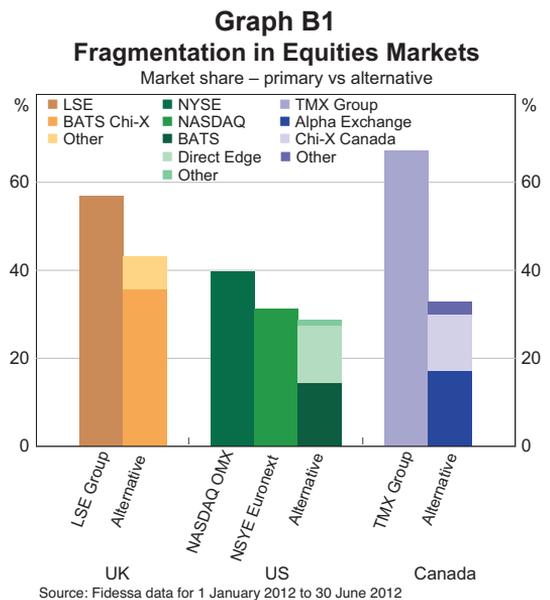
Trading and Post-trade Fees Internationally

Several internationally active stakeholders consulted by the Agencies expressed the view that ASX was a relatively high-cost provider of clearing and settlement services. On a broad international comparison, however, there is considerable variation in costs across countries, with ASX's costs closer to the lower end of the range than the top. For instance, Oxera (2012) compares combined trade and post-trade costs for institutional traders, finding that these range from around 0.3 basis points to 4.7 basis points of the trade value, with Australia's costs at around 1.2 basis points.³²

In part, this variation in costs can be explained by economies of scale, with facilities based in countries with lower transaction volumes tending to have higher costs. This is borne out by Graph 1 in Section 3.

However, even for facilities with similar market size, there is considerable cost variation. This may reflect several factors, in addition to scale and the emergence of competition in clearing, including: the intensity of competition in trading; the integration of clearing and settlement with trading; and the ownership and governance structure of the CS facilities. Notwithstanding the small sample size, the following observations may be made:

- *Economies of scale:* There is some evidence of a negative relationship between trading and post-trade costs and the scale of the equity markets (see Graph 1, Section 3).
- *The emergence of competition in clearing:* Of the markets included in Oxera's study, only LSE and Chi-X Europe are served by more than one CCP. These markets have among the lowest combined trading and post-trade costs. Several other markets exhibit relatively strong competition between a vertically integrated incumbent and other trading platforms that are served by alternative CCPs. These include the German and Italian markets, which also have relatively low costs.
- *Intensity of competition at the trading level:* The markets with the most intense competition between trading platforms, the US, Canada and the UK (see Graph B1) also have among the lowest combined trading and post-trade costs.
- *The integration of clearing and settlement with trading:* With the exception of the Canadian, Japanese and US markets, most of the major markets are vertically integrated. This may restrict the scope for competition at both trading and post-trade levels, potentially increasing costs. Particularly high costs on the Madrid Stock



³² Oxera (2012), *What would be the costs and benefits of changing the competitive structure of the market for trading and post-trading services in Brazil?*, June. Available at <<http://www.cvm.gov.br/port/Public/publ/Oxera%20report%2018062012.pdf>>.

Exchange may reflect that it does not have a conventional CCP; rather, pre-settlement risk is managed via a guarantee arrangement by the Spanish CSD.

- *Ownership and governance structure of the CS facilities:* Among the major markets, all but the Canadian, Japanese and US markets are served by for-profit clearing and settlement facilities.
 - Until recently, Canada’s cash equity market was served by a mutually owned CS facility, CDS (see Appendix C). This may, at least in part, explain the differential in post-trade costs.
 - In the US, the National Securities Clearing Corporation (NSCC), a subsidiary of DTCC, is the sole CCP for equities traded on US trading platforms. NSCC and DTCC’s CSD subsidiary, the Depository Trust Corporation, were established in the 1970s to streamline post-trade operations in the US equities market. DTCC is user owned and user governed, with any excess profits from its operations returned to its user owners. Along with the scale of the market and the intensity of competition at the trading level, this could help to contain trading and post-trade costs on the US market.
 - In Japan, Japan Securities Clearing Corporation operates the sole national CCP for equities, derivatives and government bonds. It is privately owned by the five exchanges of Japan, with Tokyo Stock Exchange (TSE) holding about 88 per cent of shares. Settlement services are performed by the Japan Securities Depository Center (JASDEC), which was incorporated in 2002 from its previous status as ‘non-profit foundation’. JASDEC is owned privately; TSE is the largest shareholder with a 23 per cent stake. Though technically a for-profit enterprise, JASDEC operates on a cost recovery basis in principle.
 - In the case of Hong Kong, although the exchange is a listed company, the Hong Kong Government is currently the largest shareholder, with the right to appoint 6 of 13 board members. This may place some downward pressure of trading and post-trade fees.

Appendix C

Conditions Imposed on the Maple Group

In August 2012, the Maple Group completed its acquisition of the Canadian Depository for Securities Limited (CDS), the TMX Group Inc. and the Alpha group of companies to create a vertically integrated trading, clearing and settlement facility. To ensure that the Maple Group will operate its facilities with regard to the public interest, and following an extensive public consultation process, Canadian securities regulators have imposed conditions on the Group.³³ Given the similarity of the emerging Canadian market structure to Australia's existing structure, these conditions, as well as existing Canadian regulatory arrangements, suggest possible specific requirements to implement the principles set out in Section 5.1. In particular, Canadian regulation goes some way to addressing the key issues of responsiveness to participants, cost control and incentives for innovation where there is market power in trading and post-trade services.

Prior to the Maple Group acquisition, CDS was a not-for-profit CS facility owned by the major Canadian banks, members of Investment Industry Regulatory Organization of Canada (IIROC) and the TMX Group, which owns exchanges for cash equities and derivatives. CDS's CDSX system is Canada's main system for clearing and settlement of Canadian exchange-traded and OTC equity, debt and money market transactions.³⁴ CDS is regulated by the Bank of Canada through its designation of CDSX as a systemically important system, and is also regulated by regional securities regulators, including the Autorité des Marchés Financiers of Quebec and the Ontario Securities Commission.

The Ontario Securities Commission (the Commission) has imposed conditions in the key areas of:

- *Governance requirements.* The Maple Group must establish fair, meaningful and diverse representation on the boards of the Group. To this end, at least half the directors of the Group Board must be independent directors. In respect of the CDS board, at least one-third of directors must be independent, at least one-third must be representatives of participants (including one representative each from IIROC, the five largest participants and a marketplace unaffiliated to the Group), and at least half must have experience in clearing and settlement. Furthermore, within three years, or as required by the Commission, the Group must engage an independent consultant to review the governance structure of the Group and its affiliated entities.

33 Background information about the Maple Group acquisition, including applications and notices, is published by the Ontario Securities Commission and is available at <http://www.osc.gov.on.ca/en/Marketplaces_maple-group_index.htm>. For conditions imposed by The Ontario Securities Commission, see the Notice of Commission Approval: Maple Group Acquisition Corporation, available at <http://www.osc.gov.on.ca/documents/en/Marketplaces/xxr-maple_20120704_recognition-orders.pdf>. See also the decisions of the Autorité des Marchés Financiers in relation to the Maple Group acquisition, available at <<http://www.lautorite.qc.ca/en/maple-en-corpor.html>>.

34 The other major clearing and settlement facility is the Canadian Derivatives Clearing Corporation (CDCC), which issues and clears equity derivatives, index derivatives and interest rate derivatives traded on the Montreal Exchange. CDCC was part of the TMX Group of companies, so that the two facilities are now both part of the Maple Group. One of the aims of the new group is to improve integration across the two facilities, such as by the introduction of cross-margining and common risk management systems.

- *Fees and rebates.* Fees for services provided by CDS are initially frozen at pre-acquisition levels, with any increase to be approved by the Commission and approvals to only be sought when there is significant change in the circumstances of the business. Rebates have also been mandated to encourage cost savings and ensure that the benefits of cost savings are shared with participants. Specifically, half of any increase in annual revenue from core clearing and settlement services (relative to the base fiscal year of 2012) must be returned to participants. In addition, a schedule of rebates has been specified, starting at C\$2.75 million in fiscal year 2013 and rising to C\$4 million per year from fiscal year 2016 onwards.
- *Cost allocation and transfer pricing.* Fees must be equitably allocated and not create unreasonable barriers to access. To this end, the Group as a whole is prohibited from applying fee rebates or other incentives that may favour one of its own affiliated entities, including its own trading platforms. The process for setting fees must provide for meaningful input from participant committees. Furthermore, CDS must establish, and submit to the Commission for approval, an internal cost allocation model and transfer pricing policies.

The Commission has also set conditions in other areas. These include conditions to ensure: fair access is offered to clearing and settlement services; best practice is followed when outsourcing key services or systems; key entities of the Group are given the financial resources needed to carry out their functions in a manner consistent with the public interest; and the Commission is provided with sufficient information to carry out its oversight duties.

Under the new Maple Group structure, existing arrangements for industry involvement in clearing and settlement investment decisions will continue to apply. Under these arrangements, an externally-sponsored Strategic Development Review Committee (SDRC) advises the CDS management and board on a range of matters to do with service development.³⁵ In particular, SDRC reviews, prioritises and oversees CDSX-related development work proposed by its members and other customers. Membership of the SDRC includes representatives from CDS participants, while other industry members may also have input to the development program by submitting suggestions to the committee. The development program itself is regularly updated and published by CDS.

So that arrangements around its participant committees remain consistent with the public interest, the Commission has set a condition that any changes to the structure or mandate of its participant committees, including the SDRC, must be approved by the Commission.

³⁵ Information about CDS, including the CDS development program, is available at <<http://www.cds.ca/cdsclearinghome.nsf/Pages/-EN-Welcome?Open>>.