Review of Competition in Clearing Australian Cash Equities: Conclusions

A Report by the
Council of Financial Regulators

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1. Introduction and Executive Summary

On 11 February 2015, the government announced that the Council of Financial Regulators (CFR) and the Australian Competition and Consumer Commission (ACCC) – together, the Agencies – would commence a review of the policy position on competition in clearing Australian cash equities (the Review).

The Agencies previously carried out a review of competition in this market in 2012 (the 2012 Review).[1] In light of stakeholder feedback, the CFR recommended that a decision on any licence application from a competing cash equity central counterparty (CCP) be deferred for two years. In the meantime, ASX was encouraged to develop a *Code of Practice for the Clearing and Settlement of Cash Equities in Australia* (the Code).[2] The government endorsed these recommendations in February 2013 and ASX published the Code in August 2013.[3]

Immediately following the announcement of the current Review, the Agencies released a consultation paper, seeking stakeholder views on a range of potential policy approaches.[4]

This paper presents the Agencies' conclusions from the Review. As in the 2012 Review, the particular focus of this work has been the clearing of ASX-listed cash equity securities (ASX securities). After first providing some background on the Review, the paper discusses key messages from the stakeholder consultation. Within the context of these messages, the paper goes on to present some analysis carried out by the Agencies on the costs, benefits and other implications of the alternative policy approaches of competition and monopoly.

The last section of the paper draws together the key messages from the consultation process and the Agencies' supporting analysis. The Agencies favour a policy approach that is open to competition, while at the same time deals with industry concerns around a continued monopoly, should competition not emerge. This approach is reflected in a series of recommendations to the government, along with a discussion of regulatory and legislative measures required to implement these recommendations.

Stakeholder Views and Analysis of Alternative Policy Approaches

The CFR received written submissions from 19 stakeholders, including a wide range of market participants and industry associations. Representatives of the Agencies also hosted bilateral discussions with 25 stakeholders. Respondents expressed mixed views on the appropriate policy approach, drawing out a number of issues that the Agencies had identified in their own analysis of the costs and benefits of the alternative policy options.

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1 A paper outlining the issues for consideration was issued in June 2012: see CFR (2012), 'Competition in the Clearing and Settlement of the Australian Cash Equity Market: Discussion Paper', June. Available at <http://www.treasury.gov.au/ConsultationsandReviews/Consultations/2012/Competition-in-the-clearing-and-settlement-of-the-Australian-cash-equity-market>.

2 The CFR's advice on competition in clearing of the cash equity market and the final report of the 2012 Review are available at <http://www.treasury.gov.au/PublicationsAndMedia/Publications/2013/competition-of-the-cash-equity-market>.

3 The government's response to the Agencies' recommendations is available at <http://ministers.treasury.gov.au/DisplayDocs.aspx?doc=pressreleases/2013/022.htm&pageID=&min=wms&Ye>.

4 The consultation paper is available at <http://www.cfr.gov.au/publications/cfr-publications/2015/review-of-competition-in-clearing-australian-cash-equities.pdf>.

The case for competition

Consistent with the Agencies' analysis, most respondents acknowledged that competition in clearing could give rise to both benefits and costs. As in the 2012 Review, the main benefits cited were the prospect of lower clearing fees, improved product and service offerings, and the creation of a platform for broader financial market innovation. Unaffiliated market operators, in particular, saw competition in clearing as a prerequisite for vibrant competition at the trading level.[5] Unaffiliated market operators also reported difficulties in negotiating clearing and settlement arrangements with ASX as a vertically integrated incumbent. Accordingly, some respondents were strongly in favour of lifting the moratorium on competition in the clearing of Australian cash equities immediately.

Others were in favour of competition in principle, but proposed a further deferral of competition for a period. This primarily reflected uncertainty about whether the benefits of competition would exceed the costs in this market. And a small number of respondents argued that a single provider was the best outcome for the Australian cash equity clearing market.

As a general matter, the economics of central clearing favour the existence of relatively few CCPs in a market. Multiple CCPs are most likely to coexist where the market size is sufficiently large, where competing CCPs can leverage technology and operational capacity in other products or markets, where the market is segmented, or where netting benefits are preserved through interoperability. This is evidenced by the fact that to date, competition in clearing has been almost exclusively a European phenomenon, where it was primarily driven by the integration of multiple national markets.

A number of respondents also noted that the issue of competition should be considered in the context of the global financial system. Even if there was no competition within the Australian clearing market, these respondents considered that ASX would still be subject to competition from international cash equity markets.

Safe and effective competition

The Agencies have identified a number of implications that competition in clearing could have for financial stability, the functioning of markets and access. Stakeholders expressed a range of views about the potential costs and risks of a multi-CCP environment and how these might best be managed. The principal costs cited were fragmentation of liquidity, a loss of netting benefits and increased operational costs. Stakeholders also agreed that competition could give rise to potential financial stability risks, including instability in the event of a commercially driven exit of a CCP.

Many respondents felt, however, that the minimum conditions for safe and effective competition proposed by the Agencies in the consultation paper would be sufficient to address any concerns about financial stability and market efficiency in a multi-CCP environment. These minimum conditions related to: (i) adequate regulatory arrangements; (ii) appropriate safeguards in the settlement process; and (iii) access to existing settlement infrastructure on non-discriminatory and transparent commercial terms.

Consistent with the Agencies' analysis, many respondents agreed that interoperability between competing CCPs would be desirable as a means of mitigating some of the costs associated with a multi-CCP environment. In particular, since interoperability would permit participants to concentrate their clearing in a single CCP, participants may be able to avoid the potentially material costs of fragmentation, un-netting and duplicated operational connections.

5 Unaffiliated market operators include alternative listing markets and competing trading venues for ASX securities.

Prospect of competition

There was near consensus among stakeholders that, even if the moratorium were lifted, a competing CCP would be unlikely to emerge in the near term – if at all. Many stakeholders took the view that the proposed minimum conditions would materially increase the cost of establishing a competing CCP. In particular, the application of the CFR's framework for ensuring that domestic regulators retain sufficient regulatory influence over cross-border clearing and settlement (CS) facilities operating in Australia (the Regulatory Influence Framework) could be a barrier to entry. This framework imposes domestic location requirements where a CS facility is both systemically important and strongly domestically connected. In the case of the Australian cash equity market, a provider of clearing services would be required to incorporate domestically at a relatively low threshold of activity. Together with a number of other forces in favour of a single provider, including the relatively small scale of the Australian market, the domestic location requirements could make any business case for competition commercially unattractive, at least in the near term. Nevertheless, a number of respondents agreed that these requirements were necessary to manage potential financial stability risks, particularly in the event that an overseas CCP entered insolvency.

As in the 2012 Review, respondents to the consultation generally agreed that competition in the settlement space was unlikely to emerge.

Dealing with a continued monopoly

Since the threat of a competitor entering the clearing market could be weak, many respondents felt that some interim measures were required to deal with an ongoing monopoly until such time as competition emerged. Respondents that supported an extension to the moratorium similarly suggested that safeguards should remain in place for as long as ASX continued to operate as a monopoly provider of cash equity CS services. There was a wide range of views about the appropriate 'interim' measures for dealing with a continued monopoly in both clearing and settlement.

Respondents expressed mixed views about the effectiveness and usefulness of the existing Code. While some saw the Code as having been beneficial in improving transparency and user engagement, others questioned whether it had achieved its intended purpose. Notwithstanding that ASX has recently committed to upgrade the infrastructure supporting its cash equity CS facilities, a number of stakeholders considered that various initiatives taken by ASX under the auspices of the Code were just good business practice, and suggested that some of these should have been adopted earlier.

Many respondents also suggested that the Code did not go far enough to address the industry's concerns in the prolonged absence of competition. There was, for example, some support for greater independence and market user representation on the ASX Clear and ASX Settlement Boards. Unaffiliated market operators also called for 'open access' measures, with some wider support for structural, operational or at least deeper governance separation of the cash equity CS facilities.

There were mixed views about the appropriate level of direct regulatory intervention to enforce such interim measures. Many respondents suggested that some enforceable regulation or oversight would be necessary, and some acknowledged that this might require the use of legislative tools. Most respondents did not consider that a 'full regulation' approach would be necessary.

Conclusions from the Review

The Agencies have identified three core conclusions from the consultation process and their supporting analysis:

- *The policy approach should be one of openness to competition*. This policy stance would recognise the potential benefits of competitive discipline. It would also be consistent with the prevailing legislative settings in the *Corporations Act 2001* that envisage competition, and the orientation towards competition in the 2014 Financial System Inquiry (FSI). Indeed, this policy approach would reflect the environment in which ASX operated until February 2013, when the government supported the CFR's recommendation to defer any consideration of competition in clearing cash equities. Taking the alternative path of prohibiting competition and establishing a statutory monopoly in cash equity clearing would be unprecedented internationally. To do so would require an unequivocal conviction that a single provider was the optimal market structure for cash equity clearing.
- *Competition, even if permitted, may not emerge for some time, if at all*. There remain strong forces in favour of a single provider of clearing services. A competing CCP may therefore never emerge (or at least not for some considerable time). This could weaken the discipline on ASX from contestability of clearing.
- *The relevant regulators should have powers to deal with an ongoing monopoly.* If the moratorium were lifted, ASX could choose to withdraw the Code. However, unless the threat of competition was sufficiently strong, market forces alone might be unable to discipline ASX's conduct. This suggests that the relevant regulators should be able to intervene as necessary to address industry concerns arising from a continued monopoly.

Reflecting these views, the Agencies have developed a number of recommendations. These include recommendations that the government implement legislative reforms that would give the relevant regulators rule-making and arbitration powers both to facilitate safe and effective competition in clearing, and to deal with the continued monopoly provision of cash equity CS services until such time as competition emerged.

Recommendation 1. Confirm a policy stance that supports openness to competition in the clearing market for ASX securities, and implement legislative changes to facilitate safe and effective competition in accordance with the Minimum Conditions.

The evidence from the Agencies' consultation and supporting analysis leads to a conclusion in favour of lifting the moratorium on consideration of a licence application from a competing CCP. A policy stance that supports openness to competition would recognise prevailing legislative settings in the Corporations Act as well as the potential benefits of competitive discipline.

In order to clarify how the relevant regulators would manage the potential costs and risks associated with a multi-CCP environment for clearing, the CFR would set out the minimum conditions for safe and effective competition in a publicly stated policy. Reflecting industry views and additional analysis carried out by the Agencies, these minimum conditions would extend beyond those articulated in the consultation paper to also require that appropriate interoperability arrangements be established prior to a competing cash equity CCP commencing operations (together, the Minimum Conditions). The Agencies anticipate publishing the stated policy in late 2015 or early 2016.

Since some aspects of the Minimum Conditions are not enforceable under the existing regulatory framework, the Agencies recommend implementing legislative changes that would allow the Australian Securities and Investments Commission (ASIC) and the Reserve Bank of Australia (the Bank)

(together, the Regulators) to implement and enforce the Minimum Conditions if and when a competitor emerged.

The Regulators would be unable to advise in favour of a competing cash equity CCP licence application until these measures had been implemented. The Agencies accept that this process could take some time. Consistent with the position of openness to competition, however, the Regulators would be prepared to engage with any potential entrant in the interim and commence consideration of a licence application, should one be submitted.

The proposed legislative framework to implement the Minimum Conditions would set out the relevant high-level requirements, and would empower the relevant regulators to make rules that impose specific obligations on CS facilities at a later stage through the use of rule-making powers. These rules would not be implemented until such time as a committed competitor emerged or was likely to emerge.

The Agencies recognise that the rule-making process and the need to make operational arrangements to support a multi-CCP environment would further extend the length of time between any submission of an application by a competitor and the commencement of operations. However, to implement the rules with a requirement that operational changes be made in advance would lead to redundant industry investment and regulatory cost should a competitor never emerge. This is particularly important given the rules will deal with matters such as interoperability and materially equivalent settlement arrangements between the emerging competitor and incumbent CCP, which could be costly to establish.

The Minimum Conditions would also need to be supported by an ACCC arbitration power to ensure that a competing CCP was able to access ASX monopoly settlement infrastructure on fair, transparent and non-discriminatory terms (see Recommendation 4).

Recommendation 2. The Agencies publicly set out regulatory expectations for ASX's conduct in operating its cash equity clearing and settlement facilities until such time as a competitor emerged.

Since the proposed legislative framework for safe and effective competition would not be in place for perhaps a number of years, and since competition might not emerge for some time even once the framework was in place, the effectiveness of the discipline from the competitive threat could be limited. Accordingly, the discipline from the competitive threat may need to be supplemented with other measures.

The Agencies would therefore publicly issue a set of regulatory expectations for the conduct of ASX's monopoly cash equity CS operations, in support of the long-term interests of the Australian market. It is anticipated that these expectations would be issued at the same time as the Minimum Conditions were set out as a publicly stated policy (see Recommendation 1). These expectations would apply to the cash equity clearing and settlement facilities (both of which are currently covered under the Code), and would remain in place for each of these facilities for as long as each remained a monopoly. The regulatory expectations would address the key governance, pricing and access matters currently dealt with under the Code, as well as some additional matters raised by stakeholders during the consultation and some of the new commitments proposed by ASX in its submission to this Review.

Recommendation 3. Implement legislative changes that would allow the relevant regulators to impose requirements on ASX's cash equity clearing and settlement facilities consistent with the regulatory expectations if these expectations were either not being met or were not delivering the intended outcomes.

As in the case of the Minimum Conditions, the regulatory expectations would not be legally enforceable under the existing regulatory framework. Since the threat of competition alone may not

exert sufficient discipline on ASX, the Agencies consider it important not only that the regulatory expectations remain in place until the emergence of a competitor, but also that the relevant regulators would be able to impose enforceable requirements on ASX where the regulatory expectations were either not being met or not delivering the intended outcomes.

The Agencies therefore recommend further legislative change that would permit the use of rule-making powers. These powers would be used to impose specific obligations on ASX's cash equity CS facilities to act in accordance with the regulatory expectations. The powers would be held in reserve and would be expected to be used only in the event of a material deviation from the expectations or where ASX's conduct was generating undesirable outcomes for the market but was not sufficiently severe to trigger intervention by the ACCC under the *Competition and Consumer Act 2010* (the CCA). The rule-making powers would be used to address systematic problems, rather than specific issues arising between particular parties.

Recommendation 4. Implement legislative changes to grant the ACCC an arbitration power to provide for recourse to binding arbitration in disputes about the terms of access to ASX's monopoly cash equity clearing and settlement services.

ASX will have incentives to discriminate in favour of its own operations when providing monopoly CS services to its competitors in related markets. To address this concern, the Agencies recommend legislative changes to implement an arbitration regime administered by the ACCC. The arbitration power would complement the rule-making powers proposed in Recommendations 1 and 3 by allowing for a more targeted regulatory response to specific access issues.

Arbitration would be available to parties requiring access to ASX's monopoly cash equity CS services in order to compete with ASX's operations in related markets; this would include unaffiliated market operators, CCPs and settlement facilities. The arbitration power would only be available for a material dispute where parties were genuinely unable to agree on terms of access to ASX's monopoly cash equity CS services through commercial negotiation. The arbitration power would provide an incentive for ASX to negotiate commercial and non-discriminatory terms of access, and would otherwise provide for timely resolution of access-related disputes.

The Agencies consider that the threat of arbitration by a regulator would be likely to provide an effective discipline on ASX. As the competition regulator, the ACCC would be well placed to assume an arbitration role in relation to disputes on the terms of access to ASX's monopoly CS services as a backstop to commercial negotiation. The Agencies consider that having the competition regulator assume this arbitration role would provide the greatest discipline on ASX and promote competition in related markets.

2. Background

2.1 The Australian Cash Equity Market

To date, there has been no competition in the clearing and settlement of ASX securities. ASX securities are cleared and settled by subsidiaries of the ASX Group – ASX Clear Pty Limited (ASX Clear) and ASX Settlement Pty Limited (ASX Settlement), respectively.[6] Although these two entities are legally separate, they are operationally integrated, with clearing and settlement of ASX securities occurring through a shared operating system, the Clearing House Electronic Sub-register System (CHESS).

Chi-X Australia Pty Ltd (Chi-X) operates a competing trading venue for ASX securities. Trades executed on the Chi-X market are cleared and settled by ASX Clear and ASX Settlement, respectively, using the Trade Acceptance Service (TAS). ASX developed the TAS to allow trades executed on approved market operators' platforms to be submitted to ASX Clear and ASX Settlement. ASX Settlement also provides settlement arrangements for approved listing market operators under the Settlement Facilitation Service (SFS). The listing markets currently approved to use the SFS are the National Stock Exchange of Australia, the Asia Pacific Exchange and the SIM Venture Securities Exchange. ASX makes the TAS and SFS available under a published set of contractual terms of service, which specify service levels and include operational and technical requirements.

2.2 Regulatory Framework

The clearing and settlement of cash equities is governed by Part 7.3 of the Corporations Act. This section of the Corporations Act establishes conditions for the licensing and operation of CS facilities in Australia, and gives the Regulators joint responsibility for the supervision of CS facilities.

- The Bank is responsible for ensuring CS facilities comply with the Financial Stability Standards (FSS) that it has determined, and take any other steps necessary to reduce systemic risk.
- ASIC is responsible for ensuring CS facilities comply with other obligations under the Corporations Act, including for the fair and effective provision of services.

The Regulators also provide advice to the Minister on any CS facility licence application. The Corporations Act specifies a number of matters that must be considered by the Minister in granting a CS facility licence, including whether granting the licence would be in the public interest.

For a prospective competing CCP that was overseas based or foreign owned, the application of the CFR's Regulatory Influence Framework for ensuring that the Regulators retain sufficient regulatory influence over cross-border CS facilities operating in Australia is also relevant. This graduated framework imposes additional requirements on cross-border CS facilities proportional to the materiality of domestic participation, their systemic importance to Australia, and the strength of their connection to the domestic financial system or real economy.[7] The framework imposes domestic

6 There are two other CS facilities in the ASX Group. ASX Clear (Futures) Pty Limited provides clearing services for the ASX 24 market (an exchange for futures products). Austraclear Limited provides settlement and depository services for debt securities as well as settlement services for derivatives traded on the ASX 24 market.

7 See CFR (2012), 'Ensuring Appropriate Influence for Australian Regulators over Cross-border Clearing and Settlement Facilities', July, available at <http://www.treasury.gov.au/ConsultationsandReviews/Consultations/%202012/cross-border-clearing>. Also see CFR (2014), 'Application of the Regulatory Influence Framework for Cross-border Central Counterparties', March, available at <http://www.cfr.gov.au/publications/cfr-publications/2014/application-of-the-regulatory-influence-framework-for-cross-border-central-counterparties/>.

location requirements where a CS facility is both systemically important and strongly domestically connected.

The Corporations Act also provides that any CS facility operators (or their holding companies) that are specified in the Corporations Regulations are subject to a 15 per cent limit on any individual controlling interest; this currently applies to the ASX entities. The Minister may approve an application for a variation of the limit if the acquisition is in the national interest.[8] The FSI recommended that, once the current reforms to cross-border regulation of financial market infrastructure (FMI) were complete, the government should remove market ownership restrictions from the Corporations Act.[9]

Finally, the ACCC is responsible for promoting competition and fair trading in the Australian economy under the CCA.

2.3 Background to the Review

Given the prevailing legislative settings, the Agencies' 2012 Review took openness to competition in clearing cash equities as the starting point for its analysis. An industry consultation sought feedback from stakeholders on the potential implications of competition in clearing for the Agencies' responsibilities, including any policy responses that might be necessary to ensure that competition could occur in a safe and effective manner. In addition to providing useful input on these issues, many stakeholders expressed views on the broader case for competition in clearing.

The balance of feedback in 2012 was that it was not then the appropriate time for changes that would impose further costs on the industry, particularly given prevailing market conditions and the substantial structural and regulatory change that was already underway. Accordingly, the Agencies recommended that a decision on any licence application from a CCP seeking to compete in the clearing of Australian cash equities be deferred for two years.

Since deferring competition would continue a de facto monopoly in cash equity clearing, the Agencies recommended that, in the meantime, ASX should develop a code of practice for its cash equity CS services. The Code was intended to address industry concerns around a continued monopoly, while preserving the prospect of competition and/or further regulation in the future. The Agencies further recommended reviewing this policy position at the end of the two years. The current Review fulfils this commitment.

The recommendations of the 2012 Review were endorsed by the government in February 2013.

2.3.1 The Code of Practice

In the 2012 Review, the Agencies set out three underlying principles to form the basis for ASX's Code:

- *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 CS

8 In April 2011, for example, the government prohibited the acquisition of ASX by Singapore Exchange Limited, citing that the acquisition would be contrary to the national interest. See Deputy Prime Minister and Treasurer (2011), 'Foreign Investment Decision', Press Release No 030, 8 April, available at <http://ministers.treasury.gov.au/DisplayDocs.aspx?doc=pressreleases/2011/030.htm&pageID=003&min=wms&Year=&DocType>.

9 See Commonwealth of Australia (2014), *Financial System Inquiry Final Report* (D Murray, Chair), Canberra, Recommendation 44. Available at <http://fsi.gov.au/files/2014/12/FSI_Final_Report_Consolidated20141210.pdf>.

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 CS infrastructure, including CHESS, 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 CS subsidiaries. Further, all prices of individually unbundled CS 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 CS 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.
- *Access to clearing and settlement services.* In the absence of alternative providers of cash equity CS services, ASX should facilitate access to the CHESS 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.

These principles were supported by a more specific set of undertakings that the Agencies expected ASX to consider in developing the Code. By establishing a formal and transparent commitment to the industry, it was envisaged that the Code would go some way towards delivering outcomes similar to those that might be expected in a competitive setting, thereby addressing many of the issues that stakeholders had raised in consultation about a monopoly in clearing services.

2.3.2 Implementation of the Code

Following consultation with participants, ASX released the Code on 9 August 2013.[10] Consistent with the principles, the Code commits ASX to enhancing user engagement through the establishment of an advisory Forum and supporting Business Committee, and to maintaining transparent and non-discriminatory pricing of, and terms of access to, its cash equity CS services.

User engagement

The Code provides for the establishment of the Forum and Business Committee. The objectives of the Forum are to: provide user input on matters related to the design, operation and development of the core CS infrastructure; consider matters of common interest arising under the Code; and provide a mechanism for the Boards of ASX Clear and ASX Settlement to report to users on strategic plans and investment decisions. Members of the Forum are senior – typically CEO level – industry participants, representing a broad range of participant and stakeholder groups. The Forum meets at least three times a year and is supported by a Business Committee (itself supported, as necessary, by technical

10 ASX's Code of Practice is available at <http://www.asx.com.au/cs/documents/Code_of_Practice_9Aug13.pdf>.

committees). The Business Committee was originally devised to provide detailed operational input on matters dealt with in the Forum.

To ensure that matters discussed and agreed in the Forum are appropriately reflected in Board deliberations, mechanisms are in place for the Forum Chair to report to the Boards, and for the Chair of the Boards to respond on a 'comply or explain' basis.

As intended, the Forum has provided input to the ASX Clear and ASX Settlement Boards on the development of CS services infrastructure. In particular, the Forum, together with the Business Committee, has identified and progressed two key strategic initiatives: a move from a three-day to a two-day settlement cycle for cash equities; and adoption of global messaging standards, which will be pursued as part of a broader CHESS system replacement project (see 'Box A: The Forum and Business Committee').

Box A: The Forum and Business Committee

One of the key objectives of the Forum is to provide user input to the ASX Clear and ASX Settlement Boards on matters related to the design, operation and development of the cash equity CS infrastructure. The Business Committee was established to support the Forum by providing business and operational advice on the matters it dealt with. The forward work program of the Forum is developed with input from the Business Committee, and is focused on four key themes: capital efficiency and industry economics; participant structure flexibility and efficiency; service innovation; and technology and infrastructure enhancements.

The Business Committee met for the first time in August 2013, and the Forum in October 2013. Since then, the Forum – with input from the Business Committee – has recommended that the ASX Clear and ASX Settlement Boards progress two key strategic initiatives:

- *T+2 settlement.* On the advice of the Business Committee, the Forum recommended that ASX prioritise the introduction of a two-day (T+2) settlement cycle for cash equities. Having received widespread industry support for this initiative, ASX undertook to implement T+2 settlement in early 2016. ASX has continued to engage the Business Committee on the implementation plans and operational details of this proposal, with the Forum endorsing the Business Committee's recommendations.
- *CHESS replacement.* The Business Committee, with support from the Forum, identified a move to global messaging standards as an important initiative. On the recommendation of a technical committee established to progress this initiative (the Technical Committee), the work is progressing as part of a broader initiative to replace the core CHESS infrastructure that supports ASX's cash equity CS operations. ASX has continued to engage the Technical Committee, Business Committee and Forum on the implementation approach, timing and scope of the CHESS replacement project.

Work of the Business Committee

Although the Business Committee was originally devised to provide operational input on matters dealt with in the Forum, it has also provided user input to ASX on a broader range of initiatives of interest to the industry. In particular, the Business Committee has recommended that ASX undertake a number of operational service improvements, including:

- issuing individual quarterly activity and fee reports to ASX Clear and ASX Settlement participants
- implementing the second phase of the corporate actions straight-through processing initiative

- examining the feasibility of 'principal to principal' clearing arrangements.

The Business Committee has also provided input on the scope and content of several consultation papers related to the ASX cash equity CS services prior to their release. Furthermore, ASX has engaged the Business Committee on a number of initiatives aimed at providing more flexible and efficient participant structures, including the introduction of tiered capital requirements for clearing participants, and facilitating the admission of both domestic and foreign authorised deposit-taking institutions as clearing participants.

Work of the Technical Committees

The Code also provides for the establishment of one or more technical committees to examine and provide advice on specific matters dealt with in the Forum. The Technical Committee was convened in November 2013 to provide input on the introduction of global messaging standards; the scope of the Technical Committee's work was later extended to the broader CHESS replacement project. The members of this Technical Committee comprise technology executives from a range of industry users, including CS participants, unaffiliated market operators and share registries.

One of the Technical Committee's initial recommendations was that it would be most efficient and cost effective to adopt global messaging standards as part of the broader CHESS replacement project. Since then, the Technical Committee has continued to consider the operational details of this project and report its findings to the Business Committee. ASX expected the frequency of the Technical Committee meetings to increase once there was more certainty around the future of the market structure and the CHESS replacement project.

Pricing

The key commitments under the Code relevant to the principle of 'transparent and non-discriminatory pricing' are:

- the publication of fee schedules and tools to assist participants in anticipating the price they will have to pay for use of ASX's cash equity CS services
- the publication of audited management accounts for ASX's cash equity CS services, reflecting a published policy for apportioning common shared costs
- non-discriminatory pricing to all customers and potential users
- the commissioning of an annual international comparison of CS fees.

In accordance with these commitments, ASX has released a cost allocation and transfer pricing policy, and has published management accounts for its cash market CS businesses alongside the ASX financial statements since the year ended June 2013. ASX has also published detailed pricing information on its website and, on the recommendation of the Business Committee, developed quarterly fee and activity level reports for participants. ASX also commissioned the economic consultancy firm Oxera to conduct a global cost benchmarking study, with the Forum and Business Committee providing input on the scope and methodology of this review. Oxera's report, released in June 2014, concluded that ASX's cash equity CS fees were broadly in line with those in markets of comparable size.[11]

11 Oxera (2014), 'Global Cost Benchmarking of Cash Equity Clearing and Settlement Services', June. Available at <http://www.asx.com.au/cs/documents/Global_cost_benchmarking_of_cash_equity_clearing__settlement_services_Final_20Jun14.pdf>.

Access – service levels, information handling and confidentiality

The Code commits ASX to provide transparent, non-discriminatory access to its CS services, both for participants and unaffiliated market operators. This high-level commitment is supported by standardised service level agreements for services to unaffiliated market operators, published timeframes for responding to requests for service, and pre- and post-access dispute resolution arrangements.

In July 2014, following industry consultation, ASX made a number of refinements to the service level and information-handling standards established under the TAS and SFS.[12] ASX also waived the annual TAS service fee, and undertook a technical review of the TAS to confirm material equivalence with the services performed for trades executed on the ASX market.[13] The Code also provides for the protection of confidential information, which has been a key concern of some stakeholders given the vertically integrated structure of the ASX group.

In addition to its commitments under the Code, ASX recently restructured its CS Boards to reduce the number of common directors between its CS facilities and ASX Limited, and adopted a policy that a majority of its directors must be independent.

Review of the Code

ASX has carried out an internal review and engaged an independent external auditor to review the operation of the Code; both reviews concluded that ASX had been in broad compliance with its obligations under the Code.[14]

In December 2014, ASX issued a consultation paper seeking feedback on a number of operational improvements to the Code. The proposals included: changes to the governance arrangements which give greater prominence to the Business Committee; carrying out the cost benchmarking review every two years, rather than annually; and focusing the external annual review of the Code on the core commitments.[15]

In its submission to the Agencies' consultation, ASX proposed to extend its Code further to include a number of additional commitments, including:

- the implementation of a new clearing fee schedule, which would result in an upfront fee reduction and incrementally lower fees as the aggregate market value cleared increased[16]
- a requirement to submit future CS fee changes to regulators for review
- launching a consultation on the CHESS replacement project
- extending the existing access arrangements to include certain non-ASX securities.

ASX noted that these additional commitments were contingent on competition being deferred for a further period of five years. ASX also noted that the Code would only remain in place for as long as the moratorium on competition continued.

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12 The consultation paper and ASX's response are available at <http://www.asx.com.au/cs/documents/consultation_paper_TAS_and_SFS_23Jan14.pdf> and <http://www.asx.com.au/cs/documents/TAS_and_SFS_Consultation_Outcomes_-_ASX_Response_to_Feedback.PDF>, respectively.

13 The ASX market provides a trading platform for ASX listed securities and equity derivatives. ASX Limited is the licensed operator of the ASX market.

14 The internal review is available at <http://www.asx.com.au/cs/documents/Code_of_Practice_Internal_Review_Report_-_21_August_2014.PDF>. The external review is available at <http://www.asx.com.au/cs/documents/PwC_Code_of_Practice_External_Review_Report.PDF>.

15 The consultation paper is available at <http://www.asx.com.au/documents/public-consultations/ASX_Consultation_Paper_-_Operational_Improvements_to_the_Code_of_Practice_-_Dec_2014.PDF>.

16 ASX also issued a market announcement regarding the proposed new clearing fee schedule on 9 March 2015. Available at <http://www.asx.com.au/asxpdf/20150309/pdf/42x4l270b9wp8v.pdf>.

3. Stakeholders' Views

The Agencies' consultation paper sought stakeholders' views on a range of potential policy approaches. The approaches ranged from opening up the cash equity clearing market to competition, to establishing an effective monopoly in clearing with some means of regulating ASX's cash equity CS facilities. Stakeholders were also asked to provide feedback on whether any ancillary regulatory or legislative measures would be necessary under each policy approach to ensure the continued safe and effective functioning of the Australian cash equity market.

Stakeholders expressed a wide range of views on the issues canvassed in the consultation paper. This section summarises the consultation feedback received on the case for competition, the prospect of a competitor emerging and measures for dealing with either a multi-CCP or a monopoly environment. The themes and views summarised here are explored further in later sections of this paper.

3.1 The Case for Competition

There was a broad range of views on the preferred policy approach to competition in clearing. Irrespective of their favoured policy approach, however, most respondents acknowledged that competition could give rise to both benefits and costs.

Some respondents were strongly in favour of lifting the moratorium and opening up the cash equity clearing market to competition. These respondents were often of the view that ASX was operating in an uncompetitive manner to the detriment of the market, and that any potential costs associated with a multi-CCP environment would be more than offset by the benefits. As in the 2012 Review, the main benefits of competition cited by stakeholders were:

- *Lower clearing fees.* Many respondents argued that Australia's clearing fees were too high relative to other developed markets. While the international cost benchmarking report by Oxera had concluded that ASX's fees were broadly in line with those in markets of comparable size, a subsequent study commissioned by industry participants and carried out by Market Structure Partners had placed ASX's fees towards the top of the range.[17] Competition was widely expected to lead to a decline in clearing fees, as had been the case in Europe. A number of stakeholders also noted that ASX's recent proposals for a reduction in clearing fees were further evidence that there was scope to reduce the price of clearing in Australia. Compared with the 2012 Review, however, there was greater uncertainty around the potential magnitude of fee reductions associated with competition; this reflected the high costs that would be incurred by an entrant setting up operations, particularly if the entrant had to incorporate domestically. Some respondents were also concerned that any fee reductions would primarily benefit larger brokers and high-frequency traders, rather than smaller participants and end investors.
- *Improved product and service offering.* Competition was generally expected to drive increased innovation and efficiency. Respondents were concerned that there had been insufficient investment in the cash equity CS services in recent years. Most notably, the CHESS infrastructure was seen to be outdated and to not have kept pace with global best practice standards. Some stakeholders observed that competition in clearing had contributed to improved product and service offerings in Europe; these included enhanced risk management tools, the development of clearing solutions for a wider range of products, greater choice of client account structures and

17 See Market Structure Partners (2014), 'International Transaction Cost Benchmarking Review', October. Available at <http://www.marketstructure.co.uk/wp-content/uploads/Market-Structure-Partners-International-Transaction-Cost-Benchmark-Review-October-2014-Final-Windows-Version.pdf>.

improved settlement solutions. Respondents felt that similar benefits could be realised in Australia.

Other respondents supported competition in principle, but proposed deferring competition for a further period. This primarily reflected uncertainty about whether the benefits of competition would exceed the ensuing costs in this market.

A small number of respondents argued that a monopoly was the best outcome for the Australian cash equity clearing market. These respondents viewed the existing arrangements as sufficient for ensuring a fair and transparent market, and expected that competition would impose a net cost on the industry. Some of the costs of competition identified by stakeholders included:

- *Operational costs.* Concerns were raised about additional costs participants would face as a result of establishing new connections, implementing technology and systems changes, and the un-netting of CCP exposures and settlement obligations, notwithstanding that some of these costs could be mitigated by interoperability (see Section 4.4).
- *Costs of regulation.* Some respondents were of the view that competition in clearing would require the introduction of new regulatory oversight arrangements. Participants were therefore mindful of a potential increase in regulatory costs, particularly in light of the experience with the introduction of cross-market supervision.

A number of respondents also noted that the issue of competition should be considered in the context of the global financial system. It was noted that even if there was no competition within the Australian clearing market, ASX would still be subject to competition from international cash equity markets. Some stakeholders stressed that the policy approach to competition should support the development and international attractiveness of the Australian financial markets.

3.2 Safe and Effective Competition

Respondents expressed mixed views about the impact of competition on market functioning and financial stability. A number of participants raised concerns about the potential loss of netting efficiencies and the consequent increase in margin obligations in a multi-CCP environment. Some respondents also thought that competition between CCPs would have an adverse effect on stability; interoperability, for example, could increase operational complexity and introduce additional risks by creating exposures between CCPs. Others, however, argued that CCPs would not compromise on risk control standards since market participants would not clear through a CCP that was thought to be unsafe. They also noted that the existence of multiple CCPs could enhance the resilience of the market to the failure or exit of a CCP.

Despite these differing views, many respondents felt that the minimum conditions for safe and effective competition proposed by the Agencies in the consultation paper (drawn from the conclusions to the 2012 Review) would be sufficient to address any concerns about financial stability and market efficiency in a multi-CCP environment. Many respondents also agreed that interoperability between competing CCPs could be an effective means of mitigating the potentially material costs of liquidity fragmentation, un-netting and multiple operational connections.

3.3 Prospect of Competition

There was near consensus among stakeholders that, even if the moratorium were lifted, a competitor would be unlikely to emerge in the near term, if at all.

Many stakeholders also took the view that the proposed minimum conditions would materially increase the cost of establishing a competing CCP. In particular, the application of the Regulatory

Influence Framework was considered to be a significant barrier to entry. Under this framework, a provider of clearing services to the Australian cash equity market would be required to incorporate domestically at a relatively low threshold of activity. Together with a number of other forces in favour of a single provider, including the relatively small scale of the Australian market, the domestic location requirements were likely to make any business case for competition commercially unattractive, at least in the near term.

As in the 2012 Review, respondents to the consultation generally agreed that competition in the settlement space was unlikely to emerge.

3.4 Dealing with a Continued Monopoly

Since the threat of a competitor entering the clearing market was generally seen to be weak, many respondents felt that even if the moratorium was lifted, some interim measures would nevertheless be required until such time as competition did emerge. Those respondents that supported a further deferral of competition similarly felt it was important that the existing Code, or other similar measures, remained in place for as long as ASX continued to operate as a monopoly provider of cash equity CS services.

Many of the 'interim' measures proposed by stakeholders for dealing with a continued monopoly reflected their views on the current market structure, and in particular the effectiveness and usefulness of the Code. While some saw the Code as having been beneficial in improving transparency and user engagement, others questioned whether it had achieved its intended purpose. A number considered that various initiatives taken by ASX under the auspices of the Code were just good business practice, and suggested that some of these should have been adopted earlier.

Many suggested that although the Code was an acceptable interim measure, it did not go far enough to address the industry's concerns in the absence of competition, particularly with regard to pricing. Accordingly, there were a number of suggestions for strengthening the existing commitments under the Code. In particular, there was broad support for greater independence and market user representation on the ASX Clear and ASX Settlement Boards. It was also suggested that ASX should increase transparency of the investments it made in maintaining and updating its systems, and possibly make an explicit commitment to investing in its CS infrastructure based on open standards. Suggestions on pricing included enhancing the process of cost benchmarking studies with input from regulators or some independent party, or introducing some form of regulatory pricing controls. There were also calls for 'open access' measures for unaffiliated market operators, with some respondents arguing that structural, operational or at least greater governance separation of the cash equity CS facilities was required in order to ensure fair access to these services. Some respondents also expressed concern that ASX's Code was not binding or enforceable and recommended that it be mandated.

3.5 Enforcement Mechanisms

There were mixed views about the appropriate level of direct regulatory intervention that would be required to enforce such additional interim measures. Many respondents suggested that some enforceable regulation or oversight would be required, and some acknowledged that this might require the use of legislative tools. Most respondents did not consider that a 'full regulation' approach would be necessary.

Several respondents also noted that the proposed measures for dealing with a monopoly should not be restricted only to ASX's cash equity CS facilities, but could potentially also apply to other ASX services that did not face competition.

4. Policy Approach: Competition

The existing regulatory framework envisages competition between multiple providers of CS services. This is reflected in the broadly stated licence criteria, which are intended to be sufficiently flexible to accommodate different market structures. Taking a broader financial system perspective, the FSI noted that 'competition is the cornerstone of a well-functioning financial system' and is a generally preferred mechanism for achieving efficient, resilient and fair outcomes.

This section discusses the benefits and costs of competition in clearing, focusing on matters raised by stakeholders in the Agencies' consultation. To date, competition in cash equity clearing has remained rare outside of Europe, where it was primarily driven by the integration of markets formerly fragmented along national lines.[18] The Agencies' analysis draws on the experiences in both Europe and other international markets to examine the possible consequences of competition in clearing, as well as other factors that should be considered.

Reflecting the Agencies' analysis of the potential implications of competition in clearing for financial stability and the functioning of the cash equities market, the section closes with a restatement and refinement of the minimum conditions for safe and effective competition that were introduced in conclusions to the Agencies' 2012 Review.

4.1 Objectives of Competition

Competition in clearing cash equities would be expected to provide a number of benefits to market participants, consistent with the broad view that a competitive market structure was most likely to deliver efficiency, innovation and productivity across the economy. Many respondents to the consultation expected that competition between CCPs would improve outcomes in the areas of pricing, innovation and user responsiveness in this market, and would support access and competition at the trading level.

4.1.1 Lower clearing fees

Competition in clearing would be expected to lead to a reduction in clearing fees. In the absence of competition, a monopoly CCP may be able to exert its market power to charge high fees to participants. A number of stakeholders consulted by the Agencies felt that ASX's CS fees were higher than in many overseas markets, particularly those in which competition in clearing had emerged.

The global cost benchmarking study carried out by Oxera in 2014 found that ASX's cash equity CS fees were broadly in line with those in markets of comparable size. The report concluded that economies of scale could explain some of the variation in fees across markets, with fees generally decreasing as the value of trades in the market increased. Noting that ASX's clearing fees were at the high end of the global range, Oxera explained that one of the potential reasons for this was that ASX operated on a lower scale than a number of other markets.

Using a different sample of markets and user profiles, however, Market Structure Partners' 2014 review concluded that ASX's clearing fees were towards the higher end of the range globally, even taking economies of scale into account. Meanwhile, CCPs operating in competitive markets or operating as industry utilities were generally found to charge some of the lowest clearing fees.

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18 For further information about competition in Europe, see Appendix B of the CFR's final report on the 2012 Review, available at <http://www.treasury.gov.au/PublicationsAndMedia/Publications/2013/competition-of-the-cash-equity-market>.

International evidence

The expected effect of competition on clearing fees has been demonstrated in Europe. In the period between 2006 and 2009, the average reduction in clearing fees charged by European CCPs was around 73 per cent on a transaction basis (Oxera 2011).[19] These fee reductions were at least in part attributed to the emergence of competition.[20] Even ahead of the introduction of the Markets in Financial Instruments Directive (MiFID) and the *European Code of Conduct for Clearing and Settlement* (the European Code; see Appendix B), the contestability of the market affected the commercial decisions of incumbent CCPs. LCH.Clearnet Ltd (LCH.Clearnet), for example, began reducing its UK clearing fees in November 2006 in anticipation of the entry of European Multilateral Clearing Facility NV (EMCF) in June 2007.

Once competition emerged, European CCPs continued to regularly review their fee structures in order to attract the business of new trading platforms and remain competitive. This dynamic was likely strengthened by the increase in price transparency following the establishment of the European Code. Best execution requirements under MiFID also led to price competition among equity trading platforms and, consequently, the CCPs serving them.[21]

Other considerations

While competition between CCPs typically led to reduced clearing fees in Europe, this benefit was not distributed evenly across market participants. The structure of clearing fee cuts indicates that CCPs were primarily competing to attract high volume, pan-European trading platforms, which were often competing for the order flow of high-frequency and algorithmic traders. In 2010, despite subdued equity trading volumes, both EMCF and LCH.Clearnet introduced tiered pricing schedules favouring high volume clearing members; LCH.Clearnet offered free clearing for average daily member volumes exceeding 150 000 trades.

Furthermore, the clearing market structure is only one of the determinants of clearing fees. International comparisons show that there is considerable variation in fees across countries. In addition to competitive dynamics, this variation may reflect factors such as economies of scale, the intensity of competition in trading, the degree of vertical integration, interoperability, regulation, service levels, profit orientation and ownership structure. Oxera (2014) reported that the clearing fees charged by two monopoly CCPs – the US National Securities Clearing Corporation (NSCC) and the Canadian CDS Clearing and Depository Services Inc (CDS) – were among the lowest of the financial markets examined.

- NSCC is a user-owned CCP and operates an at-cost business model; its low costs likely reflect significant economies of scale associated with serving the world's largest equities market.
- CDS is part of a for-profit vertically integrated silo, but its fees are subject to a regulatory approval process. The regulation of fees was a condition of the approval of the Maple Group acquisition in 2012, which transformed CDS from a user-owned, not-for-profit CCP into a

19 See Oxera (2011), 'Monitoring Prices, Costs and Volumes of Trading and Post-trading Services', May. Available at <http://ec.europa.eu/internal_market/financial-markets/docs/clearing/2011_oxera_study_en.pdf>.

20 However, this also reflected a trend towards smaller transactions, with clearing fees per value of transaction rising in some cases. Among those facilities in which clearing fees fell on a per transaction value basis, fees declined by 7 to 59 per cent.

21 MiFID's best execution rules require firms to take all reasonable steps to obtain the best possible result for their clients when executing an order, taking into account the relevant execution factors (price, cost, speed, likelihood of execution and settlement, size, nature or any other consideration).

vertically integrated, for-profit entity.[22] The relatively low fees may also reflect CDS's narrower service offering, whereby novation occurs on the day of settlement rather than the day that a trade is executed.

Another potential determinant of clearing fees is the amount of resources that the CCP contributes for use in the event of a participant default. Oxera observed that while ASX Clear's prefunded pooled financial resources were contributed entirely by the CCP, participants of other CCPs generally contributed a much larger share of pooled resources. Oxera's 2014 study estimated that ASX's clearing fees were closer to the middle of the range globally once the opportunity cost for participants of providing these funds was taken into account.

Furthermore, while competition may be expected to lead to a reduction in clearing fees, it also has the potential to increase other implementation and participation costs for industry (see Section 4.3). A number of respondents to the consultation expressed concern that any direct savings from lower fees could be offset by additional operational and participation costs in a multi-CCP environment.

4.1.2 Innovation and user responsiveness

Competition would generally be expected to increase innovation and user responsiveness. The dynamic efficiency, or rate of development, of an industry is determined by the level of investment and innovation. In the absence of competition, dynamic efficiency is likely to be low; a monopoly provider may have little incentive to innovate and invest in improving the quality of its products or services to the detriment of the market.[23] A monopoly CCP may become complacent and underinvest in its operations due to its dominant market position and high barriers to market entry.

A number of respondents to the Agencies' consultation raised concerns about a perceived lack of innovation and user responsiveness at ASX's cash equity CS facilities. Notwithstanding that ASX has recently commenced a large-scale technology transformation project and plans to refresh the infrastructure supporting its cash equity CS facilities, participants noted that the CHESS infrastructure had to date not kept pace with global best practice and this project was long overdue.

Competition is generally expected to alleviate these problems, as CCPs would try to differentiate themselves and attract market share based on the range and quality of their services. Even in the absence of a competing provider, the threat of competition in a contestable market would be expected to incentivise firms to innovate and invest in response to user demands. Some stakeholders observed that competition in clearing had brought about improved product and service offerings in Europe, and felt that similar benefits could be realised in Australia.

International evidence

In Europe, competition has placed increased pressure on CCPs to improve or expand their service offerings. Respondents to the Agencies' consultation highlighted several examples, including enhanced risk management tools, the development of clearing solutions for a wider range of products, greater choice of client account structures, and improved settlement solutions. Some specific examples are outlined below.

22 For further information about the conditions imposed on the Maple Group, see Appendix C of CFR's final report on the 2012 Review, available at <http://www.treasury.gov.au/PublicationsAndMedia/Publications/2013/competition-of-the-cash-equity-market>.

23 See, for example, Serifsoy B and M Weiss (2007), 'Settling for Efficiency – A Framework for the European Securities Transaction Industry', *Journal of Banking & Finance*, 31, pp 3034–3057.

- Despite the barriers to establishing private interoperability arrangements (see Section 4.4 and Appendix B), LCH.Clearnet, SIX x-clear Ltd (SIX x-clear) and EuroCCP Ltd have implemented a number of interoperable links in response to the demands of users and trading platforms.[24]
- In August 2013, EuroCCP Ltd introduced cross-platform settlement netting for UK and Irish securities. This allows members to net all of their trades in these securities across different European trading platforms, and thereby achieve greater settlement netting efficiencies and lower costs.[25]
- European CCPs have been exploring additional product lines such as equity derivatives and over-the-counter (OTC) equities in an attempt to broaden their revenue base.

Other considerations

There are arguments suggesting that the operational efficiencies provided by vertical integration may better facilitate investment in product development and the expansion of clearing services to a broader range of products. Trading venues have an incentive to launch new financial instruments in order to increase revenues, particularly in the presence of competing platforms. Where a trading venue is integrated with a CCP, economies of scale and coordination along the supply chain suggest that clearable products could be introduced faster and at a lower cost than in the case of two unaffiliated facilities. Vertical integration may also reduce business risk associated with a new product since, assuming the product became actively traded, the CCP would have guaranteed access to the trade flow in that product. However, in the absence of competition at the trading level, a vertically integrated trading venue may lack an appropriate incentive to innovate and invest despite these possible efficiencies.

Coordination issues arising between competing CCPs may also inhibit some investments. In Russia, for example, the consolidation of two vertically integrated trading, clearing and settlement silos facilitated the establishment of a single securities depository; this development had been discussed for a number of years, but had been impeded by the existence of two separate vertically integrated settlement and depository facilities. The merger of the facilities also encouraged changes that aimed to bring the Russian cash equity market into line with global best practice, including enhancements to the settlement model and a move to a two-day settlement cycle.

Another issue to consider is that market fragmentation reduces the opportunities for economies of scale and scope. CCPs may therefore attempt to reduce their business costs in order to remain viable, especially if competition puts pressure on clearing fees. This may slow down new investment in the short run, particularly if the CCPs do not have guaranteed trade flow in any new products for which they develop clearing solutions. There may also be a trade-off between an entrant's ability to charge competitive fees and investment in its products and services. It was suggested during the consultation that clearing fees would be unlikely to decrease significantly in the short run due to the set-up costs that a new entrant would face. In the long term, competition would be expected to promote lower clearing fees and an efficient level of investment and innovation. However, given the above considerations, the net effect of competition on investment and innovation in the short run may be uncertain.

Furthermore, as with clearing fees, the rate of innovation and the level of user responsiveness may reflect factors other than the market structure. For example, under its Principles of Governance, the US Depository Trust and Clearing Corporation (DTCC) – which owns the monopoly NSCC – has

24 Prior to the merger of EMCF and EuroCCP Ltd in December 2013, there were four interoperable CCPs in Europe: LCH.Clearnet, SIX x-clear, EMCF and EuroCCP Ltd.

25 Prior to this, separate settlement arrangements were required for each platform due to UK and Irish stamp duty restrictions.

committed to promptly and efficiently expanding its services to meet the needs of its stakeholders (see 'Box B: Governance Arrangements at the Depository Trust & Clearing Corporation').

Box B: Governance Arrangements at the Depository Trust & Clearing Corporation

DTCC is the user-owned and user-governed provider of post-trade services to the US securities market. NSCC, a subsidiary of DTCC, provides clearing services for almost all broker-to-broker cash equity trades in the US.

History of DTCC

DTCC emerged in response to a regulatory push for a unified national securities market. The Securities Acts Amendments of 1975 encouraged competition at the trading level, while advocating for an efficient and robust infrastructure for the clearing and settlement of securities.

Following this, in 1976, the clearing houses of three large US exchanges – the New York Stock Exchange, the National Association of Securities Dealers and the American Stock Exchange – merged to form NSCC. In 1973, the same exchanges had established the Depository Trust Company (DTC), a central securities depository intended to deliver settlement efficiencies by immobilising securities and providing for the transfer of title. Over the next 25 years, the clearing houses and central securities depositories of regional US stock exchanges were consolidated into NSCC and DTC, creating two single utility post-trade service providers for the US securities market. In 1999, NSCC and DTC became vertically integrated under the holding company, DTCC.

NSCC and DTC were created when securities exchanges and post-trade service providers were typically non-profit, user-owned market utilities. Following the consolidation of the market, DTCC continued to operate an at-cost business model, with economies of scale allowing it to charge among the lowest fees in the world. The newly formed DTCC also committed to introducing new products, services and technologies to meet the needs of its users. DTCC has since expanded its operations to provide clearing, settlement, asset servicing, data management and information services for a wide range of securities markets, including equities, fixed income, derivatives, money market instruments, mutual funds, and alternative investment products. Its subsidiaries include EuroCCP (formerly EuroCCP Ltd), which was launched in 2007 to compete in the European cash equity clearing market.

Ownership of DTCC

DTCC is a user-owned entity. Its common shares are owned by over 300 participants of the DTCC clearing agencies. The number of shares each participant is required or permitted (depending on their participation status) to own is proportional to their use of the clearing agencies' services. This ownership structure ensures that participants are appropriately invested in the business and, through the election of Board members, are given a voice in the governance and operations of DTCC.

The DTCC Board

There are currently 19 members on the DTCC Board of Directors, including 12 representatives of clearing participants and three non-participant directors. Board members also serve on various Board committees responsible for overseeing aspects of DTCC's operation.

The composition of the Board is intended to capture a broad range of DTCC's stakeholders and the broader industry. Non-participant directors – who have specialised knowledge of financial services but

are not affiliated with any firm that uses DTCC's services – were introduced to the Board in 2010 to bring an independent perspective and mitigate potential conflicts of interest among participant directors. DTCC also establishes advisory committees to support the Board and management. The advisory committees are comprised of industry participants who do not serve on the Board, and are intended to further enhance industry engagement and provide expert guidance and feedback on various initiatives.

The DTCC Board's Mission Statement commits it to 'providing direction to and overseeing the conduct of the affairs of the corporation in the interests of the corporation, its shareholders and other stakeholders including investors, issuers and participants in the financial markets that DTCC serves'.[1] DTCC's overall performance and contribution to the industry is measured against annual 'corporate goals'. In order to ensure that these goals are aligned with the interests of the public, they are developed through consultation with Board members, participants, industry associations, regulators and other relevant stakeholders.

User responsiveness

The roles and responsibilities of DTCC's Board and management are outlined in the 'Principles of DTCC Governance'. Under these Principles, DTCC's responsibilities include providing a range of services supporting stakeholders' financial activities at the lowest reasonable cost, and expanding those services to meet stakeholders' evolving needs promptly and efficiently. DTCC follows a structured approach for the development of new initiatives or enhancement of existing businesses and services. As part of this approach, DTCC employs a number of mechanisms for engaging with its stakeholders and the wider industry to ensure that it fulfils its responsibilities.

Stakeholders are able to participate in the development of DTCC's products and services through the Board advisory committees or other working groups established to assist with specific initiatives. DTCC also interacts with the industry through a number of industry associations and client forums. In 2014, for example, the DTCC Regional Council was established to gain input and feedback from smaller firms. The Corporate Actions Transformation initiative provides another example of DTCC's user engagement. As part of this project, DTCC worked with over 260 client firms to test the implementation and explain the effect of the initiative to the industry; client feedback was used to make revisions and modifications throughout the project. DTCC also conducts an annual customer satisfaction survey to evaluate whether it is meeting the needs of its users.

1 The Board of Directors of the Depository Trust & Clearing Corporation Mission Statement and Charter (2015) is available at <http://www.dtcc.com/~/media/Files/Downloads/legal/policy-and-compliance/DTCC-BOD-Mission-and-Charter.pdf>.

4.1.3 Access and competition at the trading level

Competition in clearing would also be expected to improve access to CCPs by trading platforms and thereby support competition at the trading level. In order to be a viable alternative, an entrant trading platform must offer its participants combined trading and post-trading fees and service levels that are comparable to those of the existing platform. Where there is only one CCP in the market and that CCP is vertically integrated with the incumbent trading platform, an 'essential facilities' problem may arise. The vertically integrated CCP will have an incentive and ability to foreclose competition in the trading market by discriminating in the provision of essential services to unaffiliated trading platforms. In a 2006 report, the European Commission identified vertical integration as a barrier to

competition, noting that it 'may result in foreclosure at all levels of the value chain and therefore lead to welfare losses'.[26]

Given that ASX is currently the sole provider of CS services for Australian cash equities, unaffiliated market operators would generally require access to the ASX CS facilities. Stakeholders voiced concerns that the vertical integration of trading, clearing and settlement within the ASX Group created a potential barrier to achieving non-discriminatory and commercial terms of access to the ASX CS facilities for competing trading platforms. Unaffiliated market operators in particular reported difficulties in negotiating clearing and settlement arrangements with ASX, citing examples of delay, non-responsiveness and unreasonable contract terms.

In a competitive clearing market, the potential to lose market share could incentivise the incumbent CCP to compete for the business of all trading platforms. Competition in clearing could therefore improve the terms of access for unaffiliated market operators, allowing for more vibrant competition at the trading level.

International evidence

Prior to the financial integration of the European Union, each traditional European equity trading platform typically had an exclusive relationship with a single CCP. The implementation of MiFID in 2007 went some way towards removing this barrier by enabling 'multilateral trading facilities' (MTFs) to enter the market as rivals to established national trading platforms. The MTFs quickly captured a significant share of the trading volume in pan-European securities by competing with traditional platforms on the basis of price, speed, reliability, quality of execution and the price of clearing and settlement.

In order to provide a low-cost service, MTFs selected new entrants such as EMCF and EuroCCP Ltd to provide clearing services rather than incumbent CCPs. The Turquoise trading platform, for example, chose EuroCCP Ltd over seven rival European clearers based on the promise of low fees – EuroCCP Ltd promised to operate on an at-cost basis, and its ability to leverage capabilities in its US operations from its US parent, DTCC, ensured that its unit costs remained very low. Similarly, in 2007, Chi-X Europe entered the market with clearing provided by the newly created EMCF. While some incumbent CCPs made attempts to attract the business of the new trading platforms, much of the competition was concentrated in two incumbent clearers, SIX x-clear and LCH.Clearnet (which, at the time, was not part of an exchange group).

Other considerations

Even in a single-CCP market, effective competition in trading may still develop if the incumbent platform is not vertically integrated with the CCP. The US equities market is characterised by a large number of trading platforms, all of which clear through NSCC, the monopoly clearer; NSCC is not affiliated with any trading platforms. This market structure can facilitate competition, since all trading platforms would be likely to achieve similar terms of access to clearing services, and would therefore only compete on the basis of their own fees and the quality of the services they provided.

Another issue to consider is that, even in a multi-CCP environment, an essential facilities scenario may still arise at the settlement layer. Assuming that settlement remained a vertically integrated monopoly service provided by ASX, any new CCP seeking to clear ASX securities would require access to the existing settlement facility for those securities (i.e. ASX Settlement). Given the potential essential facilities scenario, ensuring access to ASX Settlement on fair and non-discriminatory terms may be a necessary ongoing condition to support competition in clearing cash equities.

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26 European Commission, Competition DG (2006), 'Competition in EU Securities Trading and Post-trading: Issues Paper', May.

4.2 Sustainability of Competition

4.2.1 Economics of central clearing

The economics of central clearing have implications for the sustainability of competition. A CCP's cost structure involves high fixed costs and low variable costs, which lead to economies of scale and scope in clearing. Network externalities and netting benefits are also important considerations; the effectiveness of the multilateral netting process carried out by a CCP increases with the number of participants in the CCP and the share of each participant's transactions that is submitted to the CCP.

The economics of central clearing therefore favour the existence of relatively few CCPs in a market. A market may be able to support more than one CCP where:

- the market size is sufficiently large that the fixed costs of clearing may be shared across a sizeable volume of trades;
- competing CCPs can leverage technology and operational capacity that supports clearing services in other products or markets;
- the market is segmented, with each CCP serving a distinct niche (although in this case the CCPs may not be directly competing); and/or
- network externalities and netting benefits are preserved through CCP interoperability (see Section 4.4).

4.2.2 Market dynamics

Effective competitive market dynamics would be expected to benefit market participants over the long term. However, those benefits might not be realised if incumbents engage in anti-competitive conduct. For example, a dominant incumbent could attempt to deter smaller firms from entering the market by engaging in predatory pricing, where prices are pushed below marginal cost. While this would result in lower fees for market participants in the short term, it could inhibit effective competition. Such anti-competitive conduct by an incumbent leading to the exit of competitors could therefore have implications for the stability of the market structure. Furthermore, if the incumbent successfully deterred competition, it could raise its fees in the longer term.

In Europe, the main entrant CCPs were subsidiaries of, or backed by, large companies with access to extensive financial resources. The expansion of EuroCCP Ltd, for example, has been supported by capital injections from its US parent, DTCC. Much of the competition between CCPs in Europe has been concentrated in four large CCP organisations: LCH.Clearnet, SIX x-clear, EuroCCP Ltd and EMCF (with the latter two CCPs merging in 2013).

4.2.3 Consolidation

The economics of central clearing could lead to reconsolidation in competitive clearing markets over time. In Europe, the price reductions associated with the emergence of competition reduced the profitability of both incumbent and entrant CCPs (although it should be noted this occurred during the global financial crisis period, when lower market turnover would also have had an impact on profitability).

- Lower fees at LCH.Clearnet contributed to a fall in the group's equity clearing revenues from €114.6 million in 2008 to €60.6 million in 2009.
- EuroCCP Ltd could leverage off the economies of scale of its US parent, DTCC. Despite this, EuroCCP, which competed using an at-cost business model, reported five consecutive years of

losses from 2008 to 2012. During this period, it required over €100 million of capital injections from DTCC.[27]

Driven by cost pressures, operational inefficiencies and price competition, the European post-trade securities market has experienced a wave of mergers and vertical integration in recent years. This included the merger of two of the largest CCPs in Europe, EMCF and EuroCCP Ltd, which formed European Central Counterparty NV (EuroCCP) in December 2013. Ahead of this decision, EuroCCP Ltd's at-cost model had allowed it to gain considerable market share. Meanwhile, the establishment of interoperability in Europe saw EMCF lose market share and record its first loss in 2012. The consolidation of the two CCPs was intended to take advantage of economies of scale and scope, streamline operations, and reduce costs through technological and operational integration.

Similarly in Russia, the two existing trading, clearing and settlement silos merged in 2011 to form the Moscow Exchange, which is vertically integrated with the National Clearing Centre and the National Settlement Depository. The merger was the result of a government push to strengthen Russia's financial infrastructure, stimulate market activity, and draw Russian equity issuers and foreign investors back to the national market.

The push towards consolidation suggests that the potential benefits of competition may ultimately be outweighed by the benefits of network externalities and economies of scale and scope achieved by a single provider. Nevertheless, some stakeholders argued that market structure outcomes should be allowed to evolve in response to market dynamics and the needs of the industry rather than be determined upfront by regulators – even if competition ultimately only became a temporary structure.

4.3 Cost Implications of Competition

Competition in clearing Australian cash equities could have cost, risk and efficiency implications for the functioning of markets, financial stability and access. The introduction of competition could also impose additional operational costs on market participants. A key theme of the stakeholder consultation was whether the costs associated with competition in clearing would outweigh the potential benefits.

This section outlines some of the potential costs of competition, drawing on both stakeholder responses and evidence from overseas markets.

4.3.1 Implications for market functioning

Competition in clearing could affect the functioning of the market for ASX securities. In the absence of interoperability between competing CCPs, both parties to a centrally cleared trade must be participants of the same CCP. Where each market operator is served by only one CCP, the costs associated with maintaining multiple trading and clearing arrangements could give participants an incentive to trade only on a subset of the available markets. The division of trade flows across clearing and trading arrangements could lead to the fragmentation of market liquidity and the un-netting of exposures. Participants may therefore face increased margin obligations and reduced settlement efficiency.

The benefits of netting could encourage participants to concentrate trade flow in a single CCP. Similarly, a new entrant might seek to clear only a narrower range of more liquid products, supporting the use of simpler margin methodologies and lower operational costs (see Section 4.5). These

27 These injections were partly used to ensure that EuroCCP Ltd complied with capital requirements.

dynamics could have implications for the respective activity profiles of incumbent and competitor CCPs, and consequently their risk and cost profiles. When the new MTFs entered the European market, for example, they generally offered trading only in the most liquid securities; less liquid securities continued to be traded predominantly on the incumbent national markets.

Although a number of participants raised concerns about the potential loss of netting efficiencies and the consequent increase in margin obligations in a multi-CCP environment, many viewed interoperability as a potentially effective means of addressing these issues (see Section 4.4).

4.3.2 Implications for financial stability

Competition between CCPs could also have implications for financial system stability. Although few respondents to the consultation expressed views on how competition in clearing could affect financial stability, many were of the view that any increased stability risks could be addressed by regulatory measures. Specifically, the minimum conditions set out in the 2012 Review were generally seen as likely to be sufficient to ensure that a multi-CCP market could operate in a safe and effective manner. Some of the possible risks to financial stability include:

- *'Race to the bottom' on risk controls.* There may be potential for CCPs to compete on the basis of less stringent risk management standards. However, respondents to the consultation thought this was unlikely in the current regulatory environment. Furthermore, market participants would not use a CCP that was perceived to have weak risk controls. Some stakeholders nevertheless highlighted that any new entrant CCP would need to be held to the same regulatory standards as the incumbent.
- *Instability in the event of exit.* Competition could involve both entry and exit of CCPs. Any exit could disrupt the segment of market activity that the CCP cleared, imposing costs and creating risk and uncertainty during the transition between providers. There was support from respondents for requiring exit plans and *ex ante* commitments as a means of reducing these risks. Referring to the recent consolidation of CCPs in Europe, one respondent stressed the importance of establishing clear guidelines and operating requirements for potential entrants, to ensure they would be making a long-term commitment to the market.
- *Oversight of offshore entrants.* Since the most likely potential entrant would be an overseas CCP seeking to leverage existing capabilities in an offshore cash equity market, the Regulators would need to ensure they had sufficient influence over that CCP in order to meet their regulatory objectives. Stakeholders expressed strong views on how the CFR's Regulatory Influence Framework should be applied in the case of the Australian cash equity market. Many respondents took the view that the domestic location requirement would materially increase the cost of establishing a competing cash equity CCP in Australia. This prompted some respondents to argue against the application of this policy, on the basis that any established overseas CCP would already be overseen against the CPMI-IOSCO *Principles for Financial Market Infrastructures* (PFMIs) by its home regulator and hence subject to the same stringent standards as Australian domestic CCPs. They therefore considered that the domestic location requirements established an unnecessary barrier to entry. Other respondents, however, agreed that the Regulatory Influence Framework was necessary in order to ensure that potential risks to the stability of the Australian financial system and the real economy could be adequately monitored and controlled by the Regulators – particularly in the event that an overseas CCP entered insolvency.
- *Settlement arrangements for competing CCPs.* The settlement arrangements for a multi-CCP environment could give rise to additional risks, such as financial interdependencies between CCPs and increased complexity in managing a default. A number of participants stressed the

importance of ensuring that any competing CCP was granted equal priority to ASX Clear in the settlement process. Relatedly, stakeholders also wanted to ensure that any new settlement arrangements did not compromise the efficiencies of the existing model.

4.3.3 Implications for access to settlement services

In the 2012 Review, stakeholders generally agreed that there may be less scope for competition in the cash equity settlement market. Accordingly, the Agencies' analysis assumed that ASX would remain the sole provider of core securities settlement services, and competition in settlement was outside the scope of the current Review. Nevertheless, the Agencies sought stakeholder feedback on the implications of competition in clearing for the design, operation and organisation of equity settlement.

Existing settlement arrangements

ASX Settlement is currently the sole provider of settlement services for ASX securities. As in the 2012 Review, respondents to the consultation generally agreed that competition in the settlement space was unlikely to emerge. However, a small number of stakeholders did not rule out the possibility, arguing that competition in settlement would allow the benefits of competition at the clearing and trading levels to be more fully realised. The possibility of a settlement solution emerging in the long run for the Asian region was also raised.

The core settlement function – the transfer of legal title – is currently performed via CHESS, ASX's electronic cash equity CS system. Although CHESS is generally thought to be an efficient and effective system, many respondents to the consultation noted that it was ageing and in urgent need of an upgrade. Several respondents also commented that the design of CHESS was unique to the Australian market; participants and service providers were consequently required to implement bespoke information and technology systems to interface with CHESS, limiting the scope for international companies to leverage operational efficiencies.

As part of a broader technology upgrade project, ASX has committed to investing in its cash equity CS infrastructure over the next three to four years. ASX has been engaging the user forums established under the Code to provide input on the system that will replace CHESS. One of the key strategic initiatives progressed by the Forum and Business Committee has been a commitment to adopt global messaging standards as part of the broader CHESS replacement project (see Section 2.3.2). ASX has also indicated that the clearing and depository functions that are currently integrated within CHESS are likely to be separated out into specialist systems. ASX intends to consult with the industry on the business requirements for the new system over the coming period.

Nevertheless, many respondents to the consultation continued to raise concerns about the level of ongoing investment in the system. There were suggestions that ASX, as the custodian of this essential market infrastructure, should make a commitment to investing in the future development of CHESS. Industry participants advocated for greater user input in determining how the system should be developed, with calls for user representation on the ASX Settlement Board. There was some concern that if the moratorium on competition was not extended, ASX would withdraw its commitment to make value-added investment in the CHESS replacement system beyond the minimum requirements under existing regulatory standards. Indeed, ASX stated in its submission that it would reconsider the scope and timing of its investment in the cash equity CS infrastructure if the moratorium was not extended for a further five years.

Implications of competition in clearing for settlement arrangements

The settlement of most transactions in ASX securities currently occurs in a single daily batch process run by CHESS. These settlement arrangements have been in place for many years and, as noted

above, are generally regarded as highly efficient and effective. The entry of a new cash equity CCP would have implications for the design, operation and organisation of the settlement model.

There was little discussion during the current consultation about possible settlement models for a multi-CCP environment. One of the models proposed by stakeholders in the 2012 Review was the 'settlement agent' model. Under this model, a competing CCP would submit novated trades as bilateral settlement instructions via an ASX Settlement participant, rather than via a direct feed. However, such a model could give rise to financial stability risks, in part because it would place a high level of financial and operational reliance on the relevant ASX Settlement participant and commercial settlement bank. Furthermore, under the current arrangements, the competing CCP would have a lower priority than ASX Clear in the settlement algorithm and in default management scenarios; several participants voiced concerns about this, and the Regulators would be likely to consider this to be unacceptable from a stability perspective. This provides an example of the potential costs and risks that could arise from a change to the existing settlement arrangements.

One key matter raised by stakeholders was that the netting and operational efficiencies of the existing model should be preserved as far as possible. Some participants also stressed the importance of providing all CCPs with materially equivalent priority within the settlement process. Respondents suggested that the functionality to accommodate multiple CCPs should not be difficult or costly to integrate into the CHESS replacement system, particularly if international messaging standards were adopted. It was noted that available 'off-the-shelf' software was likely to already have the functionality for connecting to multiple CCPs.

Implications of competition in clearing for access to settlement

Given that ASX is expected to remain the sole provider of core settlement services, at least in the medium term, any new cash equity CCP would require access to ASX Settlement. A number of stakeholders voiced concerns that the vertical integration of trading, clearing and settlement within the ASX Group could give rise to an 'essential facilities' scenario (see Section 4.1.3), undermining competition at the clearing level.

The TAS and SFS are currently made available under a published set of contractual terms of service, which specify service levels and include operational and technical requirements. In accordance with its commitments under the Code, ASX has recently made a number of enhancements to the service level and information-handling standards established under the TAS and SFS. It has also increased the transparency of the operational performance of these services, undertaken a technical review of the TAS to confirm material equivalence with the services performed for trades executed on the ASX market, and waived the annual TAS service fee. ASX has also been working with Chi-X to extend the existing clearing and settlement access arrangements to certain non-ASX listed securities.

Nevertheless, some stakeholders have continued to report specific difficulties in negotiating access arrangements with ASX, citing examples of delay, non-responsiveness and unreasonable contract terms. There are concerns that the internal integration of ASX's trading, clearing and settlement systems necessarily implies that ASX cannot provide post-trade services to unaffiliated market operators on a non-discriminatory basis. In this regard, there were calls for the new settlement system to provide for standardised open access, with ASX Clear accessing ASX Settlement through the same technical interface as all other industry participants, including unaffiliated market operators and any competing cash equity CCPs.

The Agencies were encouraged to consider various regulatory responses to ensure that a competing CCP could achieve fair and non-discriminatory terms of access to ASX Settlement. Proposed measures included: strengthened governance arrangements; regulation of access and pricing; and structural or operational separation of ASX Settlement from the ASX Group. It was noted, however, that measures such as the separation of various ASX functions would decrease the operational efficiencies inherent

in a vertically integrated structure; any consequent increases in ASX's operating costs could be passed on to participants through higher fees. The complexity of detailed pricing and access controls could also give rise to significant costs and challenges (see Section 5.2).

In the context of weak contestability of settlement services, a number of participants raised concerns about settlement fees in a multi-CCP market. Although the Oxera (2014) study concluded that ASX's settlement fees were currently at the lower end of the range internationally, stakeholders saw the potential for ASX to recoup losses from increased competition in clearing by increasing fees for settlement services, where it faced less competition.

4.3.4 Operational cost implications for market participants

A number of stakeholders raised concerns that competition in clearing would impose additional operational costs on CS participants. These costs could potentially fall on all participants irrespective of the benefits they would derive.

In the absence of interoperability (see Section 4.4), market participants may have an incentive to establish connections with all markets and CCPs to maximise the scope of trading opportunities. Competition in clearing could therefore lead to:

- large up-front costs from establishing new connections, processes and technology
- duplication of fixed CCP-participation costs, such as legal and compliance costs, membership fees and default fund contributions
- ongoing costs of clearing through multiple CCPs arising from the duplication of operational processes and resourcing (including for the management of multiple accounts and carrying out reconciliations).

The un-netting of exposures arising from the fragmentation of trade flow across multiple CCPs could also have a number of ongoing cost implications for participants. Some sources of these costs include:

- *Exposures and margin obligations.* Un-netting would be expected to increase the level of aggregate exposure relative to the case in which trades were concentrated in a single CCP. Participants' initial margin obligations associated with this exposure would rise commensurately.
- *Default fund contributions.* Participants would have to meet any required member contributions to the default fund of each CCP with which they had a direct connection. Since un-netting would be expected to increase the aggregate exposure in the market for a given volume of trade flow, the required aggregate size of CCP default resources would similarly be expected to increase.[28]
- *Settlement efficiency.* Depending on the settlement model ultimately applied, it is likely that clearing via multiple CCPs could have an impact on settlement efficiency. For example, the division of trade flow across multiple CCPs would increase the total volume of settlement instructions; it could also increase the complexity of pre-positioning securities for settlement and therefore increase the potential for settlement fails.

Since some of the costs of participating in multiple CCPs would be independent of a firm's trading activity, relative costs could increase for some participants. The uneven distribution of operational costs could, in turn, affect the participation structure of the market.

28 ASX Clear does not currently collect prefunded participant contributions to its default fund, relying instead on own funds.

4.4 Interoperability

As in the 2012 Review, many respondents to the consultation expected interoperability to be an effective mechanism for mitigating some of the adverse implications of a multi-CCP environment, including liquidity fragmentation and the increased operational costs associated with multiple CCP memberships.

Interoperability between two clearing facilities allows a participant of one CCP to execute centrally cleared trades with a participant of the other CCP (Figure 2).[29] In the absence of interoperability, both parties to a centrally cleared trade must be participants of the same CCP; market participants that do not establish connections with all markets and CCPs may therefore face a restricted scope of trading opportunities (Figure 1).

Figure 1: Central Clearing Without Interoperability

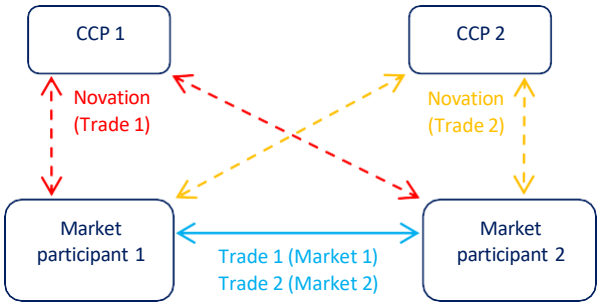

Figure 1 illustrates a market in the absence of interoperability. Both participants to a trade must be members of the same CCP. In order to maximise the scope of trading opportunities, participants would need to establish connections with all markets and all CCPs.

Figure 2: Central Clearing With Interoperability

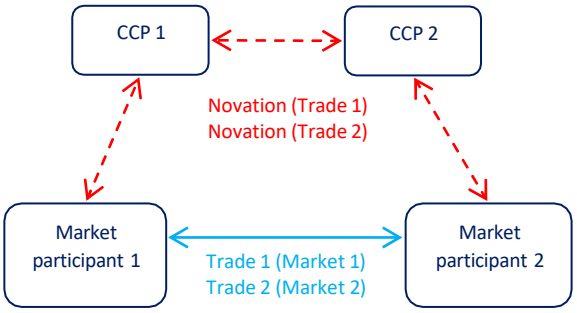

Figure 2 illustrates a market with interoperability. A participant of one CCP can execute trades on multiple markets with a participant of a different CCP. Each trade is novated into three contracts: between each participant and its own CCP and between the two CCPs.

Allowing participants of multiple trading venues to clear all their trades through a single CCP could mitigate some of the costs associated with a multi-CCP environment. At the same time, however, interoperability could lead to additional complexities and risks which would need to be carefully understood and managed by the relevant CCPs, participants and regulators.

This section considers the potential benefits of interoperability in a multi-CCP setting, the implications for financial stability, management of risks and potential difficulties in implementing such arrangements. The analysis draws on evidence from the European experience with interoperability since the early 2000s.

4.4.1 Benefits of interoperability

Many participants expected that the ability to concentrate clearing through a single interoperable CCP would allow them to maintain operational efficiency and realise the price benefits of competition.

- *Market fragmentation and un-netting of exposures.* Since interoperability allows participants of multiple trading venues to concentrate all their centrally cleared trades in a single CCP, interoperability can reduce market fragmentation and mitigate many of the costs arising from the un-netting of exposures.

29 Novation is the process whereby matched trades between participants are replaced by separate contracts between the buyer and the CCP and the seller and the CCP.

- *Costs for participants.* Since interoperability between competing CCPs precludes the need for multiple clearing connections, participants can avoid some of the operational costs associated with a multi-CCP environment without limiting their access to products and trading networks.
- *Competition*. Network externalities arise in a competitive market without interoperability, since a larger CCP can offer its participants wider access to other traders and hence a deeper market. Participants are also more likely to join a large CCP rather than multiple smaller CCPs due to the costs associated with multiple clearing memberships. By allowing a CCP to access another CCP's participant network, interoperability minimises the network advantages and market power that accrue to large CCPs, fostering competition between clearing services. Furthermore, in the absence of interoperability, the CCP through which participants on a market must clear is typically chosen by the market operator. Market operators therefore have an incentive to choose a CCP with lower fees or superior service levels, since this would make the market more attractive. Competition between CCPs may be diminished, however, if at least one of the market operators is already vertically integrated with a CCP or if market operators face substantial costs in changing their clearing arrangements. Interoperability facilitates the use of multiple CCPs by each market operator, allowing participants to choose their preferred market operators and CCPs based on the service characteristics that best suit them.

4.4.2 Implications for financial stability

While interoperability could mitigate some of the costs arising from competition in clearing, both stakeholders and the Agencies recognise that it could also give rise to additional complexities and risks. These risks include:

- *Credit risk.* The introduction of credit exposures between interoperable CCPs gives rise to default risk and the potential for the transmission of stress between CCPs. Interoperability arrangements expose each CCP to potential spillover effects in the event that a linked CCP was unable to meet its obligations. An interoperable CCP that managed its risks in accordance with the PFMIs would be able to meet its obligations even upon the default of its two largest clearing participants in extreme but plausible market conditions. If, however, the CCP had exhausted its prefunded risk resources and began to implement loss allocation (recovery) tools, a linked CCP may be required to share in potentially uncovered credit losses. Since the value of trades flowing across a link could become very large, the default of one CCP could impose substantial losses on the linked CCP. The potential losses borne by the linked CCP could threaten its own solvency, generating contagion across markets. Depending on the agreed loss-sharing arrangements, each CCP would need to ensure it had sufficient financial resources available to address this risk. Interoperability also increases the risk that liquidity and operational problems are spread across CCPs.
- Operational, legal and regulatory risks.
- Operational risks can arise if linked CCPs operate in different time zones, have different risk management, technical or communication arrangements, or become dependent on each other's systems and procedures.
- Legal risks can arise particularly in cross-border arrangements, due to differences in laws governing novation, netting, settlement finality, collateral ownership and insolvency.
- Regulatory risks can also arise in cross-border arrangements if there are uncertainties about the delegation of responsibilities among the relevant regulatory and oversight authorities.

These risks would need to be managed carefully by the CCPs involved, and fully understood by participants and regulators. The type and degree of risk arising from interoperability depends on the

structure of the CCP link network, as well as the nature of the relationships between CCPs (see Appendix A).

4.4.3 Management of risks

To ensure the continued safe and effective functioning of the cash equities market with CCP interoperability, certain risk mitigation measures would need to be put in place. In particular, CCPs would need to have adequate protection to withstand the losses that could arise in the event of recovery or resolution of a linked CCP.

Provided that each CCP prudently managed its exposures to its own participants, the likelihood of a CCP becoming insolvent would be extremely low. Nevertheless, as noted above, the implementation of recovery or resolution tools at one CCP could impose losses on any linked CCP. The market disruption that would be expected to arise from a CCP default would be significantly greater if the transmission of stress caused multiple CCPs to default simultaneously.

Existing risk management requirements

In order to mitigate these risks, the PFMIs and, correspondingly, the Bank's FSS outline a number of requirements to ensure that CCPs identify and properly control any risks associated with interoperability arrangements (see Appendix A).

At the core of these requirements is the need to manage the additional exposures that arise between linked CCPs. It should be noted that doing so would not be expected to undermine the netting benefit from interoperability. Cox, Garvin and Kelly (2013) show that under a wide range of plausible conditions, the benefit arising from inter-CCP netting dominates the cost arising from the management of inter-CCP exposures; interoperability can therefore decrease the aggregate exposure in a market relative to a situation in which there are two unlinked CCPs.[30] To the extent that collateral requirements reflect underlying exposures, interoperability would be expected to economise on collateral.

Additional guidance

The FSS are not prescriptive in how a CCP should manage the risks arising from interoperability arrangements. Further guidance to clarify the Bank's interpretation of the relevant standards may therefore be required. Consideration would need to be given to: the appropriate level and source of resources used to cover inter-CCP exposures; inter-CCP margining arrangements; whether a CCP should contribute to a linked CCP's default fund; recovery arrangements; and whether operational arrangements and risk management frameworks should be harmonised across linked CCPs.

A few respondents noted that interoperability operated effectively in the European market; one respondent in particular argued that it did not have any adverse effect on financial stability in Europe, as evidenced by its resilience during the global financial crisis (including the Lehman default period).

Nevertheless, the Agencies are of the view that a conservative stance in respect of interoperability would be consistent with the Bank's mandate to promote stability in the financial system, and might be desirable given the novelty of such arrangements in Australia and their complexity. Any additional guidance would therefore aim to ensure that the risks posed by interoperability were adequately controlled without undermining the benefits of such arrangements. The guidance could be similar to that issued by regulators in Europe, which assists national authorities in assessing CCP interoperability arrangements to ensure that any resulting risks are effectively identified and managed (see Appendix B).

30 Cox N, N Garvin and G Kelly (2013), 'Central Counterparty Links and Clearing System Exposures', RBA Research Discussion Paper No 2013-12.

4.4.4 Implementation challenges

In light of the different incentives of incumbent and competitor CCPs, interoperability arrangements may not develop on a purely voluntary basis. There may also be operational challenges in establishing inter-CCP links. This has been the experience in Europe.

- An incumbent CCP with a dominant market position has little private incentive to establish interoperability with a new competitor, as this would enable the entrant to attract business away from the incumbent. Furthermore, any agreement that was ultimately reached might not be on mutually acceptable commercial terms, given the disparity in bargaining power between a large incumbent and a new entrant.
- Operational challenges arise from differences in business models, market practices and technical communication languages. Prior to establishing a link, the FSS require each CCP to undertake extensive due diligence to assess all potential sources of risk arising from the arrangement, including operational risks. A framework for identifying, monitoring and managing these risks on an ongoing basis would need to be put in place, and some aspects of the linked CCPs' rules and procedures may need to be harmonised.

Citing these barriers and the European experience, several stakeholders took the view that fair and effective interoperability links may not develop in the absence of regulatory intervention. While the PFMIs and the FSS (CCP Standard 17) provide for 'fair and open access' to a CCP's services, including by other FMIs, participants suggested that further measures – such as mandating interoperability arrangements – may be required. Similarly, acknowledging the obstacles to establishing interoperability links, European regulators have strengthened access obligations between CCPs in recent years; under new market infrastructure regulation, interoperability requests can be rejected only on the basis of risk considerations (see Appendix B).

4.5 Regulatory Oversight in a Multi-CCP Environment

Respondents to consultation in the 2012 Review suggested that significant regulatory change may be required to support a multi-CCP environment, analogous to the transfer of market supervision responsibilities from ASX to ASIC at the time competition was introduced at the trading level. One respondent in particular suggested that the Regulators may need to play a role in areas such as default management arrangements, capital requirements and client agreements. It was proposed that ASIC might need to write 'clearing integrity rules' as an analogue to existing market integrity rules.

Although a number of respondents to the current Review suggested that some regulatory measures may be required to effectively supervise a multi-competitive environment, there was little discussion of the need to transfer oversight responsibilities from CCPs to regulators. As in the 2012 Review, the Agencies do not see a strong case for a material change in the Regulators' supervisory responsibilities in a multi-CCP environment. In forming this view, the Agencies have drawn on the experience of competition in equity clearing in Europe, which has not involved centralised surveillance of clearing participants by a regulatory agency, as well as recent experience in the Australian OTC interest rate derivatives market.[31] Nevertheless, the Agencies acknowledge the need to ensure that regulatory settings remained appropriate for the prevailing market structure.

The case for a single market-wide supervisor for market integrity matters is straightforward, since traders commonly pursue strategies to exploit profit-making opportunities between different trading

31 The transfer of supervision has not been required for competition in the clearing of OTC Australian dollar interest rate derivatives for which there are three competing CCPs licensed in Australia. Globally, and most notably in the European Union, there is no precedent for the transfer of supervision in clearing to a centralised regulatory agency.

platforms. The case is less straightforward at the clearing level, where the 'supervisory' role of the CCP is primarily directed towards monitoring and managing its proprietary credit and liquidity exposures to its participants. CCPs are required to manage these exposures on a 'loss-given-default' basis, ensuring that they are collateralised against any externalities arising from a common participant's risk-taking behaviour outside of the CCP, including trades cleared through a competing CCP. Nevertheless there are several areas in which a more fragmented view of participants in a multi-CCP environment could potentially disrupt ASX's current arrangements for monitoring and managing clearing risk, or lead to undesirable changes in its product or participant scope.

- *Default management*. In a multi-CCP environment, the defaulter's positions could be split across multiple CCPs. Without the ability to influence the management of the defaulter's positions at the other CCP, each CCP may have a stronger incentive to place a participant into default as soon as a default event has occurred or is likely to occur (in order to achieve a first-mover advantage in closing out positions) – although there is no evidence to suggest this has been the case in Europe.[32] While a swift declaration of default may be desirable in some circumstances, in other circumstances a more measured response may support more orderly management of a participant incident.
- *Adverse selection in participants and products*. In a multi-CCP environment, it is possible that minimum access criteria would not be equivalent across CCPs. Such criteria would need to be consistent with the FSS, which require that access be based on reasonable risk-based participation requirements (CCP Standard 17). A new entrant could nevertheless set requirements at a level that excluded smaller participants currently served by the incumbent and thereby materially alter the relative risk profiles of the incumbent and competitor CCPs. Similarly, a new entrant might seek to clear a narrower range of more liquid products, supporting the use of simpler margin methodologies and lower operational costs. The cost efficiencies achieved by an entrant under such circumstances could drive activity in the more liquid products away from the incumbent, concentrating the incumbent's exposures towards less liquid products.

While several other matters arising in a multi-CCP environment have been raised as having regulatory implications, the case for altering regulatory arrangements to accommodate these is less strong.

- *Participant monitoring*. On a day-to-day basis, CCPs monitor the positions of their participants (such as for emerging concentration risks), and gather general information and intelligence to support their assessment of participant credit standing. In a multi-CCP environment, CCPs would observe a smaller proportion of each participant's cleared positions and would not be able to observe any issues that arise in the management of a participant's positions in relevant products at another CCP. However, the risks introduced via this fragmentation of information are incremental in the sense that irrespective of market structure, participants will typically have other non-cleared exposures and risks that would not be visible to a CCP.[33] More fundamentally, CCPs carry out monitoring of participants to manage their own proprietary risk and it would be inappropriate for this function to be outsourced to a regulator. CCPs could require their participants to report additional information on marketwide positions in order to address concerns regarding the fragmentation of information.
- *Interoperability*. To the extent that competition was supported by interoperability between competing CCPs, these arrangements would require oversight by the Regulators. However, this

32 See Zhu S (2011), 'Is There a "Race to the Bottom" in Central Counterparties Competition? – Evidence from LCH.Clearnet SA, EMCF and EuroCCP', *DNB Occasional Studies*, Vol 9, No 6.

33 Participation requirements and general information gathering are currently used to mitigate such risks.

would be an extension of existing supervisory arrangements with respect to the FSS (to cover inter-CCP arrangements in addition to participant-related risk management); there is no reason to consider that an additional regulatory layer would be required to oversee an interoperable link.

- *Client agreements*. During the 2012 review, one stakeholder suggested that there was a role for the Regulators in the centralised supervision of client agreements in a multi-CCP environment. While CCPs do not directly oversee agreements between participants and their clients, they often specify some of the minimum terms that must be contained in such agreements. It is unclear why a move to competition would strengthen the case for changing these arrangements.

4.6 Best Execution

The best execution obligation requires a market participant to take reasonable steps when handling and executing client orders to obtain the best outcome for their client.[34] The nature of the obligation differs between retail and wholesale clients:

- *Retail clients:* best outcome means the best total consideration (the purchase or sale price adjusted for transaction costs, which include clearing and settlement costs), taking into account client instructions. The current guidance interprets this as the best purchase or sale price in situations where there are no material differences in transaction costs between trading venues.
- *Wholesale clients:* the best outcome should take into account all outcomes relevant for the client, which may include price, costs, speed of execution and likelihood of execution. Clearing and settlement is identified as one potential cost.

The existing best execution obligation and associated guidance contemplate competition in clearing. Nevertheless, if a competing CCP emerged, ASIC would provide additional guidance on the implications for market participants and market operators, particularly around the interpretation of 'total consideration' for retail investors.

While market participants would have to consider their best execution obligation in a multi-CCP environment, the obligation itself would not necessarily require a connection to every CCP. The test for a market participant considering having access to only one CCP would be whether it could demonstrate that it had taken reasonable steps to deliver the best outcome and whether in practice it could consistently obtain the best outcome for its clients. Therefore, in a multi-CCP environment, commercial factors and drivers, such as client preferences, would most likely be key determinants of market participants' decisions to connect to competing CCPs, with appropriate best execution policies developed accordingly.

4.7 Minimum Conditions for Safe and Effective Competition

The 2012 Review considered how regulators could ensure that, if competition emerged, the benefits of competition could be realised while mitigating any adverse implications for financial system stability and the effective functioning of financial markets.

34 Best execution is an obligation under the *ASIC Market Integrity Rules (Competition in Exchange Markets) 2011* that applies to market participants dealing in Australian equity market products and Commonwealth Government Securities (which includes ASX securities). Additional guidance on best execution is provided in ASIC Regulatory Guide 223: *Guidance on ASIC Market Integrity Rules for Competition in Exchange Markets.*

In particular, the Agencies examined safeguards that might need to be put in place in a multi-CCP environment, to address the various issues that could arise. Such actions were cast in terms of minimum conditions for safe and effective competition.

Based on stakeholder feedback in the current consultation, as well as further analysis and consideration of the issues set out in the preceding sections, the Agencies have reviewed the safeguards identified in the 2012 Review. The Agencies consider that the safeguards identified previously, together with an additional requirement that appropriate interoperability arrangements be established between any competing CCPs, would be sufficient to protect the stability and effective functioning of the cash equity market and facilitate competition if the moratorium were lifted. The Minimum Conditions relate to:

1. Adequate regulatory arrangements. These should include:
    (a) rigorous supervision against the FSS and other requirements under the Corporations Act
    (b) application of the CFR's framework for regulatory influence over cross-border CS facilities
    (c) *ex ante* wind-down plans
    (d) appropriate arrangements for regulatory oversight in a multi-CCP environment.
2. Appropriate safeguards in the settlement process. The cash equity settlement model applied in a multi-CCP environment should seek as far as possible to preserve the efficiencies of the existing model, while:
    (a) affording materially equivalent priority to trades novated to a competing CCP
    (b) minimising financial interdependencies between competing CCPs in the settlement process
    (c) facilitating appropriate default management actions.
3. Access to the existing securities settlement infrastructure on non-discriminatory and commercial terms.
4. Appropriate interoperability arrangements between competing cash equity CCPs.

Each of the Minimum Conditions identified above is considered in greater detail in the remainder of this section.[35]

4.7.1 Adequate regulatory arrangements

(a) Rigorous oversight against the Financial Stability Standards and other requirements under the Corporations Act

The Corporations Act gives ASIC and the Bank joint regulatory responsibility for supervising CS facility licensees (see Section 2.2). The Bank is responsible for ensuring that CS facilities comply with the FSS and take any other steps necessary to reduce systemic risk. The FSS are aligned with the financial stability-related requirements of the PFMIs, which establish an international benchmark for the risk management and operational standards of CS facilities. ASIC is responsible for ensuring CS facilities comply with other obligations under the Corporations Act, as elaborated in ASIC's Regulatory Guide 211: *Clearing and Settlement Facilities: Australian and Overseas Operators* (RG211).

35 See also Section 4 of the final report of the 2012 Review. Available at <http://www.treasury.gov.au/PublicationsAndMedia/Publications/2013/competition-of-the-cash-equity-market>.

Equivalent application of these oversight standards across competing CCPs should be sufficient to limit any scope for competition on the basis of less onerous risk controls, and thereby ensure that the market continues to function in a safe and effective manner. The Agencies nevertheless acknowledge the need for close vigilance at the margins of the standards, including cost-cutting measures and product development processes.

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

If a new entrant CCP was seeking to leverage existing capabilities in overseas cash equity markets, the CFR's Regulatory Influence Framework would necessarily apply. As articulated in both the 2012 Review and the additional guidance on the Regulatory Influence Framework, the threshold for the application of the requirement to establish a domestic legal and operational presence for any CCP seeking to clear ASX securities would likely be set at a relatively low threshold. The Agencies are of the view that establishing a domestic location requirement in accordance with the Regulatory Influence Framework must remain an integral part of the Minimum Conditions, at least until the Regulators are comfortable with the arrangements for cross-border coordination and management of FMI recovery and resolution.[36] The precise thresholds for the requirement would be discussed and agreed with a prospective competitor in order to provide the entrant with sufficient certainty to support business plans and investment decisions. The threshold would also be made transparent to market participants, market operators and ASX, to ensure that all stakeholders had the necessary information to formulate business plans with certainty.

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

Since a commercially driven exit of a CCP in a competitive environment could disrupt activity in the segment of market activity that it cleared, the Agencies see a case to include measures aimed at mitigating such market disruption within the Minimum Conditions.

In particular, all competing CCPs – including the incumbent and any new entrants – would be required to commit *ex ante* to a notice period of at least one year prior to any planned exit from the market. This should be supported by ring-fenced capital sufficient to cover operating expenses for the duration of the notice period, calculated on a rolling basis, as well as clearly articulated wind-down plans which would be discussed with the Regulators.

The Agencies acknowledge that the conditions stated here are more stringent than the requirements for orderly wind-down envisaged in the FSS; Standard 14 for CCPs on general business risk requires that 'at a minimum, a CCP should hold, or have legally certain access to, liquid net assets funded by equity equal to at least six months of current operating expenses'. The Agencies consider this difference to be appropriate, as this requirement is intended to provide for a planned exit, while the FSS seeks to protect against exit due to the crystallisation of business risk.

Furthermore, as discussed above, a commercially driven exit of a CCP could disrupt activity in the segment of market activity that it cleared. Such disruption could also arise if an existing provider scaled back its activities due to increased costs (e.g. if its exposures became concentrated in less liquid products). The Agencies would therefore work with the CCPs and relevant market operators to establish *ex ante* contingency arrangements to ensure the continued provision of clearing services for less liquid securities in the event that the incumbent CCP for those securities were to exit the market or reappraise its provision of those services.

36 The international work on recovery and resolution of FMIs is currently ongoing. Domestically, in February 2015, the government released a consultation paper on legislative proposals to establish a special resolution regime for FMIs in Australia, available at <http://www.treasury.gov.au/ConsultationsandReviews/Consultations/2015/Resolution-regime-for-financial-market-infrastructures>.

(d) Appropriate arrangements for regulatory oversight in a multi-CCP environment

The Agencies do not see a strong case for a material change in the Regulators' supervisory responsibilities in a multi-CCP environment. This view is consistent with the idea that participant oversight is central to a CCP's risk management activities, given the proprietary risk exposure that a CCP assumes to its participants.

However, as discussed in Section 4.5, a more fragmented view of participants in a multi-CCP environment could disrupt arrangements for monitoring and managing clearing risk, including perhaps most notably in default management. As part of the Minimum Conditions, the Agencies would clarify arrangements for regulatory oversight, particularly in relation to default management and CCP recovery, at such time as a committed competitor emerged.

Competition in clearing could also give rise to adverse selection in both products and participants. This could lead to the fragmentation of the market along the lines of liquidity, with potential implications for the profile of exposures to be managed by each CCP. If a competing CCP were to emerge, the Agencies could explore steps to mitigate these effects, such as through closer oversight of product and participant scope; it is acknowledged, however, that there could be practical challenges in implementing such steps.

4.7.2 Appropriate safeguards in the settlement process

The entry of a competing cash equity CCP would have implications for the design, operation and organisation of the settlement model. Any changes to the existing settlement arrangements could potentially give rise to additional costs, as well as financial and operational risks (see Section 4.3.3). In light of this, the Agencies see a case to set minimum conditions around the design of the settlement model for a multi-CCP environment. As far as possible, the new model would need to preserve the efficiencies of the existing model, while affording materially equivalent priority to a competing CCP. It should also minimise financial interdependencies between CCPs in the settlement process and facilitate appropriate default management actions.

One possible model, proposed by the Agencies in the 2012 Review, would aggregate the trade feeds from multiple CCPs for settlement in a single net batch, preserving the efficiencies of the existing process. However, in order to minimise financial interdependencies between CCPs and to enable ASX Settlement to allocate a payments default or failed stock delivery to the appropriate CCP, settlement participants may need to maintain separate settlement 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, participants would need to be able to meet delivery and funding obligations to each CCP independently. This un-netting of delivery obligations ahead of settlement would necessarily result in some loss of efficiency compared with the current model.

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

In the absence of an alternative provider of cash equity settlement services emerging, any new cash equity CCP would require access to the vertically integrated incumbent settlement facility, ASX Settlement. Given that ASX Settlement is likely to remain the sole provider of cash equity settlement services, at least in the medium term, the Agencies consider that access to the settlement facility on commercial, transparent and non-discriminatory terms is a necessary condition to support competition in cash equity clearing. If competition in clearing were to emerge, ASX Settlement would therefore be required to facilitate access to its cash equity settlement infrastructure on a transparent and non-discriminatory basis.

Specifically, in providing settlement services, ASX should not discriminate in favour of its own operations relative to those of competing cash equity CCPs (except to the extent that the cost of providing the same service to another party was higher). As part of this:

- ASX should retain standard terms and conditions for unaffiliated CCPs that support access to its settlement infrastructure on non-discriminatory, transparent and commercial terms and promote outcomes that are consistent with those that might be expected to arise in a competitive market.
- ASX should have objectives for its settlement services that include an explicit overarching commitment to open access. Consistent with these objectives, service level agreements should commit ASX to providing access to its settlement services for unaffiliated CCPs on operational and commercial terms and service levels that are materially equivalent to those that apply to ASX as a market operator and a clearing service provider.
- ASX should adhere to a protocol for dealing fairly and in a timely manner with requests for access, including reasonable timeframes for responding to enquiries and arrangements for dealing with disputes.
- ASX should demonstrate, and periodically attest, that any investments in the systems and technology that support its cash equity settlement services did not raise barriers to access from unaffiliated CCPs.
- While ensuring that the above requirements are met, ASX should retain, and on an ongoing basis review, its arrangements for the handling of sensitive or confidential information. These arrangements should ensure that conflict-sensitive information pertaining to the strategic plans of unaffiliated CCPs is handled sensitively and confidentially, and in particular cannot be used to advance the interests of ASX as a market operator or CCP.

As a matter of principle, the Agencies maintain a preference for commercial negotiations to determine mutually acceptable terms and conditions of access. At the same time, however, it is recognised that some form of regulatory oversight or intervention could contribute to more mutually acceptable outcomes. The Agencies may therefore need to implement some additional measures, such as arbitration of access disputes, to regulate certain aspects of ASX Settlement's activities if it was determined that ASX Settlement was operating in a way that was detrimental to competition in related markets.

Relatedly, the Agencies consider that a continued commitment by ASX Settlement to transparent and non-discriminatory pricing could mitigate some of its potential to provide an advantage to ASX's competitive clearing or trading services through preferential pricing. If a competing CCP were to emerge, ASX would therefore need to ensure that the full range of fees for its settlement services:

- were transparent to all users of the services
- did not discriminate between ASX-affiliated and other users of the services
- were based on the efficient costs of providing the services.

The Agencies also note that ASX is planning to review its settlement fee structure in light of the upcoming changes to the settlement infrastructure. ASX would be expected to publish any changes to its settlement fee schedules along with an externally audited statement justifying the reasonableness of these changes, with reference to the calculated return on equity, benchmarked price lists or other relevant metrics.

As noted above, several stakeholders have 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 the needs of the industry. Although this is not directly related to the issue of competition in clearing, the Agencies agree that there is a strong case for such mechanisms. For so long as ASX Settlement remained the sole provider of cash equity settlement services, the Agencies would expect it to maintain a regular, formalised mechanism for user input to the governance of its infrastructure.

4.7.4 Appropriate interoperability arrangements between competing CCPs

Interoperability has been identified as a potentially effective mechanism for ensuring that the benefits of competition are realised while mitigating some of the adverse implications, including market fragmentation and increased operational costs for participants (see Section 4.4). Based on their analysis, the Agencies consider that a requirement to establish appropriate interoperability arrangements between cash equity CCPs prior to a competing CCP commencing operations would be a necessary condition to support competition in the clearing market.

Given commercial and operational considerations, the incumbent CCP may have little incentive to voluntarily develop interoperability arrangements with a new entrant. 'Open access' obligations or other regulatory measures may therefore need to be imposed to facilitate the establishment of fair and effective interoperability between the incumbent CCP and any new CCP seeking to enter the Australian cash equity market.

The Agencies also acknowledge that interoperability may give rise to additional complexities and risks. Should a competing CCP emerge, an effective risk management framework for interoperability arrangements would need to be put in place in order to mitigate these incremental risks. Specifically, the Bank would need to issue additional guidance to clarify how the requirements under CCP Standard 19 should be met for the purpose of establishing safe and effective interoperable links.

5. Policy Approach: Monopoly

As discussed in the previous section, the economics of central clearing favour the existence of relatively few CCPs in a given market. Factors such as network externalities and economies of scale and scope create significant barriers to entry into the market for clearing services.

An incumbent monopoly CCP that is unlikely to face competition due to high barriers to entry may choose to exert its monopolistic power by charging high fees to market participants. If the provision of clearing services is a natural monopoly, costs will be lower in theory if all service provision is concentrated in a single CCP. However, in the absence of competition, a reduction in fees would only occur if the monopoly chose not to extract monopolistic rents from participants. A monopoly CCP that did not face the threat of competition would also be unlikely to have a strong incentive to innovate and invest efficiently or consult with its users. Factors such as the level of regulation, ownership structure and profit orientation could also influence how a CCP monopolist behaves.

If the policy approach adopted was to retain a monopoly CCP, some level of regulation would be required to address such issues and provide a discipline on ASX's conduct in the absence of a competitive threat. This section discusses two broad regulatory options for a monopoly environment: self-regulation or partial regulation, and full regulation.

5.1 Self-regulation or Partial Regulation

Among the CFR's recommendations arising from the 2012 Review, ASX was encouraged to adopt a code of practice for its monopoly CS services (see Section 2.3). By establishing a formal and transparent commitment to the industry, it was envisaged that the Code would go some way towards delivering outcomes similar to those that might be expected in a competitive setting.

The Code provides an example of a self-regulatory approach to dealing with monopoly provision of CS services. This section considers stakeholder views on the existing arrangements and examines some of the suggested options for refining and perhaps enforcing commitments under the Code, should ASX remain the sole provider of these services. An enforceable Code might be considered a partial regulatory approach.

5.1.1 Effectiveness of the Code of Practice

In its response to the Agencies' consultation, ASX was strongly of the view that a single CCP was the most effective outcome for a market of this size, and that self-regulation had proven to be effective. ASX emphasised the steps it had taken under the Code in the past two years, including the establishment of a user forum, enhancements to cost and price transparency, and amendments to access arrangements for unaffiliated market operators.

Nevertheless, other respondents to the Agencies' consultation expressed mixed views about the effectiveness of the Code. While some saw the Code as having been beneficial in improving transparency and user engagement, others questioned whether it had achieved its intended purpose. Many suggested that the Code did not go far enough to address the industry's concerns in the absence of competition. If the moratorium on competition were extended, or if a competing CCP failed to emerge, many respondents considered that additional commitments in some key areas might be desirable, together with stronger accountability mechanisms or a level of enforceability. Some areas in which it was suggested that arrangements might usefully be strengthened in the absence of competition, perhaps via regulatory means, are considered below.

User input to governance

The key commitment in the Code relevant to the principle of 'user input to governance' is the establishment of the Forum, supported by a Business Committee. A number of stakeholders took the view that the Forum and Business Committee had provided an effective platform for users to engage with ASX. Some respondents saw these arrangements as instrumental in improving the ASX service, with initiatives being progressed in a more timely and collaborative manner. These respondents commonly cited the transition to a two-day settlement cycle as an example of the important strategic initiatives progressed by the Forum and Business Committee. There were, however, some concerns that the user groups did not have an appropriate level of independence from ASX, particularly with respect to setting the meeting agendas.

The Forum

Given the strategic nature of the Forum's objectives, it was seen as appropriate that the Forum had senior representation across a range of participant and stakeholder groups. Some stakeholders, however, felt that the Forum was too senior and high level in its focus and suggested that the Forum should comprise the heads of the users' equity businesses, rather than CEOs.

Indeed, it is important that users also have a mechanism to provide input on less strategic matters. In the clearing and settlement context, detailed design and operational considerations may be very relevant to performance, resilience, security, functionality, and the overall price and quality of the services provided to market participants. User input at both the strategic and operational levels is therefore extremely important if investments in the design, operation and development of the CS infrastructure are to be directed towards the needs of market participants and keep pace with international best practice.

In practice, input on operational and design matters is achieved by delegation to the Business Committee. Indeed, many stakeholders viewed the Business Committee as the more valuable and effective mechanism, since its members had more technical knowledge and were able to discuss issues of greater practical importance to the market.

The Business Committee

The Business Committee plays an important role in providing user input to decisions related to investment in the design, operation and development of the CS infrastructure. The Business Committee was originally devised to provide input on matters dealt with in the Forum. In practice, the Business Committee has operational input on a broader range of initiatives, not just Forum-led matters (see 'Box A: The Forum and Business Committee').

ASX has recognised the evolution of the role of the Business Committee by proposing amendments to the Code that would reduce the frequency of Forum meetings, while increasing the frequency of Business Committee meetings. In its submission to the consultation, ASX further proposed that the Code formally recognise the role of the Business Committee in supporting ASX on design and operational matters, and extend its membership to include the heads of participants' equity businesses. This would be expected to further enhance the status of the Business Committee and expand the scope of issues it considers.

If the moratorium on competition were extended, or if a competing CCP failed to emerge, there could be a case to go beyond ASX's proposed amendments to the Code. In particular, there could be a case for ASX to make a formal commitment to invest promptly and efficiently to meet the needs of users, as well as more fundamental commitments or requirements to explicitly recognise the importance of both strategic and operational inputs from users across the range of ASX's infrastructure investments.

For instance, since the Business Committee provides inputs on a broader range of issues than the strategic initiatives dealt with by the Forum, independent accountability arrangements could be established for ASX in its interactions with the Business Committee; these would complement the existing 'comply or explain' mechanism for the Forum. Such arrangements could perhaps take the form of an annual report on how ASX has progressed the work program of the Business Committee and taken into consideration Business Committee members' views. Such changes would be in the spirit of the user input achieved in user-owned/governed settings.

The Board and Board Committees

Prior to 2014, the Boards of all four ASX CS facilities, including ASX Clear and ASX Settlement, shared common directors. This reflected the group-wide approach to the governance and oversight of CS activities. In January 2014, this arrangement was altered in favour of two overlapping but non-identical sets of Boards. One set of Boards governs clearing and settlement of equities and equity derivatives in ASX Clear and ASX Settlement ('Equity Boards'), while the other set of Boards has oversight of clearing and settlement of futures and OTC bonds and derivatives in ASX Clear (Futures) Pty Limited and Austraclear Limited ('OTC and Futures Boards'). Each set of Boards has in common three independent directors that are not also directors of ASX Limited, as well as three directors that are also on the ASX Limited Board (including the CEO). However, the Equity Boards have one director that does not sit on the OTC and Futures Boards, and the OTC and Futures Boards have two directors that do not sit on the Equity Boards. Two directors constitute a quorum on each Board.

The restructure of the CS Boards was largely driven by the increasingly divergent agenda items between the Equity Boards and the OTC and Futures Boards since the development of the OTC derivatives clearing service. At the same time, however, it provides a mechanism for handling potential conflicts arising from the vertically integrated structure of ASX in a market with multiple trading venues for ASX securities. The reduction in the number of common directors between each of the CS facilities and ASX Limited, coupled with the quorum of two directors, allows matters that raise potential conflicts of interest to be considered and voted on without the involvement of directors that are also on the ASX Limited Board.

The Agencies consider these to be positive developments. The compositional changes and the possibility that Board members that are independent of the ASX Limited Board meet alone to consider matters that raise potential conflicts help to address some concerns raised by stakeholders in 2012.

Some stakeholders, nevertheless, considered that ASX could go further. There was support among respondents for greater independence and market user representation on the ASX Clear and ASX Settlement Boards. Some stakeholders argued that there could be a case to enshrine a Board-level voice for unaffiliated market operators. One respondent to the consultation proposed a governance model for ASX Clear and ASX Settlement that was based on the arrangements in place at ASX Compliance Pty Limited and the conditions imposed on the Canadian CDS following its acquisition by Maple Group. Under this proposal, the ASX Clear and ASX Settlement Boards would be required to: be independent of the ASX Group; review the performance of the business executive heads; attest to how the businesses have acted in the public interest; and comprise representatives of market participants and unaffiliated market operators.

Pricing

ASX has taken a range of actions in accordance with its pricing commitments under the Code, including publishing audited management accounts for ASX Clear and ASX Settlement in both 2013 and 2014, and commissioning an international cost benchmarking review by an economic consultancy firm, Oxera. While welcoming these actions, stakeholders questioned whether the Code alone could provide enough incentive for ASX to minimise costs and fees if the moratorium on competition were extended or if a competing CCP failed to emerge.

Management accounts

Stakeholders welcomed increased transparency and disclosure in the area of pricing. This included ASX's development of a policy for the apportionment of common shared costs and the publication of audited management accounts for its cash equity CS services. Alongside benchmarking studies (see below), measures of the return on equity based on these accounts could ultimately be the best barometers of the 'fairness' or 'reasonableness' of ASX's fee schedules.

Some respondents, however, argued that the accounts needed to be more granular to provide useful information about the costs and efficiencies of ASX's cash equity CS businesses. Furthermore, to the extent that the management accounts – and hence measures of the return on capital or equity – relied on ASX's internal cost allocation and transfer pricing policy, there could be a case for independent external validation of the appropriateness of this policy.

International benchmarking

The international benchmarking exercise has been valuable and has provided a deeper evidence base for the ongoing dialogue around the pricing of ASX's CS services. The Oxera cost benchmarking study concluded that cash equity CS fees in Australia were broadly in line with those in international markets of comparable size (see Section 4.1.1). However, a number of observations were made by stakeholders:

- Oxera's study failed to include some relevant international markets that had lower CS fees than those in Australia.
- Oxera's study was based on a range of 'user profiles' that were not necessarily the most relevant for Australia's cash equity market.
- Members of the Forum and Business Committee had insufficient input into the development of the study and were given insufficient opportunity to provide detailed comments on the report prior to its release.

In part reflecting these observations, several ASX participants commissioned a rival benchmarking exercise by Market Structure Partners. In many respects, this review reached broadly similar conclusions on the scale of ASX's fees. However, by including evidence from some additional lower cost – mainly European – markets and focusing on the fees faced by large intermediaries rather than end investors, the report placed ASX's fees towards the higher end of the range internationally, rather than towards the middle.

Taking the two studies together, it is clear that there are a number of subjective elements to such analysis. This would remain the case even if regulators or some independent party provided input into the benchmarking studies, as was suggested by a respondent to the consultation. Accordingly, these studies should be seen merely as inputs to the debate. ASX proposed that such studies be carried out only biennially, rather than annually.

Fee schedules

Transparency of fee schedules is important, and ASX has enhanced transparency under the Code by making available worked examples and tools to assist participants in calculating CS fees given the profile of their business. Particularly where governance arrangements give users a voice, transparency of fees, accounting cost information and benchmarking analyses can go some way towards putting pressure on a provider to reduce fees. However, since ASX is a for-profit entity, in the absence of a credible alternative provider such pressure can only go so far.

Accordingly, if the moratorium on competition were extended, or if a competing CCP failed to emerge, some stakeholders saw a case to complement existing pricing commitments under the Code

by introducing additional regulatory or independent oversight of ASX's cash equity CS fees. One way of doing this, as proposed by ASX in its submission to the Agencies' consultation, could be to require that ASX submit any changes to its cash equity CS fee schedules to the Agencies for review prior to implementation. However, in the absence of upfront price regulation, the Agencies consider that it may not be appropriate for them to be expected to review and endorse ASX prices in this way. An alternative approach could be for ASX to publish its CS fee schedules (and any proposed changes thereto) along with an externally audited statement justifying their reasonableness, with reference to the calculated return on equity and other relevant metrics. Such a transparency measure could inform market participants in their commercial negotiations with ASX.

Stakeholders expressed mixed views on the case for more stringent regulatory price controls. While a small number of respondents were in favour of some form of enforceable price regulation, it was also noted that formal price controls could themselves have a distorting effect and create market inefficiencies.

The Agencies also note that ASX recently pre-announced a revised fee schedule for its cash equity clearing services. If implemented, this would result in an upfront fee reduction and incrementally lower fees as the aggregate market value cleared increased. ASX stressed, however, that these fee cuts would be implemented only if the moratorium on competition was extended for a further five years. This is on the grounds that, if the moratorium was lifted, ASX would need to devote additional resources to studying the impact of an alternative market structure on its business.

Access – service levels, information handling and confidentiality

Stakeholders' underlying concerns around service levels and information handling stem largely from ASX's vertically integrated structure and shared management, operational and technological resources. Respondents who commented on these issues were generally of the view that access to ASX's CS services could not be provided on a fair and non-discriminatory basis so long as these facilities remained vertically integrated with the ASX trading platform.

With competition in trading now established, ASX has had to adjust to making its post-trade services available to unaffiliated market operators, and doing so with a customer focus. As noted in Section 2.3.2, ASX recently made some amendments to its service level and information-handling arrangements for the TAS and SFS, by which unaffiliated market operators and alternative listing venues access ASX's CS services. Via a separate process of bilateral engagement with interested stakeholders, ASX also finalised a standard form agreement and operational standards for provision of the SFS to unaffiliated listing markets.

Service levels

The Code includes high-level commitments around non-discriminatory terms of access and development of service level agreements with the objective of ensuring consistency with 'the outcomes of a competitive market'.

A common theme in ASX's consultation with stakeholders on its access arrangements, also reflected in responses to the Agencies' consultation, was that CS services to unaffiliated market operators should be provided on fair terms, with equivalent operational and commercial terms and service levels. The standard form agreement underpinning the TAS commits ASX to providing a service of 'comparable quality to that provided to ASX Limited'. ASX seeks to achieve this by replicating within the TAS the trade verification and validation arrangements in place for ASX Trade. ASX has provided evidence that system availability has been broadly equivalent, with both CHESS and the TAS having achieved availability of 100 per cent in 2014, and that there has been no material difference in the incidence of rejection of trades submitted via the TAS relative to those submitted via ASX Trade.

Nevertheless, some residual concerns were raised by stakeholders in the Agencies' consultation. It has also previously been suggested to the Agencies that, to ensure equivalence, ASX Trade should also be required to submit trades via the TAS. ASX has previously countered that to reconfigure systems to redirect ASX Trade through the TAS would incur undue costs and operational risks, although a common technological solution for trade submission could perhaps be considered as part of ASX's planned upgrade of the CHESS system.

In the meantime, one possibility could be for ASX to make an explicit overarching commitment in the Code to materially equivalent operational and commercial terms and service levels for services provided to unaffiliated market operators. To underpin such a commitment, ASX could also consider establishing a governance structure at the management level that promotes 'open access' and, in particular, the interests of unaffiliated market operators. This could include measures such as key performance indicators that reflect management's efforts to uphold the interests of unaffiliated market operators. Such an option could alleviate stakeholder concerns without incurring the costs of structural separation of ASX Clear and ASX Settlement, as was suggested by some respondents to the consultation. Specifically, a few stakeholders argued that structural separation of the cash equity CS facilities was required in order to ensure fair and non-discriminatory access to these services for unaffiliated market operators.

Information handling and confidentiality

ASX has developed a detailed information-handling protocol to support its commitments under the Code. The protocol aims to address stakeholders' concerns around conflicts of interest in circumstances where ASX is requested to make changes to its CS services to support the product or business development plans of an unaffiliated market operator. As part of these arrangements, the General Manager, Regulatory Assurance, is the single point of contact, and conflict sensitive information is disseminated further only to nominated persons as agreed by the unaffiliated market operator. The 2014 internal review of the Code's operations did not identify any instances in which the conflict-handling arrangements had not been adhered to.

The information-handling arrangements are further supported by the recent changes to Board composition (discussed under 'User input to governance' above), whereby conflict sensitive information can be considered by a quorum formed of non-executive directors that are not also directors of ASX Limited. It was nevertheless suggested during the consultation that even the enhanced information-handling arrangements were not sufficient for maintaining confidentiality of information provided by unaffiliated market operators, and that structural or operational separation could be necessary in order to reinforce information barriers.

5.2 Full Regulation

5.2.1 Objective of full regulation

As noted in the 2012 Report, in principle, it would be preferable for ASX and any unaffiliated market operator requiring access to ASX's cash equity CS facilities to arrange mutually acceptable access terms through commercial negotiations. However, the Agencies recognise that in other industries, the degree of market power held by monopoly providers has meant that appropriate negotiations have at times not taken place. This has necessitated a range of different regulatory responses.

If, on advice of the Agencies, the government formed the view that the clearing and settlement of ASX securities were natural monopolies, or saw evidence of abuse of market power by ASX, or determined that it was in the national interest for there to be a single provider of these services, the government could decide to regulate ASX as a monopoly under a full regulation framework. Such a framework

could be based on a public utility model and could include upfront setting of price and non-price terms of access.[37]

Full regulation of a monopoly provider would have the same objectives as those envisioned by the self-regulation or partial regulation models. That is, to deliver the desired objectives of effective market functioning, acceptable levels of clearing fees and operating costs, user responsiveness and innovation, and open access on fair and non-discriminatory terms.

The presumption behind full regulation would be that direct regulatory intervention was necessary in order to deliver the outcomes that would normally be expected in a competitive market.

5.2.2 Scope and mechanisms

Under the full regulation approach, there would be an industry expectation and reliance on the regulators to effectively regulate ASX as a monopoly. Effective regulation may involve: assessing the terms and conditions imposed by ASX for access to its CS services; developing measures to address the scope for discrimination arising from ASX's vertical integration (such as ring-fencing or structural separation); implementing pricing measures (such as price or revenue caps); and developing incentives for ASX to innovate and invest.

The appropriate form of full statutory regulation depends on the extent of the incumbent service provider's market power and vertical integration, as well as factors such as the number of service seekers and historical practice. The Agencies note that there are various approaches within the existing legal and policy framework to address access to nationally significant infrastructure through full statutory regulation.

For instance, Part IIIA of the CCA establishes the National Access Regime. This regime provides a mechanism by which firms can gain access to services provided by means of nationally significant infrastructure facilities, where access would promote a material increase in competition in a related market. A number of direct policy approaches would also be available if there were found to be impediments to accessing ASX's post-trade facilities on commercially acceptable terms. Drawing on existing legislation and experience in other industries, some possible approaches include:

- providing for a 'deemed declaration' or making a decision to mandate the submission of an access undertaking;[38] ASX could, for example, be required to submit an access undertaking under Part IIIA of the CCA that covered price and non-price terms of access as a condition of its cash equity CS facility licences
- an industry-specific access regime separate to the generic National Access Regime[39]
- a mandatory industry code of conduct prescribed by the relevant Minister, as provided for under Part IVB of the CCA[40]
- surveillance of the pricing of ASX's cash equity CS services under Part VIIA of the CCA.[41]

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37 The term 'public utility' encompasses a wide variety of industries which traditionally included, among others, airlines, telecommunications, oil, natural gas, electricity and railroads. These industries share a common 'network' structure, in that they have extensive distribution systems or routes requiring the use of public assets or access. In some cases, such as airlines, the government owns a part of the infrastructure. Public utilities typically have substantial sunk costs because of the need for extensive infrastructure.

38 For example, section 192 (now repealed) of the *Airports Act 1996* was enacted to provide for 'deemed declaration' as a transitional measure in the context of the privatisation of a number of airports.

39 Examples of these include regimes for the telecommunications (Part XIC of the CCA), electricity (the National Electricity Law and Rules) and gas industries (the National Gas Law and Rules).

40 For example, the Competition and Consumer (Industry Code – Port Terminal Access (Bulk Wheat)) Regulation 2014.

The government could also require structural separation of a vertically integrated monopoly service from the potentially competitive services. In 2009, the Australian Financial Centre Forum suggested examining the case for clearing and settlement to become an industry owned and funded service.[42] The FSI also noted that vertical integration had the potential to limit the benefits of competition and should be proactively monitored.

5.2.3 Benefits and costs

A full regulation approach would provide the greatest scope for regulators to limit the potential detriment arising from an ongoing monopoly in the provision of CS services. For example, regulators would have the ability to set prices, limiting the scope for ASX to inflate its fees and earn monopoly rents. Regulators would similarly have the ability to provide ASX with incentives to innovate and invest in its CS infrastructure, and to engage with users.

However, significant difficulties may also be encountered in regulating governance and pricing under a full regulation model. The ability to realise the benefits of full regulation in practice may be limited by the difficulty of identifying the true costs of providing CS services and developing appropriate incentives. This could give rise to the risk of regulatory error, which could create costs for industry. Despite the proliferation of clearing monopolies globally, the Agencies are not aware of any examples of full price regulation of this activity in other jurisdictions.

Furthermore, determining appropriate regulatory settings to address the potential consequences of ASX's monopoly position would be a complex and costly exercise. Significant legislative reform would be required, and there may be scope for ASX to exert its market power in the intervening period before the regulatory regime commences. Substantial regulatory resourcing and funding would also be required to monitor and enforce a full regulation regime.

Consideration should also be given to the potential impact on ASX, including the implications of imposing substantial changes on ASX's current operational structure and the consequent resource requirements and loss of efficiencies in its operations. Of the options available, a full regulation approach would result in the highest level of regulatory burden on ASX, which could be reflected in costs passed through to industry. Since ASX is a publicly listed company, another important consideration would be the potential impact such changes would have on its market valuation.

There were mixed views from stakeholders about the appropriate level of direct regulatory intervention that would be required to deal with ongoing monopoly provision of CCP services. With the exception of ASX, no stakeholder argued that cash market clearing in Australia was a natural monopoly, and most respondents did not consider that a 'full regulation' approach would be necessary. While many argued that a competitor was unlikely to emerge in the near term, some stakeholders raised the possibility that changes to the size of the market, the regulatory settings or technology could see a competitor emerge in the medium to long term. Incurring the up-front costs associated with establishing a full regulation regime was less likely to be warranted if ASX was not expected to maintain its monopoly position in the long term.

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41 Examples of services currently under prices surveillance include regional air services provided by Sydney Airport, air traffic control and aviation fire-fighting and rescue services provided by Airservices Australia, and reserved services provided by Australia Post.

42 See Australian Financial Centre Forum (2009), 'Australia as a Financial Centre: Building on Our Strengths'. Available at <http://afcf.treasury.gov.au/content/final_report.asp>.

5.3 Overall Conclusions on the Monopoly Policy Approach

As discussed throughout this paper, there are natural forces in favour of a single provider of clearing services – and some benefits to such a structure. Additional costs, such as fragmentation of liquidity, loss of netting benefits and increased operational costs, could be avoided in a monopoly environment. An indefinite extension to the moratorium could provide greater long-term certainty to industry and preclude operational and other changes to support a multi-CCP environment.

However, it is also important to consider the full implications of a monopoly policy approach. While retaining ASX's monopoly in providing post-trade services could simplify the market structure, it could also have adverse implications, particularly in the areas of pricing, innovation and responsiveness to user needs. Advocating a monopoly policy position would also be inconsistent with the FSI recommendations and the prevailing legislative settings in the Corporation Act. Such arrangements may also affect perceptions of the approach to competition within the Australian economy.

If the moratorium were extended or a competing CCP failed to emerge, self-regulation or partial regulation could go some way to addressing such concerns. Although self-regulation or partial regulation may not be fully effective in constraining ASX's market power, such approaches may on balance be preferable to full regulation. The mechanics of effecting a full regulatory regime would arguably be substantially more onerous on both regulators and ASX, would take a considerable time to put into place, and would be likely to result in the consumption of far greater regulatory and industry resources. The Agencies therefore consider that a full regulation approach should only be adopted for clearing if there was a policy decision that ASX should remain a monopoly provider of these services over the long term, and if other options were expected to be ineffective in constraining ASX's market power.

6. Conclusions from the Review

In the foregoing sections, the Agencies have presented an analysis of the potential benefits and costs of competition, drawing heavily on international evidence and views received in the consultation. This section brings together the key messages from the consultation process and the Agencies' supporting analysis into a set of recommendations. The section closes with a discussion of the regulatory and legislative changes that would be required to implement the recommendations.

6.1 Assessment and Recommendations

The assessment and recommendations set out below reflect three core conclusions from the consultation process and the Agencies' supporting analysis:

- *The policy approach should be one of openness to competition*. This would reflect the environment in which ASX operated until February 2013, when the government supported the CFR's recommendation to defer any consideration of competition in clearing cash equities. While competition in clearing has emerged in relatively few markets internationally, the Agencies are not aware of any jurisdiction in which it is actively prohibited. Such an outcome could only be justified if the Agencies determined that cash equity clearing was a natural monopoly, or if there was unambiguous evidence that it was otherwise in the best interests of the market to permit only a single provider. Neither case has been made. Furthermore, an outright prohibition on competition could have adverse implications for Australia's international reputation, as well as its recognition and cooperation arrangements with overseas regulators.

  The evidence therefore leads to a conclusion in favour of lifting the moratorium on consideration of a licence application from a competing CCP, subject to the Minimum Conditions presented in Section 4.7. This policy stance acknowledges that:

- the Corporations Act envisages competition in clearing services
- there was a presumption in favour of competition both in the conclusions of the 2012 Report and the final report of the FSI
- the Agencies are willing to be led by the market, but at the same time need to ensure that the resulting market structure is managed appropriately in the public interest.
- *Competition, even if permitted, may not emerge for some time, if at all*. There remain strong forces in favour of a single provider; most notably, economies of scale and scope, netting efficiencies and operational efficiencies. Industry and prospective competing providers may therefore ultimately decide that the benefits of competition would not outweigh the costs, and a competing provider may never emerge (or at least not for some considerable time). This could weaken the discipline on ASX from contestability of clearing. The Agencies also acknowledge that this weak contestability is at least in part driven by regulatory settings; in particular, the domestic location requirements under the Regulatory Influence Framework could be a barrier to entry. The Agencies nevertheless consider that these location requirements are essential, at least until arrangements for cross-border coordination and management of FMI recovery and resolution are sufficiently mature.
- *The relevant regulators should have powers to deal with an ongoing monopoly.* If the moratorium were lifted, ASX could choose to withdraw the Code. However, unless the threat of competition was sufficiently strong, market forces alone might be unable to discipline ASX's conduct as a single provider. This suggests that the regulatory framework should provide for the relevant regulators to intervene as necessary to address industry concerns arising from a continued monopoly.

These three core conclusions are reflected in the Agencies' recommendations, below. These include recommendations that the government implement legislative reforms that would give the relevant regulators rule-making and arbitration powers both to facilitate safe and effective competition in clearing, and to deal with the continued monopoly provision of cash equity CS services until such time as competition emerged.

Recommendation 1

Confirm a policy stance that supports openness to competition in the clearing market for ASX securities, and implement legislative changes to facilitate safe and effective competition in accordance with the Minimum Conditions.

The evidence from the Agencies' consultation and supporting analysis leads to a conclusion in favour of lifting the moratorium on consideration of a licence application from a competing CCP. A policy stance that supports openness to competition would recognise prevailing legislative settings in the Corporations Act as well as the potential benefits of competitive discipline.

In order to clarify how the relevant regulators would manage the potential costs and risks associated with a competitive environment for clearing, the CFR proposes to set out the minimum conditions for safe and effective competition in a publicly stated policy. The Minimum Conditions relate to: (i) adequate regulatory arrangements; (ii) appropriate safeguards in the settlement process; (iii) access to existing settlement infrastructure on non-discriminatory and transparent commercial terms; and (iv) appropriate interoperability arrangements between competing cash equity CCPs (see Section 4.7).

This should provide potential entrants with sufficient clarity as to the measures that the Regulators would require be taken before they could advise in favour of a licence application, and thereby assist in establishing the business case for a competing provider. In addition to meeting existing licensing requirements under the Corporations Act, any licence applicant would be expected to demonstrate that it could viably provide services in this market in a manner consistent with the Minimum Conditions.

Since some aspects of the Minimum Conditions are not enforceable under the existing regulatory framework (such as requirements for materially equivalent settlement arrangements and the establishment of interoperability), the Agencies further recommend implementing legislative changes that would allow the relevant regulators to implement and enforce the Minimum Conditions through the use of a rule-making power if and when a competitor emerged (see Section 6.3.1). The Agencies also recommend that the Minimum Conditions be supported by an ACCC arbitration power to ensure that a competing CCP was able to access ASX's monopoly settlement infrastructure on fair, transparent and non-discriminatory terms (see Recommendation 4).

Given the importance of the Minimum Conditions in ensuring that competition did not adversely affect financial stability or effective market functioning, the Regulators would be unable to advise in favour of a licence application until these measures had been implemented. The Agencies accept that this process could take some time. Consistent with the position of openness to competition, however, the Regulators would be prepared to engage with any potential entrant in the interim and commence consideration of a licence application, should one be submitted.

The proposed legislative framework to implement the Minimum Conditions would set out the relevant high-level obligations, leaving the relevant regulators to impose any specific requirements at a later stage through the use of the rule-making powers. It is envisaged that the new legislation would set the scope of the rule-making powers and the circumstances in which these powers could be used. The accompanying Explanatory Memorandum could provide further guidance on the nature of specific requirements that might be imposed through the use of these powers. In the case of

interoperability, for instance, the rules would be likely to include such details as the criteria against which a CCP would be obliged to consider an access request from a competitor (and the acceptable grounds for rejecting such a request), the required scope and operational functionality of a link, and the timeframe on which a request that met the criteria should be granted.

Certain Minimum Conditions would need to be further supported by operational changes and, once implemented, would rely on other aspects of the regulatory framework. In the case of interoperability, for example, the rule-making power would establish and enforce the access requirement; once in place, the Regulators would monitor the operation of the link and the management of risks arising from the link under existing powers. The Bank would, however, need to elaborate additional guidance to the relevant FSS that deals with the management of risks arising from interoperable links. At the same time, also consistent with the Minimum Conditions, the Agencies would clarify arrangements for the regulatory oversight of matters such as default management and CCP recovery in a multi-CCP environment.

To the extent possible, the Regulators would offer a prospective competitor guidance on potential specific requirements through bilateral discussions prior to submission of a licence application, but detailed specific requirements would not be articulated or implemented until such time as a committed competitor emerged or was likely to emerge. The Agencies recognise that the rule-making process and the need to make operational arrangements to support a multi-CCP environment would further extend the length of time between any submission of an application by a competitor and the commencement of operations. However, to implement the rules and require that operational changes be made in advance would lead to redundant industry investment and regulatory cost should a competitor fail to emerge. This is particularly important given that the rules will deal with matters such as interoperability and materially equivalent settlement arrangements between the emerging competitor and incumbent CCP, which could be costly to establish.

Accordingly, ASX would not be required to make up-front operational changes to accommodate competition until such time as a competing CCP committed to entry. However, at the same time, the technological design of ASX's CS infrastructure should not raise barriers to the potential future implementation of interoperability or access to settlement arrangements by a competing CCP.

Recommendation 2

The Agencies publicly set out regulatory expectations for ASX's conduct in operating its cash equity clearing and settlement facilities until such time as a committed competitor emerged.

Since the proposed legislative framework for safe and effective competition would not be in place for perhaps a number of years, the effectiveness of the discipline from the competitive threat could be limited during the intervening period. Even once the framework was in place, many stakeholders speculated that a viable business case for a competing CCP may never emerge in a market the size of that in Australia – at least given the policy that a competing CCP would have to be domestically incorporated and licensed beyond a relatively low threshold of activity. Accordingly, the discipline from the competitive threat may need to be supplemented with other measures.

The Agencies would therefore publically issue a set of regulatory expectations for the conduct of ASX's monopoly cash equity CS operations, in support of the long-term interests of the Australian market. It is anticipated that these expectations would be issued at the same time as the Minimum Conditions were set out as a publicly stated policy (see Recommendation 1). The regulatory expectations would apply to ASX's cash equity CS facilities (both of which are currently covered under the Code) for both ASX securities and non-ASX listed securities, and would remain in place for each service for as long as that service remained a monopoly. The regulatory expectations would address the key governance, pricing and access matters currently dealt with under the Code – although some aspects of the existing Code, such as the publication of management accounts, may not be justified in

a competitive environment. The expectations would also reflect some additional matters raised by stakeholders during the consultation, as well as some of the new commitments proposed by ASX in its submission for inclusion in a revised Code (see Section 2.3.2). The core elements that would be expected to be included in the regulatory expectations are set out in Section 6.2.

In relation to pricing, the proposed regulatory expectations focus on fairness and transparency, rather than the level of prices; this is in line with the principles established by the Agencies in the 2012 Review to underpin the Code. ASX's proposed fee reductions may nevertheless provide a useful benchmark for commercial negotiations with market participants.

The regulatory expectations would not be legally enforceable under the existing legislative framework. If, however, the relevant regulators had serious doubts about ASX's conduct and its adherence to the regulatory expectations, further action could be considered (see Recommendation 3). In addition, the ACCC may have regard to the regulatory expectations when making a binding determination under the proposed arbitration power (see Recommendation 4).

Recommendation 3

Implement legislative changes that would allow the relevant regulators to impose requirements on ASX's cash equity clearing and settlement facilities consistent with the regulatory expectations if these expectations were either not being met or were not delivering the intended outcomes.

As noted, a business case for a competing CCP may fail to emerge even once the legislative framework to manage the costs and risks associated with competition was in place. The threat of competition alone may therefore not exert sufficient discipline on ASX. For this reason, the Agencies consider it important not only that the regulatory expectations remain in place until the emergence of a committed competitor, but also that the relevant regulators have some means of imposing enforceable requirements on ASX where the regulatory expectations were either not being met or were not delivering the intended outcomes.

The Agencies therefore recommend further legislative changes that would permit the use of rule-making powers (see Section 6.3.2). These rule-making powers would be used to impose specific obligations on ASX's cash equity CS facilities to act in accordance with the regulatory expectations. The powers would be held in reserve and would be expected to be used only where ASX's conduct was generating undesirable outcomes for the market, but was not sufficiently severe to trigger intervention by the ACCC under the CCA. In particular, the rule-making powers would be used to address systematic problems, rather than specific issues arising between particular parties. To provide a potential evidence base for such a decision, ASX would be expected to submit an independent review by a third party of its governance, pricing and access arrangements to the relevant regulators on an annual basis, benchmarked against the regulatory expectations. One trigger for use of the rule-making powers might be if the independent review of ASX's governance, pricing and access arrangements could not attest that ASX had met the Agencies' expectations.

The threat of recourse to rule-making powers, combined with the threat of ACCC arbitration in relation to disputes over specific issues (see Recommendation 4), would be expected to discourage ASX from exerting its monopoly power to the detriment of the market. This would also be consistent with stakeholders' preference for enforceable measures to deal with an ongoing monopoly.

Recommendation 4

Implement legislative changes to grant the ACCC an arbitration power to provide for recourse to binding arbitration in disputes about the terms of access to ASX's monopoly cash equity clearing and settlement services.

ASX is expected to remain a vertically integrated monopoly provider of settlement services for the foreseeable future, and of clearing services until a competing CCP enters the market. Consequently, ASX will have incentives to discriminate in favour of its own operations when providing cash equity CS services to its competitors in related markets (such as unaffiliated market operators).

To address this concern, the Agencies recommend legislative changes to implement an arbitration regime administered by the ACCC (see Section 6.3.3). The regime would provide for binding arbitration to be available to resolve disputes arising in the following circumstances:

- where a competing CCP was seeking access to ASX's monopoly cash equity settlement services consistent with the Minimum Conditions (see Recommendation 1)
- where a third party (including unaffiliated market operators, CCPs and settlement facilities) was seeking access to ASX monopoly cash equity clearing and/or settlement services consistent with the regulatory expectations (see Recommendation 2). If competition were to emerge in clearing, arbitration would continue to be available for settlement for such third parties.

The arbitration power would provide an incentive for ASX to negotiate commercial and non-discriminatory terms of access, and would otherwise provide for a timely resolution of access-related disputes. The arbitration power would complement the rule-making powers proposed in Recommendations 1 and 3 by allowing for a more targeted regulatory response to specific access issues. The arbitration power would only be available for a material dispute where parties were genuinely unable to agree on terms of access to ASX's monopoly services through commercial negotiation.

The Agencies consider that the threat of arbitration by a regulator would be likely to provide an effective discipline on ASX. As the competition regulator, the ACCC would be well placed to assume an arbitration role in relation to disputes on the terms of access to ASX's monopoly CS services as a backstop to commercial negotiation. The Agencies consider that having the competition regulator assume this arbitration role would provide the greatest discipline on ASX and promote competition in related markets.

6.2 Regulatory Expectations

The regulatory expectations would be based on the principles established by the Agencies in the 2012 Review to underpin the Code, with some specific measures drawn from:

- ASX's existing Code
- additional commitments proposed by ASX in its submission to this Review
- stakeholders' views on current gaps in the Code.

These expectations would apply to ASX's engagement with and services to users of its cash equity CS services for both ASX securities and non-ASX listed securities. Users should be broadly defined to include not only CS participants, but also end users, unaffiliated market operators and CS facilities, technology service providers and other relevant stakeholders. The regulatory expectations would remain in place for each service until such time as a committed competitor emerged for that service. The core elements that would be expected to be included in the regulatory expectations are set out below.

6.2.1 User input to governance

To ensure responsiveness to users' evolving needs, formal mechanisms should be maintained within ASX's governance framework to give users a strong voice in strategy setting, operational arrangements and system design, and to make ASX's CS facilities for cash equities directly accountable to users. As part of this:

- ASX should make an explicit commitment to investing promptly and efficiently in the design, operation and development of the core CS infrastructure for the Australian cash equity market, including CHESS. Investments should ensure that, to the extent reasonably practicable, the core CS infrastructure adopts (if not exceeds) relevant international best practice and that its performance, resilience, security and functionality meet the needs of users.
- ASX should ensure that the membership of user governance arrangements is representative of the user base of its CS services and that members have a strong input into the agenda of meetings and the setting of priorities.
- ASX should further maintain accountability arrangements that provide for regular attestations as to the effectiveness of ASX's interactions with users. One example of such an arrangement might be for ASX's user governance mechanisms to operate on a 'comply or explain' basis; that is, the presumption would be that the Board take actions in accordance with recommendations from the user governance mechanisms, or else explain why such actions have not been taken. Another example might be that ASX produce annually a report outlining the investment projects that ASX has progressed and how it has taken into consideration the views of users.
- ASX should formally commit to retaining a Board structure for ASX Clear and ASX Settlement that contains a minimum of 50 per cent of non-executive directors that are also independent of ASX Limited, and where a subset of these directors can form a quorum.
- ASX should establish governance structures and reporting lines at the management and operational levels that promote 'open access' to its core CS infrastructure. These arrangements should ensure, perhaps through the key performance indicators set for management staff, that the interests of users of these services are upheld (see also 'Access to clearing and settlement services' below).

6.2.2 Fair, transparent and non-discriminatory pricing of clearing and settlement services

ASX should commit to a minimum level of transparency of pricing across its range of CS services. The pricing of these services should not discriminate in favour of ASX-affiliated entities (except to the extent that the cost of providing the same service to another party was higher). To ensure fair, transparent and non-discriminatory pricing of CS services, ASX should implement a range of measures:

- ASX's CS fee schedules (and any future changes thereto) should be published along with an externally audited statement justifying their reasonableness, with reference to the calculated return on equity, benchmarked price lists or other relevant metrics.
- ASX should ensure that all prices of individually unbundled CS services, including rebates, revenue-sharing arrangements and discounts applicable to the use of these services:
- are transparent to all users of the services
- are based on the efficient costs of providing those services
- do not discriminate between ASX-affiliated and other users of CS services

- are 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.
- ASX should retain an appropriate model for the internal allocation of costs, including the cost of allocated capital, as well as policies to govern the 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 independent external review.
- ASX should continue to commission and publish regular independent reviews of how its cash equity CS fees compare with those of CS facilities in other markets.

Relatedly, the Agencies are of the firm view that – other than where pricing is anti-competitive or gives rise to financial stability or market functioning issues – the fees charged by ASX are a commercial matter for ASX and its customers. ASX has made it clear that the fee cuts it has recently offered its clearing customers, as detailed in its response to the Agencies' consultation, are contingent on an extension of the moratorium on competition for a further five years. ASX's proposals may nevertheless provide a useful benchmark for commercial negotiations with market participants.

6.2.3 Access to clearing and settlement services – service levels, information handling and confidentiality

ASX should facilitate access to its cash equity CS infrastructure on commercial, transparent and non-discriminatory terms. Non-discriminatory terms in this context are terms that do not discriminate in favour of ASX-affiliated entities (except to the extent that the cost of providing the same service to another party is higher). As part of this:

- ASX should retain standard terms and conditions for users that support access to its CS infrastructure on commercial, transparent and non-discriminatory terms and promote outcomes that are consistent with those that might be expected to arise in a competitive market.
- ASX should have objectives for its CS services that include an explicit overarching commitment to open access (see also 'User input to governance' above). Consistent with these objectives, service level agreements should commit ASX to providing access to its CS services for unaffiliated market operators and CS facilities on operational and commercial terms and service levels that are materially equivalent to those that apply to ASX as a market operator or CS facility.
- ASX should adhere to a protocol for dealing fairly and in a timely manner with requests for access, including reasonable timeframes for responding to enquiries and arrangements for dealing with disputes.
- ASX should demonstrate, and periodically attest, that any investments in the systems and technology that support its cash equity CS services did not raise barriers to access from unaffiliated market operators or CS facilities.
- While ensuring that the above expectations are met, ASX should retain, and on an ongoing basis review, its arrangements for the handling of sensitive or confidential information. Consistent with governance arrangements that promote open access (see 'User input to governance' above), these arrangements should ensure that conflict sensitive information pertaining to the strategic plans of unaffiliated market operators or CS facilities is handled sensitively and confidentially and in particular cannot be used to advance the interests of ASX as a market operator or CS facility.

As noted above, the regulatory expectations concerning access to ASX's monopoly CS services would be supported by recourse to an ACCC-administered arbitration regime.

6.3 Implementation – Proposed Legislative Framework

The implementation of the Agencies' recommendations, as set out in Section 6.1, requires that the relevant regulators have the necessary powers to impose specific obligations on ASX, and any competing cash equity CS facility licensees. Accordingly, the Agencies have recommended implementing legislative changes which would give the relevant regulators appropriate regulatory tools to:

- establish the framework for safe and effective competition (Recommendation 1)
- in the absence of competition, regulate ASX's cash equity clearing and/or settlement facilities consistent with the regulatory expectations if these expectations were either not being met or not delivering the intended outcomes (Recommendation 3)
- implement an ACCC arbitration power to provide for recourse to binding arbitration in disputes about the terms of access to ASX's monopoly cash equity clearing and/or settlement facilities (Recommendation 4).

In order to be effective, the regulatory tools need to be targeted. This would allow the relevant regulators to impose specific and in some cases detailed obligations on the relevant CS facilities in a timely manner. The tools also need to be sufficiently flexible, allowing the Agencies to tailor any obligations to the relevant circumstances, and amend them as necessary to adapt to changing market conditions. The regulatory framework should also provide for appropriate, proportional and responsive enforcement mechanisms.

The Agencies have examined the existing regulatory tools and have concluded that these tools are unlikely to be sufficiently targeted, flexible and enforceable to enable implementation of the entire suite of regulatory measures outlined in the Agencies' recommendations (see Appendix C). Accordingly, the Agencies consider that law reform will be required.

This section sets out the Agencies' recommended regulatory tools for effectively implementing the recommended regulatory measures.

- For the purposes of establishing the framework for safe and effective competition, the Agencies recommend implementing legislation granting rule-making powers to the relevant regulators, which would allow them to implement the Minimum Conditions when a competing CCP emerged. These rule-making powers would be supplemented by separate powers granted to the ACCC to arbitrate disputes about access by a competing CCP to ASX's settlement facility.
- To allow requirements to be imposed on ASX's cash equity CS facilities consistent with the regulatory expectations, the Agencies recommend implementing legislation granting rule-making powers to the relevant regulators. These powers would again be supplemented by powers granted to the ACCC to arbitrate disputes where a third party (e.g. an unaffiliated market operator) was seeking access to ASX's monopoly clearing and/or settlement services.

The legislation would specify at a high level the scope of the rule-making powers of the relevant regulators and the arbitration powers of the ACCC, as well as the process for making rules. This would allow the relevant regulators to determine and impose any specific requirements at a later stage through the application of the rule-making powers. The process for referring a dispute and how arbitrations would be conducted could be set out in an ACCC policy document.

Any proposal for law reform to grant these rule-making and arbitration powers would be subject to consultation, industry engagement, a Regulation Impact Statement (RIS) and government approval. The Agencies note that the development, implementation and enforcement of such regulatory tools could have significant resourcing implications for the regulators. The rule-making powers could also

give rise to concerns of potential regulatory overreach. The scope of any such powers would therefore need to be appropriately confined in the relevant legislation.

6.3.1 Proposed legislative framework for safe and effective competition

To manage the potential costs and risks associated with a multi-CCP environment, the relevant regulators would need to be able to implement and enforce the Minimum Conditions when a competitor for clearing services in ASX securities emerged (Recommendation 1). This would involve imposing a range of obligations on ASX and any competing CCPs.

Some elements of the Minimum Conditions could be dealt with using existing regulatory tools (described in Appendix C) or under existing proposals for law reform. For example, the Bank could issue additional guidance to clarify how the requirements under the FSS should be met for the purpose of implementing safe and effective interoperable links. In addition, the CFR has recently proposed legislative changes which would provide a platform for implementing and enforcing the domestic location requirements under the Regulatory Influence Framework.[43]

Other aspects of the Minimum Conditions, however, could not be enforceable under the existing regulatory framework; these include the obligation to establish interoperable links and materially equivalent settlement arrangements. Drawing on existing models under the Corporations Act and comparison with international regimes, the Agencies have concluded that implementation of the Minimum Conditions would be best achieved through a rules-based framework administered by the relevant regulators. The proposed scope and features of such rule-making powers are discussed in greater detail below.

Rule-making powers

Scope of the rule-making powers

The Corporations Act would be amended to empower the relevant regulators to make, by legislative instrument, rules to impose obligations on licensed CS facilities as required to implement the Minimum Conditions.

In particular, the Corporations Act would need to provide for the ability to make rules that dealt with, among other things, access to the settlement infrastructure by competing CCPs, the establishment of an appropriate settlement model for a multi-CCP environment, and the establishment of legal, commercial and technological arrangements required to facilitate interoperability between competing CCPs. As discussed above, some of the other elements of the Minimum Conditions may be implemented using existing regulatory tools or existing proposals for law reform.

Features of the rule-making regime

The rule-making power could be modelled on the existing ASIC-administered rule-making regimes for market integrity rules, derivative transaction rules and derivative trade repository rules.

Consistent with the existing rule-making power in relation to derivative trade repositories, the Corporations Act would specify that the rules could deal only with specific aspects of a CS facility's operations, being those aspects that are included in the Minimum Conditions.[44] Unlike the regime for

43 See CFR (2015), 'Overseas Clearing and Settlement Facilities: The Australian Licensing Regime', March. Available at <http://www.cfr.gov.au/publications/cfr-publications/2015/overseas-clearing-and-settlement-facilities-australian-licensing-regime.pdf>.

44 While the scope of the rule-making power would be confined to specific subject areas, to maintain flexibility the Corporations Act could also provide for the rule-making power to deal with other matters relating to the operation of a licensed CS facility specified in the regulations or by Ministerial determination.

market integrity rules, the scope of the rule-making power for licensed CS facilities would be confined to these specific subject areas because the transition to competition in clearing does not, in the Agencies' view, require the transfer of supervision to the Regulators, as for competition at the trading level (see Section 4.5).

The accompanying Explanatory Memorandum could provide further guidance on the nature of specific requirements that might be imposed through the use of these powers. These would again be requirements as envisaged by the publicly stated policy on the Minimum Conditions to be set out by the Agencies in accordance with Recommendation 1.

The rule-making powers would provide the relevant regulators with sufficient flexibility to impose specific obligations on any competing CCPs in accordance with the Minimum Conditions, while taking into account the prevailing circumstances of the market at the time competition emerged. This would be necessary to ensure that the market continued to operate in a safe and effective manner. To ensure the relevant regulators were able to take a facilitative and flexible approach in administering the rules, the power to make rules could be complemented by a power to grant conditional exemptions from the rules in appropriate cases.

Consistent with the structure of Part 7.3 of the Corporations Act, the rules would be capable of imposing requirements on any licensed CS facility. However, in practice, the rules would only be applied to ASX and any CCP providing competing clearing services in ASX securities.[45]

Enforcement options

The legislation could provide for enforcement of the rules through a number of mechanisms, including civil penalty provisions, compensation orders and sanctions that are currently available in relation to breaches of other CS facility licensee obligations under Part 7.3 of the Corporations Act. The legislation could allow for alternatives to civil proceedings for a CS facility alleged to have breached the rules, which could be administered through an infringement notice regime. These alternatives could include paying a penalty to the Commonwealth, undertaking or instituting remedial measures (such as compliance or education programs), accepting other sanctions, or entering into a legally enforceable undertaking (EU). Compliance with the rules would be subject to regular assessments. As with breaches of existing CS facility obligations, a breach of a rule could trigger the exercise of directions powers, suspension or cancellation of the licence, or court orders and injunctions.

Process for making rules

In most cases (unless the rules are minor and technical), proposed rules or rule amendments would be subject to consultation with affected stakeholders, a RIS and Parliamentary disallowance. The rules could also be made subject to Ministerial consent if desired.

The legislative framework could allow for the rules to be made at any time. If necessary, rules could be made in advance of a competitor emerging, although such rules would not have practical application until required to facilitate competition. The rules could also be made at the time a competitor emerged, to save on potentially redundant regulatory costs. Waiting until a competitor emerged would also allow for the relevant regulators to determine appropriate interoperability and settlement arrangements with an understanding of the competitor's business model and ASX's cash equity CS infrastructure in operation at the time. Implementing the rules and requiring that

45 If necessary, the ability to apply the rules to a particular CS facility could also be enlivened or restricted by regulations or Ministerial determination.

operational changes be made in advance would also lead to redundant industry investment should a competitor never emerge.

The legislative framework for implementing the Minimum Conditions would be supplemented by arbitration powers, which would provide for the ACCC to arbitrate in relation to disputes about access to ASX's settlement facility by competing CCPs (see Section 6.3.3).

6.3.2 Proposed legislative framework for ensuring the regulatory expectations are met

The relevant regulators should have some means of regulating aspects of ASX's conduct as the single provider of CS facility services for cash equities, if the regulatory expectations were either not being met or were not delivering the intended outcomes (Recommendation 3). This is consistent with stakeholders' preference for enforceable measures to deal with an ongoing monopoly.

The Agencies are of the view that the power to enforce conduct consistent with the regulatory expectations would be best achieved through regulatory tools that are specifically designed for a monopoly environment. This approach would also allow for the consideration of more appropriate, proportional and responsive enforcement options than are currently available. The Agencies consider that rule-making powers would be the most appropriate regulatory tool for this purpose.

Rule-making powers

These powers would be used to impose specific obligations on ASX's cash equity CS facilities to act in accordance with the regulatory expectations, if these expectations were either not being met or were not delivering the intended outcomes. The rule-making powers would only be used to address systematic issues associated with the provision of relevant services by a monopoly provider, rather than specific issues arising between particular parties. The powers would be held in reserve and would only be expected to be used if there was adequate evidence of a material deviation from the regulatory expectations that was considered to be generating undesirable outcomes for the market.

Such rule-making powers would provide the relevant regulators with sufficient flexibility to tailor an appropriate response to any detrimental conduct. The threat of recourse to rule-making powers would also be expected to provide further discipline, encouraging ASX to operate in accordance with the regulatory expectations.

Scope of the rule-making powers

Similar to the rule-making power used to implement the Minimum Conditions, the Corporations Act would specify that the rules could deal only with specific aspects of the CS facilities' operations, being those aspects that relate specifically to the regulatory expectations. For example, the Corporations Act could provide for the rules to deal with access to, and the governance and pricing of the CS facilities' services (as well as any other matters specified in the regulations or by Ministerial determination). Given the Minimum Conditions and the regulatory expectations both relate to the provision of access to settlement services on non-discriminatory and transparent terms, there may be some overlap in these rule-making powers.

In developing these regulatory tools, the Agencies may give consideration to whether the tools should be applied specifically to ASX's cash equity CS facilities, or whether they could also be applicable to monopoly CS services in other markets. Several stakeholders noted that the proposed measures for regulating a monopoly should not be restricted only to ASX's cash equity CS facilities, but could potentially also apply to other ASX services that did not face competition. Such an approach would be consistent with the current structure of Part 7.3 of the Corporations Act, which applies uniformly to all licensed CS facilities. Any proposal to extend the regulatory measures to other market segments

would, however, be subject to further extensive consultation with industry, as well as regulatory impact assessment and government approval.

Features of the rule-making regime

Any rules dealing with regulatory expectations would be implemented and enforced in a similar manner to the rules used to implement the Minimum Conditions (Section 6.3.1). The rule-making powers would be used only if there was adequate evidence that ASX was not operating consistently with the regulatory expectations in the provision of clearing and/or settlement services for either ASX securities or non-ASX securities. To provide an evidence base for such a decision, ASX would be expected to submit an independent annual review of its governance, pricing and access arrangements to the relevant regulators, benchmarked against the regulatory expectations. One trigger for use of the rule-making powers might be if this review could not attest that ASX had met the regulatory expectations.

The legislative framework for implementing the regulatory expectations would be supplemented by the arbitration power discussed in Section 6.3.3, which would provide for the ACCC to arbitrate disputes where a third party was seeking access to ASX's monopoly clearing and/or settlement services consistent with the regulatory expectations.

6.3.3 Proposed legislative framework for arbitration

The arbitration powers proposed in Recommendation 4 would provide for resolution of material disputes where parties were genuinely unable to agree on the terms of access to ASX's monopoly CS facility services through commercial negotiation. These powers would be used as a complementary regulatory tool to the rule-making powers proposed to support the Minimum Conditions and to ensure the regulatory expectations are met (see Sections 6.3.1 and 6.3.2, respectively).

The Agencies consider that the arbitration powers would be necessary to provide an incentive for ASX to negotiate reasonable, non-discriminatory access terms, and to otherwise provide for a timely resolution of access-related disputes both in single provider and multi-CCP environments. The arbitration powers would therefore apply in the following circumstances:

- in the event of competition in clearing of ASX securities, the resolution of disputes about access by competing CCPs to ASX's monopoly settlement services, consistent with the Minimum Conditions (see Recommendation 1)
- for as long as the relevant service remained a monopoly, the resolution of disputes about access by third parties (such as unaffiliated market operators and CS facilities) to ASX's cash equity CS services, consistent with the regulatory expectations (see Recommendation 2).

The proposed arbitration powers are discussed in greater detail below.

The arbitration powers

The arbitration powers would be used in specific circumstances where a party could not otherwise access ASX's monopoly CS services on reasonable commercial terms. Such access disputes could have a significant detrimental impact on competition at both the trading and clearing levels, where access to ASX's settlement services was required by an unaffiliated market operator or CCP.

Where a party has no option but to use the services of a monopoly provider, terms and conditions may be put to them on a 'take it or leave it' basis. This is particularly true when the monopoly provider is vertically integrated and may therefore have incentives to restrict competition in related markets in which the firm also competes (see Section 4.1.3). Respondents to the Agencies' consultation raised concerns that ASX's vertically integrated structure could prevent unaffiliated market operators from being able to achieve non-discriminatory and reasonable commercial terms of

access to ASX's monopoly CS services. Similarly, the Agencies have stipulated access to ASX Settlement as a Minimum Condition for safe and effective competition.

The credible threat of arbitration could encourage ASX to engage in commercial negotiations, and thereby address the imbalance in bargaining power between ASX and parties seeking access to its monopoly services. Anecdotal evidence suggests that the threat of arbitration has facilitated commercial settlements in a range of disputes regarding access to monopoly services, including port terminal and airport services.[46]

Scope of the arbitration powers

Arbitration would be available to parties requiring access to ASX's monopoly clearing and/or settlement services for both ASX securities and non-ASX listed cash equity securities in order to compete with ASX's vertically integrated operations. This would include:

- unaffiliated market operators seeking to offer products and execute trades that require clearing and settlement by ASX
- any future competing CCPs that would require access to ASX Settlement in order to compete with ASX's clearing services, for as long as ASX's settlement services remained a monopoly.

The Agencies have considered whether market participants requiring ASX CS services should also have recourse to arbitration. Given that ASX's vertical integration does not extend to the participant level, the Agencies consider that ASX would have little incentive to adversely affect access by market participants to its CS services. Market participants are therefore less likely to need recourse to arbitration in their dealings with ASX.

Features of the arbitration regime

The threat of recourse to arbitration should provide an additional discipline discouraging ASX from exerting its market power to the detriment of competition. To be effective, the arbitration powers would need to provide a clear avenue for relevant industry participants to inform regulators of any issues in obtaining access to ASX's monopoly services and achieve timely resolution.

Recourse to arbitration is included in a number of regimes that deal with access to monopoly services, including the National Access Regime under Part IIIA of the CCA. Features of the arbitration regime in Part IIIA could provide a starting point for the design of the arbitration power in relation to ASX's monopoly CS services. Some important features of existing regimes which the Agencies consider should be reflected in the arbitration regime applying to ASX's CS services include:

- that a dispute must be referred to arbitration by one of the parties to the dispute, to ensure a regulator does not intervene where both parties prefer to keep negotiating commercially
- that either party to a dispute can unilaterally refer the dispute to arbitration (provided certain general preconditions are met), to ensure that neither party can avoid resolution simply by refusing to proceed to arbitration
- a 'backstop' arbitrator should be specified, to ensure that neither party can circumvent the arbitration process simply by refusing to agree on the appointment of an arbitrator
- a provision for the arbitrator to recover the costs of arbitration.

46 ACCC (2013), Submission to the Productivity Commission Review of the National Access Regime, February, pp 38–39. Available at <http://www.pc.gov.au/inquiries/completed/access-regime/submissions/submissions-test/submission-counter/sub016-access-regime.pdf>.

In order for the arbitration regime to function effectively as a 'reserve power', it should provide incentives for both parties to reach agreement before referring the dispute to arbitration. Referral to arbitration should only be available as a last resort for material disputes where the parties are genuinely unable to agree on the terms of access. This may be achieved by providing for the arbitrator to reject vexatious or frivolous disputes and require both parties to demonstrate that they have attempted to negotiate in good faith prior to seeking arbitration. Requiring the parties to the dispute to bear the costs of arbitration in proportions determined by the arbitrator would also provide an incentive for parties to reach agreement through commercial negotiation.

The regime should also provide certainty to industry about the basis on which the arbitrator would make its decision. This may be in the form of a set of factors or criteria that the arbitrator would need to take into account. These factors or criteria should address the imbalance in bargaining power between the monopoly service provider and the parties seeking access to its services. For example, the arbitrator may be required to have regard to the legitimate business interests of ASX, but also consider the interests of the parties seeking access and the public interest in having competition in the related markets. It may also be appropriate for the arbitrator to have regard to financial stability considerations. Importantly, to complement the rule-making powers described in Sections 6.3.1 and 6.3.2, the arbitrator would be expected to take into account the obligations of the monopoly service provider under any rules made by the relevant regulators governing access to CS services.

The arbitrator

The Agencies consider that the threat of arbitration by a regulator is likely to provide an effective discipline on ASX's conduct. As the competition regulator, the ACCC has a similar arbitral role under the National Access Regime, and performs specific arbitral functions in other industries. The ACCC has experience arbitrating disputes in relation to both price and non-price terms of access. The ACCC would therefore be well placed to have an arbitration role in relation to disputes on the terms of access to ASX's monopoly CS services. The Agencies consider that having the competition regulator assume this arbitral role would provide the greatest discipline on ASX and promote competition in related markets.

An additional option would be to provide for the ACCC to refer disputes to an independent commercial arbitrator. Some existing regulatory dispute resolution regimes provide for independent commercial arbitrators and price experts to have a role in dispute resolution. The Agencies consider that a regime under which disputes are referred to an independent commercial arbitrator should be subject to the ACCC (in consultation with the Regulators) approving the appointment of the arbitrator and being informed of the outcomes to ensure consideration of any competition and financial stability implications.

6.3.4 Timeframe for legislative change

Any legislative changes to implement the legislative framework for facilitating competition and dealing with ASX's ongoing monopoly should competition fail to emerge – including the rule-making and arbitration powers – would ideally be made concurrently.

Since it could be some time before the legislation was in place, the Agencies would need to rely on other sources of discipline in the intervening period. For example, even before the legislative framework was fully established, a competing CCP would still be able to submit a licence application for consideration. Similarly, if there was adequate evidence that ASX was not acting in accordance with the regulatory expectations, the relevant regulators could proceed to develop rules ensuring that these could be enforced as soon as the rule-making powers were established.

Appendix A: Interoperability

Interoperability between two clearing facilities allows a participant of one CCP to execute cleared trades with a participant of the other CCP.

There are two basic types of CCP interoperability links: peer-to-peer links and participant links. Both types of arrangements may give rise to additional risks that must be identified, monitored and managed by the linked CCPs.[47]

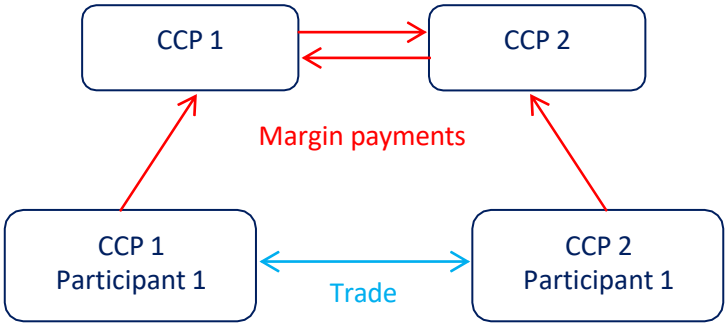
Peer-to-peer links

In a peer-to-peer link, each CCP becomes a participant of the other (Figure A1). The CCPs are generally not subject to the same rules as regular participants; for example, each CCP may be exempt from contributing to the linked CCP's default fund, in order to reduce the direct exposures between each CCP and the linked CCP's participants.

Since the linked CCPs face current and potential future exposures to each other, margin and other financial resources are typically exchanged on a reciprocal basis. Risk management between the linked CCPs is based on a jointly approved framework, which may be difficult to implement if the margin methodologies and collateralisation processes differ across the CCPs.

In peer-to-peer links, each CCP is exposed to the risk that the linked CCP was unable to meet its obligations. Depending on the agreed loss sharing arrangements, both CCPs could be exposed to the risk of sharing in potentially uncovered credit losses in the event that the linked CCP entered recovery or resolution.

Figure A1: Peer-to-peer Interoperability Links



Participant links

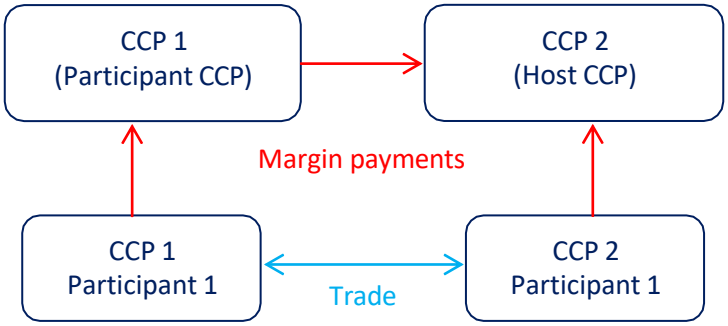
A participant link involves one CCP (the participant CCP) becoming a participant of the other (host CCP), without a reciprocal arrangement (Figure A2). The participant CCP may be subject to the host CCP's normal participant rules, or it may enter into a more customised arrangement whereby its obligations are adapted to acknowledge its CCP status (e.g. the participant CCP may not be required to contribute to the host CCP's default fund).

Risk protection in a participant link is one-way, with the participant CCP providing margin to the other CCP, but not vice versa. This exposes the participant CCP to additional counterparty risk. The participant CCP would therefore have to hold additional financial resources to ensure it has adequate protection in the event that the host CCP had exhausted its prefunded risk resources and began to

47 For a further discussion of CCP interoperability, see Garvin N (2012), 'Central Counterparty Interoperability', RBA *Bulletin*, June, pp 59–68.

implement loss allocation tools. Due to this asymmetry, a participant link is more likely to be established where the participant CCP has stronger incentives to establish a link than the host CCP.

Figure A2: Participant Interoperability Links



Management of risks

Existing risk management requirements

The PFMIs and, correspondingly, the Bank's FSS outline a number of requirements to ensure that CCPs identify and properly control any risks associated with link arrangements. Specifically, CCP Standard 19 requires that:

- a CCP identify, monitor and manage all potential sources of risk arising from the link
- a CCP identify and manage the potential spillover effects from the default of the linked CCP
- a CCP hold sufficient resources to cover its current and potential future exposures to a linked CCP and its participants, without reducing the CCP's ability to fulfil its obligations to its own participants.

Additional guidance

Given the risks to financial stability that could arise from interoperable networks, further guidance to clarify the Bank's interpretation of the risk monitoring and management standards, and in particular the collateralisation of inter-CCP exposures, would be required. The following list outlines a number of matters that could be considered in an elaborated interpretation of CCP Standard 19. The Bank would expect to take a conservative stance on these matters. This would be consistent with the Bank's mandate to promote stability in the financial system, and would recognise the novelty of such arrangements in Australia. Industry stakeholders would be consulted on these and other principles and considerations before any supplementary guidance was finalised.

- *The size of financial resources to deal with inter-CCP exposures.* CCP Standard 19 states that an interoperable CCP should be able to cover 'its current and potential future exposures to the linked CCP and its participants … without reducing the CCP's ability to fulfil its obligations to its own participants at any time'. Inter-CCP exposures are therefore incremental to a CCP's exposures to its participants. This implies that a CCP should protect itself against the default of a linked CCP by collecting margin and holding prefunded financial resources that are separate from and additional to the resources already collected to cover its participant exposures; this includes the resources held to cover exposures on the default of the two largest participants and their affiliates. These additional resources would be sized using a methodology consistent with that applied to participant exposures. Since a linked CCP default would be likely to be correlated with the default of multiple common participants, calibration to stressed scenarios may be appropriate.

- *Assessment and management of potential spillover effects from the entry of a linked CCP into recovery*. Each CCP must carefully manage its inter-CCP exposures in accordance with its broader risk framework. This includes managing potential spillover in the event that a linked CCP was unable to meet its obligations. Since the value of trades flowing across a link could become very large, the entry of a CCP into recovery could impose substantial losses on a linked CCP. To ensure that the risk of contagion was effectively managed, each CCP would have to demonstrate that it could meet such loss allocation obligations if required. Equally, since contagion between CCPs could be detrimental to financial stability, there may be a case for a linked CCP to be excluded from the scope of a CCP's loss allocation arrangements. In this instance, the CCP would have to demonstrate that its recovery plan was still able to comprehensively allocate losses without contributions from a linked CCP.
- *The composition of financial resources held against inter-CCP exposures.* The collateral eligibility criteria for financial resources held against inter-CCP exposures should be consistent with those applied for participant exposures. The basic principle that collateral assets should have low credit, liquidity and market risks should apply.

Appendix B: Interoperability in Europe

European authorities have encouraged interoperability as part of wider reforms to promote the integration of financial markets formerly fragmented along national lines. In 2001, the Giovannini Group had identified 15 barriers to the development of efficient cross-border CS arrangements in the European Union. MiFID, introduced in 2004 and implemented by 2007, aimed to address a number of these barriers by harmonising the cross-border regime for the provision of investment services and facilitating competition between trading, clearing and settlement facilities.

MiFID had little relevance to clearing, however, and did not seek to regulate relations between post-trade facilities. The European Commission (EC) consequently proposed a legislative framework for removing the Giovannini barriers related to clearing and settlement, and set up three groups of experts from both the public and private sectors to help achieve this objective. By 2006, however, progress in improving the efficiency and integration of European post-trade services had been deemed insufficient. It was ultimately decided that an industry-led approach would likely lead to a more optimal outcome, as the industry is better able to identify the needs of the market and offer solutions.

European Code of Conduct for Clearing and Settlement

In response to regulatory pressure and the threat of further legislation, the industry signed the voluntary European Code in November 2006.[48] The European Code was intended to promote investor choice and competition in the European cash equities markets by addressing three key issues: transparency of prices; access and interoperability; and unbundling of services and accounting separation. The access and interoperability principles were introduced in June 2007 alongside supporting guidelines; together, these provided a basis for establishing new links between trading platforms, CCPs and settlement facilities.[49]

In a 2009 review, however, the EC found that the European Code had been less effective in promoting the integration of CS infrastructure than initially expected. Although the European Code had encouraged a significant number of access requests to be made, relatively few interoperability links had actually been established. There was no legal obligation to establish links, and commercial and operational barriers made individual CCPs reluctant to make progress on link requests (see Section 4.4.4).

Recent regulatory measures

The biggest barriers to the emergence of interoperability, however, were judged to be risk and regulation issues. Concerns about financial stability and cross-border differences in FMI regulation had made regulators cautious about approving interoperability arrangements. In 2009, for example, Swiss regulators noted that the volume of trades being cleared through the link between SIX x-clear and LCH.Clearnet had grown significantly, leaving SIX x-clear with a large inter-CCP exposure that was no longer adequately collateralised by LCH.Clearnet. Subsequently, in 2010, regulators from Switzerland, the Netherlands and the United Kingdom issued a statement outlining the regulatory position on interoperability. The statement noted the additional risks that interoperability introduces

48 The European Code of Conduct for Clearing and Settlement (2006) is available at <http://ec.europa.eu/internal_market/financial-markets/docs/code/code_en.pdf>.

49 The Access and Interoperability Guideline (2007) is available at <http://ec.europa.eu/internal_market/financial-markets/docs/code/guideline_en.pdf>.

into the financial system and set out a number of conditions that CCPs must meet in order to adequately manage these risks.

The Recommendations published by the European Central Bank and the Committee of European Securities Regulators in May 2009 also aimed to address the risk and regulation barriers, and promote the integration, competitiveness and efficiency of the European post-trade markets.[50] The Recommendations provided guidance on how CCPs should design and operate interoperability arrangements in order to effectively reduce the risks arising from the link. The Recommendations were, however, non-binding and only addressed at public authorities.

The EC had concluded in its 2009 review that although self-regulation is an effective tool for enhancing market efficiency, there are limits to what it can achieve in terms of risk and regulatory barriers. Legislation was seen to be an essential complementary tool that could enable regulatory convergence and provide guidance on risk management standards to both regulators and market participants. Reflecting the conclusions of the EC review and the increased global focus on CCPs following the global financial crisis, further reform to FMI regulation has occurred in recent years, with greater attention given to interoperability.

- The 2012 CPMI-IOSCO PFMIs require CCPs to identify, monitor and control the risks arising from any FMI links they have established. The associated guidance outlines what regulators should focus on when assessing these arrangements.
- The European Market Infrastructure Regulation (EMIR), which took effect in 2012, strengthens CCPs' obligations to establish interoperability links and contains legal provisions for the establishment of such arrangements.
- In June 2013, the European Securities and Markets Authority (ESMA) issued guidelines clarifying the obligations of national regulators when assessing new CCP links under EMIR.[51]

Interoperability under EMIR

Title V of EMIR specifies requirements for the establishment, risk management and approval of interoperability arrangements. Specifically, EMIR provides that:

- a request for interoperability or access shall be rejected or restricted only in order to control any risk arising from that arrangement
- interoperable CCPs must identify, monitor and manage risks arising from the arrangement so that they can meet their own obligations and are not affected by the default of a member of a linked CCP; the process for managing the default of a linked CCP shall be outlined in the terms of the arrangement
- the approval of an interoperability arrangement is subject to several conditions, including that the risk management requirements (above) are met and the technical arrangements allow for orderly market functioning.

In order to improve the rigour and uniformity of standards applied in carrying out these assessments, ESMA issued guidelines outlining the key issues and risks that regulators should take into account

50 ESCB-CESR (2009), 'Recommendations for Securities Settlement Systems and Recommendations for Central Counterparties in the European Union', May. Available at <https://www.ecb.europa.eu/pub/pdf/other/pr090623_escb-cesr_recommendationsen.pdf>.

51 ESMA (2013), 'Guidelines and Recommendations for Establishing Consistent, Efficient and Effective Assessments of Interoperability Arrangements', June. Available at <http://www.esma.europa.eu/system/files/2013-323_annex_1_esma_final_report_on_guidelines_on_interoperability.pdf>.

when assessing an interoperability arrangement. These include: legal risk; open and fair access; identification, monitoring and management of risks; deposit of collateral; and cooperation between national regulators.

The guidelines extensively list the factors that should be taken into account when assessing whether the relevant CCPs are able to adequately identify, monitor and manage any risks arising from the interoperability arrangement. These factors include appropriate policies, procedures and systems; the ability to meet prudential risk management requirements; potential exposures in the event of default of a linked CCP; differences in risk management frameworks; risks arising from interdependencies and membership; and processes for managing inter-CCP exposures.

In November 2014, the Bank of England (BoE) issued a consultation paper on its proposed approach to implementing these guidelines.[52] The consultation focused on several areas which could be subject to flexible interpretation, including:

- *The level and sources of inter-CCP margins.* The BoE proposed that inter-CCP margin should be at least equal to the combined value of margin and default fund contribution that would be collected from a participant with the same positions. Any margin posted by a CCP to a linked CCP should be separate from and additional to the margin it collects to cover exposures to its own participants.
- *Other risk management tools to cover inter-CCP exposures.* The BoE proposed that a CCP could include inter-CCP exposures when calculating the loss to its largest two members for purposes of sizing its default fund, and that the default fund could be used to meet any losses arising in the event of default of a linked CCP.
- *Managing the impact of loss allocation on linked CCPs.* The BoE considered that it is neither feasible nor desirable for a CCP to include linked CCPs within the scope of its loss allocation arrangements.

The BoE sought feedback from stakeholders on whether its proposals struck an appropriate balance between mitigating contagion risk and not undermining the benefits of interoperability.

52 Bank of England (2014), 'Implementation by the Bank of England of ESMA's Guidelines and Recommendations on CCP Interoperability Arrangements', November. Available at <http://www.bankofengland.co.uk/markets/Documents/cpesma1114.pdf>.

Appendix C: Assessment of Existing Regulatory Tools and Models for Law Reform

Assessment of Existing Regulatory Tools

In developing their recommendations, the Agencies considered whether existing regulatory tools could be used to implement and enforce the recommended regulatory measures (as set out in Section 6.1).This Appendix summarises some of these regulatory tools, and provides a high-level assessment of whether they exhibit the characteristics that would be necessary for implementing the proposed regulatory measures – that is, whether they are targeted, flexible and provide for recourse to appropriate, proportional and responsive enforcement mechanisms.

General obligations under the Corporations Act

Part 7.3 of the Corporations Act sets out the general obligations of all CS facility licensees. These include reducing systemic risk, ensuring the fair and effective provision of services, and having sufficient resources to properly operate the facility and provide adequate supervisory arrangements.

A CS facility's general obligations are principles based. Accordingly, the actions a CS facility must take to comply with its general obligations may vary with changes in the environment in which it operates. The Agencies have considered whether any of the recommended regulatory measures could be implemented by way of guidance as to how a CS facility should meet these obligations in either a single provider or a multi-CCP environment. There are a number of tools available to promote compliance by the CS facility with its general obligations, including the CS facility's annual compliance report, assessments of compliance by the Regulators, directions given to the CS facility licensee by ASIC or the Minister, and the ability of the Minister to require the CS facility to give ASIC a special report.

However, the general obligations are open to flexible interpretation, and guidance about how to comply with the general obligations is not itself enforceable. Further, while the guidance may be fully supported by the underlying legislative provisions, the tools for enforcing the general obligations are currently limited to suspension or cancellation of the licence, court orders or injunctions. The Agencies acknowledge that for certain breaches – such as in relation to governance or pricing arrangements – these sanctions are unlikely to be an appropriate, proportional or responsive enforcement mechanism.

Financial Stability Standards

To the extent that it is reasonably practicable to do so, a CS facility licensee must comply with the Bank's FSS and do all other things necessary to reduce systemic risk. Part 7.3 of the Corporations Act provides for the Bank to make or amend the FSS, and issue guidance on how certain FSS requirements should be met by CS facilities.

The FSS and the associated guidance represent additional regulatory tools which the Agencies have considered for the implementation of their recommendations. Observance of the FSS is mandatory under the Corporations Act, with similar tools available for promoting compliance as for general obligations. The Bank carries out a detailed assessment of each CS facility licensee's observance of the FSS on an annual basis.

However, the FSS may only be determined for the purposes of ensuring that a CS facility conducts its affairs in a way that causes or promotes overall stability in the Australian financial system. This threshold may not be met in relation to all aspects of the regulatory measures proposed in the

Agencies' recommendations, some of which deal with matters related to efficiency, competition and effective market functioning rather than systemic risk. Further, and as for general obligations, the tools for enforcing the FSS are currently limited to suspension or cancellation of the licence, court orders or injunction.

Licence conditions

Under Part 7.3 of the Corporations Act, all licensed CS facilities must ensure that they comply with their licence conditions on an ongoing basis. Under the advice of the Regulators, the Minister is responsible for licensing CS facilities that operate in Australia, and imposing, varying and revoking conditions on the licence.

Compliance with the licence conditions is mandatory under the Corporations Act, and similar tools are available to promote compliance with these conditions as in the case of the general obligations and the FSS.

Although licence conditions may be imposed in relation to a broad range of matters, they are not well suited to detailed obligations, or obligations that need to be imposed on multiple licensees. Furthermore, while the Minister has the ability to vary a CS facility licence, this generally occurs for an existing CS facility only when there is a change to the facility's operations or the conditions under which it is operating. As for the general obligations and FSS, the tools for enforcing licence conditions are currently limited to suspension or cancellation of a licence, court orders or injunctions.

CS facility operating rules

A CS facility's operating rules deal with the activities or conduct of that facility. The operating rules have effect as a contract under seal between the CS facility and its participants, and are therefore legally binding on these parties. Requirements set out in the operating rules are enforceable under the Corporations Act by ASIC, market operators for which the CS facility provides CS arrangements, and participants that may be aggrieved by a failure to comply with or enforce the operating rules. Changes to the operating rules are subject to Ministerial disallowance.

The operating rules are reasonably flexible and could, in principle, be amended to set out certain obligations on the CS facility licensees in order to implement the proposed regulatory measures. However, this would require the agreement of the licensee, who would be under no obligation to introduce provisions that were not required to be included in the operating rules under the current regulatory framework. Further, licensees may choose to deal with the matters set out in their operating rules in different ways, and the tools for enforcing operating rules are limited to court orders.

Mandatory code of conduct under the CCA

Part IVB of the CCA provides for the development of a mandatory code to regulate the conduct of participants in an industry towards other participants or consumers in the industry. A prescribed industry code binds all participants in the industry, although voluntary codes may also be prescribed. A code can be enforced by the persons directly affected by the relevant conduct through private action, as well as by the ACCC. Enforcement tools can include public warning notices, court orders, injunctions, damages, pecuniary penalties, infringement notices and EUs. Compliance with the prescribed codes would need to be monitored and enforced by the ACCC, which has traditionally had more experience with arrangements of this type. A code can include tiered arrangements which apply different obligations depending on particular circumstances.

A mandatory industry code is, however, not subject to oversight and enforcement by the Regulators, who are the primary supervisors of CS facilities. It may therefore not be an appropriate mechanism to implement an interoperability regime or other arrangements more typically overseen by ASIC or the Bank (i.e. those relating to effective market functioning and financial stability). Prescribed codes may also require a significant amount of time to develop. Furthermore, while a prescribed code can provide for periodic review, any variations must be made by the Minister and would require a RIS. A mandatory industry code may therefore not be sufficiently flexible to implement all of the Minimum Conditions. The Agencies consider that a mandatory industry code may be suited to some requirements, such as those related to providing non-discriminatory and transparent access, but would not be the preferred option to implement the overall package of recommended regulatory measures.

Enforceable Undertaking

A CS facility may give an EU to ASIC under the *Australian Securities and Investments Commission Act 2001* (ASIC Act). Under an EU, the CS facility could give undertakings committing to comply with the relevant regulatory requirements (i.e. the Minimum Conditions or the regulatory expectations). These undertakings could be given either for an indefinite or a defined period; for example, ASX could give an EU to comply with the regulatory expectations until such time as a competing CCP emerged. Once accepted by ASIC, the EU would be enforceable in a court, including by way of orders directing the CS facility to comply with the EU or compensating persons for loss or damages resulting from a breach of the EU.

A primary concern about reliance on this tool, as with the operating rules, is that there is no obligation on any CS facility to give an EU. Furthermore, while ASIC may accept an EU in connection with any matter in relation to which ASIC has a function or power under the ASIC Act, ASIC generally accepts EUs as an alternative to civil or administrative action where there has been a breach of the legislation ASIC administers.[53] The enforcement tools available where a licensee has failed to comply with the terms of an EU are limited to ASIC applying to the Court for orders. The scope for implementing and enforcing all of the proposed regulatory requirements in this manner may therefore be limited.

Deed Poll

A CS facility could also enter into a Deed Poll, making a binding commitment to act in accordance with the proposed regulatory measures. The Deed Poll could be made for the benefit of – and be enforceable by – ASIC, the Bank and other parties (potentially including CS facility participants, unaffiliated market operators and other stakeholders).

As with an EU, however, there is no obligation on any CS facility to give a Deed Poll. The tools where a CS facility fails to comply with terms of a Deed Poll are also limited to civil action in the Courts.

Summary of assessment of existing regulatory tools

Although there are a number of existing regulatory tools available to the Agencies, these tools are unlikely to be sufficiently targeted, flexible and enforceable to enable implementation of the entire suite of regulatory measures outlined in the Agencies' recommendations. Accordingly, the Agencies consider that further law reform is required.

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[53] See ASIC's Regulatory Guide 100: *Enforceable Undertakings* (RG 100), available at <http://asic.gov.au/regulatory-resources/find-a-document/regulatory-guides/rg-100-enforceable-undertakings/>.