ASX

1 June 2015

Secretary of the Commission
U.S. Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, NW
Washington, DC 20581
UNITED STATES

By Electronic Delivery to Secretary@cftc.gov

Dear Sir/Madam

PETITION FOR AN EXEMPTION FROM REGISTRATION UNDER SECTION 5B(A) OF THE COMMODITY EXCHANGE ACT
ASX CLEAR (FUTURES) PTY LIMITED ("ASX CLEAR (FUTURES)")

We hereby file pursuant to Section 5b(h) of the Commodity Exchange Act (the "Act") the petition of ASX Clear (Futures) for exemption from registration as a Derivatives Clearing Organisation ("DCO") under Section 5b(a) of the Act. The petition has been prepared in accordance with the procedures and requirements set forth in the letter from the Division of Clearing and Risk ("Division") of the U.S. Commodity Futures Trading Commission ("Commission") dated 26 November 2014 (the "Letter"). In our reply to the Letter on 2 December 2014, we confirmed that ASX Clear (Futures) would file, by 30 June 2015, a petition for an exemption from DCO registration.

This petition encloses the information and exhibits requested by the Division in the Letter. These enclosures provide an objective factual basis for the Commission to conclude that ASX Clear (Futures) is subject to comparable, comprehensive supervision and regulation by Australian regulatory agencies, as required by Section 5b(h) of the Act. In particular, this petition explains how ASX Clear (Futures) is subject on an ongoing basis to Australian regulatory requirements which are consistent with the Principles for Financial Market Infrastructures ("PFMIs"). The most recent joint assessment of Australia's regulatory agencies, as at 30 June 2014, is that ASX Clear (Futures) either observes or broadly observes all relevant PFMIs. We are not aware of any circumstance that would mean that the next assessment, which will be conducted in the second half of 2015, would result in a different assessment of our ongoing compliance with the PFMIs.

Background

By letter dated 18 September 2013, ASX Clear (Futures) requested the Division to confirm it would not recommend enforcement action against ASX Clear (Futures) if ASX Clear (Futures) cleared specified swaps for U.S. clearing participants without being registered with the Commission as a DCO. By letter dated 6 February 2014 (CFTC Letter No.14-07), the Division granted time-limited no-action relief to ASX Clear (Futures) permitting it to clear Australian and New Zealand dollar-denominated interest rate swaps for the proprietary trades of U.S clearing participants and their parent entities and affiliates.

By letter dated 18 December 2014 (CFTC Letter No.14-148), the Division extended the no-action relief from the DCO registration requirement to 31 December 2015 based on the representation that ASX Clear (Futures) would file, by 30 June 2015, a petition for an exemption from DCO registration.

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Business plan for provision of clearing services as an exempt DCO

Current operations

ASX Clear (Futures) provides central clearing services in a range of interest rate and commodity futures (including Australian and New Zealand dollar-denominated interest rate futures) and Australian dollar-denominated interest rate swaps (AUD IRS).

ASX Clear (Futures) commenced its IRS clearing service in 2013. ASX Clear (Futures) currently has eight clearing participants that are authorised to participate in the service. Within the parameters of the no-action relief referred to above, two Australian-incorporated subsidiaries of U.S. headquartered banks are authorised by ASX Clear (Futures) to clear proprietary AUD IRS business of their U.S. affiliates through ASX Clear (Futures). The gross notional amount of AUD IRS cleared by ASX Clear (Futures) from 1 July 2014 to 31 May 2015 for all participants was AUD 704 billion.

ASX Clear (Futures) now seeks to further encourage uptake of its IRS clearing service among dealer participants and large end-users of interest rate swaps in the Australian marketplace.

Mandatory Clearing

On 12 December 2014 the Australian Government announced that it will mandate central clearing of OTC interest rate derivatives denominated in Australian dollars and four global currencies for the major domestic and foreign banks (USD, EUR, GBP and JPY, collectively "G5 IRS"). On 28 May 2015, the Australian Government announced commencement of a consultation on the central clearing mandate. Drafts of a Ministerial determination and of a set of amendments to the *Corporations Regulations 2001* implementing the proposed measures are available at the following link: http://www.treasury.gov.au/ConsultationsandReviews/Consultations/2015/OTC-derivatives

The Australian Securities & Investment Commission ("ASIC") simultaneously announced commencement of a consultation on proposed mandatory clearing rules to implement the details of the proposed central clearing mandate. Together, the draft determination, regulations and rules set out the proposed regime for mandatory clearing of OTC derivatives in Australia. ASIC's consultation package is available at the following link: http://www.asic.gov.au/about-asic/media-centre/find-a-media-release/2015-releases/15-132mr-asic-consults-on-central-clearing-obligations-for-otc-derivatives/

The expected start date of mandatory clearing in Australia is the first quarter of March 2016.

Classes of swaps cleared (and to be cleared)

ASX Clear (Futures) IRS clearing service is currently limited to AUD IRS.

ASX Clear (Futures) expects to extend its clearing service to NZD IRS reflecting the material participation by Australia's four major trading banks in the NZD IRS swap market. (All of those trading banks are clearing participants in the IRS clearing service of ASX Clear (Futures)).

AUD and NZD IRS are not currently subject to a clearing mandate by any G20 government, however as noted above the Australian Government has released for public consultation the draft regulations required for central clearing of AUD IRS to be mandated.

While ASX Clear (Futures) has not yet extended its IRS clearing service to G5 IRS, the Australian Government's clearing mandate in respect of G5 IRS, and the further migration of swaps executed in the Australian time zone to a centrally cleared environment (driven by clearing mandates of Australian and other G20 governments, and capital incentives), gives rise to the need for such extension. G5 IRS are currently subject to clearing mandates by the Commission.

For the foregoing reasons, ASX Clear (Futures) requests that it is exempted from registration in respect of interest rate swaps denominated in AUD, NZD, USD, EUR, GBP and JPY.

Necessity for permanent exemptive relief

ASX Clear (Futures) seeks a permanent exemption from registration in order to continue to provide clearing services in AUD IRS, and to preserve business flexibility to offer clearing services in IRS in the other currencies described above, to U.S. headquartered banks active in the Australian marketplace. The ability of ASX Clear (Futures) to encourage uptake of its IRS clearing service among dealer participants and large Australian end-users of interest rate swaps is dependent on this.

Granting an exemption from DCO registration would advance several important policy goals. First, exemption would facilitate the centralised clearing of a significant number of swap transactions, which may otherwise not be cleared. The United States Congress and the Commission have both recognised the critical role that centralised clearing of swaps plays in the reduction of systemic risk and improved financial stability. Second, the Australian branches of U.S swap dealers represent a material percentage of the bilateral, non-cleared AUD IRS trade volume between Australian branches of non-Australian investment banks and domestic banks, and thus are entities that continue to provide substantial and vital liquidity to the AUD IRS market. Third, the relief would promote competition and enhance choice for clearing of AUD IRS and interest rate swap clearing services in other currencies, such as New Zealand Dollar interest rate swaps, that will be subsequently offered by ASX Clear (Futures).

Enclosed with this petition is the Cover Sheet containing requested information about ASX Clear (Futures), together with the Exhibits specified in the Letter. All enclosures are listed for ease of reference in the Document Index in Schedule 1.

Yours sincerely,

Amanda J. Harkness
Group General Counsel and Company Secretary

cc:
Ms Phyllis P Dietz, Acting Director, Division of Clearing and Risk, CFTC (PDietz@CFTC.gov)
Ms Eileen Donovan, Acting Deputy Director, Division of Clearing and Risk, CFTC (EDonovan@CFTC.gov)
Ms Parisa Abadi, Attorney – Advisor, Division of Clearing and Risk, CFTC (PAbadi@CFTC.gov)

Enclosed:
Schedule 1 – Document Index

RESERVE BANK OF AUSTRALIA

ASIC
Australian Securities & Investments Commission

19 April 2013

Mr Charles Littrell
Executive General Manager
Policy, Research and Statistics Division
Australian Prudential Regulation Authority
GPO Box 9836
SYDNEY NSW 2000

Dear Charles,

QUALIFYING CENTRAL COUNTERPARTIES – ASX CLEAR AND ASX CLEAR (FUTURES)

As you are aware, in July 2012 the Basel Committee on Banking Supervision (BCBS) agreed a revised Regulatory rules text on the capital requirements for bank exposures to central counterparties (CCPs).

These rules establish the capital treatment for bank exposures to qualifying CCPs (QCCPs). A QCCP is defined as:

> *'an entity that is licensed to operate as a CCP (including a licence granted by way of confirming an exemption), and is permitted by the appropriate regulator/overseer to operate as such with respect to the products offered. This is subject to the provision that the CCP is based and prudentially supervised in a jurisdiction where the relevant regulator/overseer has established, and publicly indicated that it applies to the CCP on an ongoing basis, domestic rules and regulations that are consistent with the CPSS-IOSCO Principles for Financial Market Infrastructures' (PFMIs).*

The BCBS published a set of frequently asked questions at the end of 2012, clarifying that 'if a CCP regulator has provided a public statement on the status of a CCP (QCCP or nonqualifying), then banks will treat exposures to this CCP accordingly.'

Two ASX group entities, ASX Clear Pty Ltd and ASX Clear (Futures) Pty Ltd, operate CCPs in Australia. Each is licensed as a clearing and settlement facility under the *Corporations Act 2001* (Corporations Act). The licences, including the licence conditions, are available on the Australian Securities and Investments Commission (ASIC) website.

The Reserve Bank of Australia (RBA) and the ASIC (collectively, the Regulators) have co-regulatory responsibilities for clearing and settlement facilities, including CCPs, under the Corporations Act.

Within this framework, the RBA is responsible for determining standards for the purposes of ensuring that clearing and settlement facility licensees conduct their affairs in a way that causes or promotes overall stability in the Australian financial system, and for monitoring facilities' compliance with these standards and their obligation under the Corporations Act to do all other things necessary to reduce systemic risk.

ASIC is responsible for assessing the extent to which clearing and settlement facility licensees comply with all other obligations arising under the Corporations Act, including notably the obligation to do all things necessary to ensure that the facility's services are provided in a fair and effective way.

In February, the Regulators publicly articulated how the PFMIs have been implemented in Australia. In respect of CCPs, the Regulators have taken the following actions:

- In December 2012, ASIC published revised regulatory guidance on licensing and oversight of CS facility licensees in Regulatory Guide 211 *Clearing and settlement facilities: Australian and overseas operators*. This guidance includes, *inter alia*, an allocation of primary responsibility for the PFMIs between ASIC and RBA (Appendix 2).

- In November 2012, the RBA's Payments System Board approved the determination of new financial stability standards. These standards, effective from 29 March 2013, are aligned with the requirements in the PFMIs that address matters relevant to financial stability.

The Corporations Act requires ASIC and the RBA to assess at least annually how well clearing and settlement facility licensees have complied with their obligations under the Corporations Act. Accordingly, the Regulators' assessments in 2013 will collectively consider compliance with these new requirements.

Together, these actions meet the condition that the relevant regulator has established and applies regulations that are consistent with the PFMIs. ASX Clear Pty Ltd and ASX Clear (Futures) Pty Ltd are both licensed clearing and settlement facilities under the Corporations Act, both operate CCPs, and both are subject to these new requirements. We therefore write to advise you that we consider both these entities to be QCCPs.

The Regulators reserve the right to declare a specific CCP a non-qualifying CCP, and/or to assess a specific CCP as non-compliant with existing obligations, as appropriate.

Yours sincerely

Malcolm Edey
Assistant Governor (Financial System)
Reserve Bank of Australia

Belinda Gibson
Deputy Chairman
Australian Securities and Investments Commission

2014 Assessment of ASX Clearing and Settlement Facilities

CPSS-IOSCO Principles for Financial Market Infrastructures

September 2014

Contents

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1. Introduction and Executive Summary

The *Principles for Financial Market Infrastructures* (the PFMIs), published by the Committee on Payment and Settlement Systems (CPSS, now the Committee on Payments and Market Infrastructures (CPMI)) and the Technical Committee of the International Organization of Securities Commissions (IOSCO) in April 2012,[1] establish a set of international standards for financial market infrastructures (FMIs). The principles within the PFMIs consist of 24 headline 'Principles', each supported by one or more 'Key Considerations' containing more detailed requirements for FMIs. The scope of the Principles includes central counterparties (CCPs) and securities settlement facilities (SSFs) – collectively, clearing and settlement (CS) facilities – as well as systemically important payment systems and trade repositories.[2]

This report presents the joint Assessment of the Australian Securities and Investments Commission (ASIC) and the Reserve Bank (the Bank) as to how well the four licensed CS facilities in the ASX Group (ASX) – the two CCPs, ASX Clear Pty Limited (ASX Clear) and ASX Clear (Futures) Pty Limited (ASX Clear (Futures)); and the two SSFs, ASX Settlement Pty Limited (ASX Settlement) and Austraclear Limited (Austraclear) – observed the requirements of the Principles as at 30 June 2014 (the PFMI Assessment). Consistent with their international responsibilities, ASIC and the Bank have committed to periodically carry out PFMI Assessments of licensed domestic CS facilities.

The PFMI Assessment draws heavily on the Bank's assessment of the ASX CS facilities against Financial Stability Standards (FSS) determined by the Bank, which is published alongside this report (the FSS Assessment).[3] The FSS are fully aligned to requirements in the Principles and associated Key Considerations that address matters relevant to financial stability. They do not, however, incorporate several Principles and Key Considerations that are solely relevant to ASIC's regulatory remit. In addition, the FSS contain several more detailed requirements that go beyond the minimum standard set out in the Principles. This report therefore repackages the material in the FSS Assessment, principally for an international audience, and adds information relevant to ASIC's responsibilities so as to cover the full range of relevant Principles. Also published alongside this report is a Self-assessment of ASIC's and the Bank's regulation and oversight of CS facilities against the *Responsibilities for central banks, regulators and other relevant authorities for financial market infrastructures* (the Responsibilities), which also form part of the PFMIs.[4]

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1 The Principles are available at <http://www.bis.org/publ/cpss101.htm>.

2 In this report, 'clearing and settlement facility' is defined as in Part 7.1, Division 6 of the *Corporations Act 2001*.

3 The FSS Assessment is available at <http://www.rba.gov.au/payments-system/clearing-settlement/assessments/2013-2014/index.html>.

4 The Self-assessment against the Responsibilities is available at <http://www.rba.gov.au/payments-system/policy-framework/principles-fmi/responsibilities-of-authorities.html>.

This report has been produced by ASIC's Financial Market Infrastructure Stakeholder Team and the Bank's Payments Policy Department. It is expected that this report will be an input into ongoing work of the CPMI and IOSCO to monitor implementation of the PFMIs across jurisdictions, including Australia.

The Assessment concludes that the ASX CS facilities either observe or broadly observe all relevant Principles. ASIC and the Bank have nevertheless made a number of recommendations to further strengthen the ASX facilities' observance of requirements under the Principles. Some recommendations have also been made to encourage continuous improvement, even where relevant requirements have been observed.

1.1 Background

The *Corporations Act 2001* establishes conditions for the licensing and operation of CS facilities in Australia and gives ASIC and the Bank powers and responsibilities relating to these facilities. These powers are exercised under the governance of ASIC's Commission and the Bank's Payments System Board (PSB), respectively. The regulators' respective roles are defined in the Corporations Act.

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

The Bank has determined two sets of FSS relevant to its oversight of CS facilities: one which applies to CCPs (CCP Standards), and another which applies to SSFs (SSF Standards).

ASX operates four licensed CS facilities: two CCPs and two SSFs.

- *CCPs*. A CCP acts as the buyer to every seller, and the seller to every buyer in a financial market. It does so by interposing itself as the legal counterparty to all purchases and sales via a process known as novation:
  - ASX Clear provides CCP services for cash equities, debt products and warrants traded on the ASX and Chi-X markets, and equity-related derivatives traded on the ASX market.
  - ASX Clear (Futures) provides CCP services for futures and options on interest rate, equities, energy and commodity products traded on the ASX 24 market, as well as Australian dollar-denominated over-the-counter (OTC) interest rate derivatives.
- *SSFs*. A SSF provides for the final settlement of securities transactions and the maintenance of records of transfer of title:
  - ASX Settlement provides SSF services for cash equities, debt products and warrants traded on the ASX and Chi-X markets; ASX Settlement also provides SSF services for non-ASX listed securities.
  - Austraclear provides SSF services for trades in debt securities, including government bonds and repurchase agreements.

1.2 Assessment

This Assessment was conducted as at the end of June 2014. Consistent with the division of responsibilities for oversight of CS facilities under the Corporations Act, ASIC and the Bank have allocated responsibility for the assessment of each of the Principles between the two authorities (see Section 2.2 and Table A1 in Appendix A). On the basis of the evidence presented in this report, ASIC and the Bank have concluded that the ASX CS facilities either observe or broadly observe all relevant Principles. The areas in which the ASX facilities have been found to broadly observe the requirements of the Principles relate to the CCPs' model validation framework and investment policy, as well as three areas in which the Bank granted transitional relief from the corresponding requirements of the FSS: recovery planning; segregation and portability; and liquidity risk management.

Model validation

During 2013/14, ASX significantly enhanced its model validation approach, including by:

- implementing substantial enhancements to the backtesting and sensitivity analysis of margin models
- introducing reverse stress testing
- engaging external experts for a three-year period to undertake a comprehensive validations of all key risk models.

As a result of ASX's progress in this area, the Bank's assessment is that both ASX Clear and ASX Clear (Futures) have observed most relevant model validation requirements under the Principles. Aside from a specific recommendation around liquidity stress testing at ASX Clear (see below), it is expected that both CCPs will fully observe all relevant requirements once the first year of the independent external model validation program has been completed. The CCPs are also encouraged to continually refine and enhance their margin backtesting, sensitivity analysis and reverse stress-testing methodologies and their integration into existing risk management processes.

Investment risks

In its recent assessments of the ASX CCPs against the FSS, the Bank has expressed the concern that the ASX CCPs' treasury investment policy allows relatively large and concentrated exposures to a small number of domestic banks. In response, ASX has lowered the limits on its unsecured exposures to the large domestic banks, and taken steps to improve its capacity to both make secured investments and invest with a broader range of high-quality counterparties. While the Bank welcomes the steps taken to date, it expects further progress before the ASX CCPs will be deemed to have fully observed the relevant Principle. The Bank has opened a dialogue with ASX on the detail of its expectations around credit limits on unsecured exposures to non-government-related entities and the liquidity profile of the investment portfolio. This dialogue will reveal any practical issues or implementation challenges. It will also clarify a reasonable time frame over which a transition should be achieved.

FSS transitional relief

A small number of CCP and SSF Standards that were previously subject to transitional relief came into effect at end March 2014. ASX has made a number of enhancements to rules and processes relevant

to the CS facilities' observance of the corresponding requirements of the Principles. Some of this work is, however, ongoing. It is expected that the relevant ASX facilities will fully observe these requirements once the remaining work is completed (in most cases during the coming year).

- *Recovery planning.*[5] While final CPSS-IOSCO guidance on recovery planning has still not yet been published, in early 2014 ASX developed a basic recovery plan based on the facilities' existing powers under their Operating Rules. ASX has also formulated a plan to enhance those rules in order to be able to fully address any uncovered credit losses and liquidity shortfalls and replenish financial resources following a participant default. It plans to consult on its proposed recovery approach in the second half of 2014.
- *Segregation and portability.* In accordance with requirements of the Principles, ASX Clear (Futures) has introduced individual client segregation within its account structures for both OTC derivatives and exchange-traded futures. Sitting alongside the pre-existing omnibus client account structure for exchange-traded products, the new arrangements give clients a choice in the level of protection they receive and the likelihood that positions and associated collateral could be transferred to an alternative participant in the event of a clearing participant default. ASX Clear has also implemented the first of two phases of enhancements to its cash market arrangements to provide clients with equivalent protection to house/client omnibus segregation. Implementation of the second phase will be required for ASX Clear to fully observe the relevant Principle.
- *Liquidity risk.* Both CCPs' prefunded liquid resources are currently considered to be sufficient to meet the required level of cover for liquidity exposures arising from derivatives transactions. However, ASX Clear's prefunded liquid resources may not be sufficient to cover extreme but plausible payment obligations arising from the settlement of cash equity transactions. In April 2014, ASX introduced changes to its Operating Rules whereby participants commit to provide liquidity to ASX Clear to address any funding shortfall. Under these arrangements, ASX Clear would settle transactions by entering into 'offsetting transaction arrangements' with participants that were due to deliver securities to the defaulted participant. The Bank considers these arrangements to be consistent with the relevant Principle. ASX plans to make enhancements to ASX Clear's liquidity stress testing, including to routinely provide more information to management and the Bank on the degree of contingent reliance on offsetting transaction arrangements. The Bank will monitor these enhancements and discuss further with ASX how such information might best be disseminated to participants to support their liquidity management and planning.

The remainder of this report is structured as follows. Section 2 provides an overview of the clearing and settlement landscape in Australia, while Section 3 summarises the conclusions and recommendations arising from ASIC's and the Bank's detailed assessment of each ASX CS facility against the Principles. Finally, the detailed assessments of the ASX CS facilities against the Key Considerations for each Principle are set out in Appendix A.

5 Recovery refers to steps taken by an FMI to respond to a threat to its continued viability; the related concept of resolution refers to steps taken by public authorities to restore an FMI in distress to viability or wind it down.

2. Overview of the Clearing and Settlement Landscape

2.1 Clearing and Settlement in Australia

CCPs and SSFs are key components of the financial system, delivering services critical to the smooth functioning of securities and derivatives markets.

- A CCP acts as the buyer to every seller, and the seller to every buyer in a financial market. It does so by interposing itself as the legal counterparty to all purchases and sales via a process known as novation. Following novation, the exposure of all parties – whether it be for the few days until an equity trade is settled, or for the several years of payment flows under a longer-term interest rate swap contract – is to the CCP, rather than the bilateral counterparty in the original trade.
- A SSF provides for the final settlement of securities transactions, executed either over the counter or on an exchange, and the maintenance of records of transfer of title. Settlement typically involves transfer of the title to the security and transfer of cash. These functions are linked via appropriate delivery-versus-payment (DvP) arrangements incorporated within the settlement process.

Well-designed and reliable CS facilities can be a source of both financial stability and operational efficiency. Indeed, this has been the experience in Australia and internationally. CS facilities act as a coordinating device in financial markets, bringing a network of counterparties together to support liquidity and the netting of exposures and settlement obligations. They also establish secure arrangements for the timely clearing and settlement of obligations between counterparties, assist institutions in the management of counterparty credit risks, and help to coordinate actions in the event of a market participant's default.

Many of these benefits derive from the size and breadth of the network that a CS facility controls. Accordingly, there is a tendency towards a single CS facility, or relatively few CS facilities, providing services in any given market. This is currently the case in Australia where, with the exception of CCP services in the market for OTC derivatives, only one CS facility operates in each product market.

Given their typically large size, their lack of substitutability in the markets they serve, and strong connections with banks and other financial institutions, CS facilities are generally systemically important. Indeed, this is the presumption in the PFMIs (PFMIs, p 12). Accordingly, it is critical that both CCPs and SSFs identify and properly control risks associated with their operations and conduct their affairs in accordance with regulatory standards that promote overall stability in the financial system.

Table 1 presents an overview of the systemically important CCPs and SSFs currently licensed to operate in Australia. Under the Corporations Act, these facilities are regulated jointly by ASIC and the Bank. The applicable regulatory regime is introduced in Section 2.2 below.

Table 1: Systemically Important CCPs and SSFs Operating in Australia[(a)]

	Description of Activity	Values Cleared/Settled, Daily)[(b)]	Number of participants[(c)]
Central Counterparties			
ASX Clear	Clearing of cash equities and equity-related derivatives	Cash equities: $4 billion traded value Equity options: $115 million traded value/$2.8 billion underlying	36 active direct participants (including Australian/foreign banks, brokers)
ASX Clear (Futures)	Clearing of ASX 24 exchange-traded derivatives and AUD OTC interest rate derivatives	$167 billion for five major listed financial contracts $4.1 billion notional value for OTC derivatives	19 direct participants (including Australian/foreign banks). Large number of indirect participants for listed derivatives
LCH.Clearnet Ltd's SwapClear Service	Clearing of OTC interest rate derivatives	$1.3 trillion notional value for all currencies $11.7 billion notional value for AUD-denominated trades[(d)]	90 direct participants internationally (including two Australian banks)
Securities Settlement Facilities			
ASX Settlement	Settlement of cash equities	$8.3 billion[(e)]	78 direct participants (including Australian/ foreign banks, brokers)
Austraclear	Settlement of OTC trades in debt securities, AUD payments	$41 billion for securities trades $11 billion for payment-only transactions	847 participants (including financial institutions and corporates); some access indirectly

(a) A third small licensed SSF is operated by IMB Limited for trades in its own securities. Since the value of financial obligations settled by IMB Limited in any financial year falls well below $200 million, IMB Limited is not subject to the Bank's FSS for SSFs (SSF Standards).
(b) Average for the year ended 30 June 2014; ASX OTC derivatives data for June 2014.
(c) As at 30 June 2014.
(d) Average single-sided notional value of trades registered per day. Data for AUD-denominated trades are for 1 September 2013 to 30 June 2014.
(e) Includes settlement of off-market trades.
Sources: ASX; Bloomberg; LCH.Clearnet Limited; RBA

2.2 Regulatory Framework

Part 7.3 of the Corporations Act establishes a licensing regime for CS facilities in Australia. Licensing authority rests ultimately with the responsible Minister, with licence obligations specified in the Corporations Act – and in any supplementary licence conditions – administered by ASIC and compliance overseen jointly by ASIC and the Bank.

- Under s 827D of the Corporations Act, the Bank may determine standards 'for the purposes of ensuring that CS facility licensees conduct their affairs in a way that causes or promotes overall stability in the Australian financial system'. In accordance with this provision, the Bank has

determined FSS, with which all the licensees listed in Table 1 must comply. The Bank also has responsibility to ensure that licensees take any other necessary steps to reduce systemic risk. The Bank carries out continuous oversight of CS facilities against the FSS, periodically conducting formal assessments of licensees' compliance and reporting its findings to the Minister. These formal assessments are published on the Bank's website.[6]

- Under the *Reserve Bank Act 1959*, responsibility for the exercise of the powers granted to the Bank in the Corporations Act is assigned to the PSB. The PSB is tasked with ensuring that its powers are exercised in a way that 'will best contribute to the overall stability of the financial system'. Also relevant to its responsibility for stability, the PSB has powers under the *Payment Systems and Netting Act 1998* (PSNA) to ensure that settlement finality in approved payment, clearing and settlement systems and netting arrangements is legally certain (see Section 2.2.2, below). The PSB comprises the Governor as chair, one other Bank appointee, an appointee from the Australian Prudential Regulation Authority (APRA), and up to five other members.

- Under the Corporations Act, ASIC is responsible for ensuring that CS facilities comply with all other obligations, including for the fair and effective provision of services. Together, the Corporations Act and the *Australian Securities and Investment Commission Act 2001* (ASIC Act) give ASIC a range of inspection, investigation and enforcement powers. These enable ASIC to carry out its regulatory functions, including for licensed CS facilities.

  In the exercise of its regulatory functions and powers, ASIC considers whether a CS facility licensee is providing its services in a fair and effective manner such that it would meet the desired regulatory outcomes in Part 7.3 of the Corporations Act. These desired regulatory outcomes are elaborated in ASIC *Regulatory Guide 211: Clearing and Settlement Facilities: Australian and Overseas Operators* (RG 211).[7] The outcomes cover four key regulatory areas: CS facility stability; the clearing and settlement process; facility and participant supervision; and risk management. In considering whether a CS facility is meeting these regulatory outcomes, ASIC considers a range of matters, including the reliability of operations, the transparency of the clearing and settlement process, participants' confidence in the facility, the licensee's supervision of participants, and the facility's risk management.

The Principles have been implemented in Australia and are applied as regulatory standards jointly by ASIC and the Bank. Since both ASIC and the Bank are responsible for overseeing CS facility licensees under the Corporations Act, implementing the Principles in Australia involves coordination between the regulators. A statement issued by ASIC and the Bank in December 2012 (the Joint Statement) sets out the actions taken by the regulators to implement the Principles in Australia:[8]

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[6] The Bank has set out its policy on frequency of formal assessments of CS facilities, confirming that systemically important facilities will be assessed annually: see 'Frequency of Regulatory Assessments of Licensed Clearing and Settlement Facilities', available at <http://www.rba.gov.au/payments-system/policy-framework/frequency-of-assessments.html>. The Bank's assessments of CS facility licensees have been published on the Bank's website since 2007. Annual assessments of the CS facilities under the ASX group are available at <http://www.rba.gov.au/payments-system/clearing-settlement/assessments/2012-2013/index.html>.

[7] ASIC's RG 211 is available at <http://www.ASIC.gov.au/rg>.

[8] A policy statement setting out how the Principles have been implemented in Australia is available at <http://www.rba.gov.au/payments-system/policy-framework/principles-fmi/implementing-principles-australia.html>.

- ASIC revised its regulatory guidance on licensing and oversight of CS facility licensees in RG 211. The updated regulatory guidance incorporates the Principles that are relevant to ASIC's regulatory remit as matters it will consider in:
  - framing its advice to the Minister about any CS facility licence application
  - assessing a CS facility licensee's compliance with its ongoing obligations under the Corporations Act.
- The PSB approved the determination of new FSS in November 2012.[9] These standards, which became effective from 29 March 2013, are aligned with the requirements in the Principles that address matters relevant to financial stability (see Section 2.2.1, below).

While the Bank has the power to set standards and assess licensees' compliance, enforcement powers rest with the Minister and ASIC. A failure to comply with licence obligations may be a trigger for the exercise of enforcement powers. The Minister or ASIC may take enforcement action independently or on the advice of the Bank. ASIC and the Bank have agreed an MOU, which is intended to promote transparency, help prevent unnecessary duplication of effort, and minimise the regulatory burden on CS facilities.[10] Further to these objectives, ASIC and the Bank have agreed on the appropriate division of each of the Principles between the two regulators, as published in Appendix 2 of RG 211 (see also Table A1 of Appendix A). Some Principles are relevant to both regulators and accordingly are jointly overseen. ASIC and the Bank have recently undertaken a joint Self-assessment against the Responsibilities that form part of the PFMIs.[11]

Following a request by the then Deputy Prime Minister and Treasurer in 2011, the Council of Financial Regulators (CFR, comprising the heads of regulatory authorities) consulted on a number of enhancements to the regulatory framework for FMIs. A number of recommendations were made to the government in February 2012. Some of these, relating to the application of 'location requirements' for FMIs operating across borders, were reflected in revisions to ASIC's RG 211 and the FSS in 2012. Other proposals are being developed by the CFR agencies, including in relation to special resolution arrangements for FMIs.[12]

2.2.1 The Bank's Financial Stability Standards

In accordance with its responsibilities under the Corporations Act, the Bank first determined FSS for licensed CCPs and SSFs in 2003. The standards were drafted at a high level, establishing an obligation for licensees to conduct their affairs 'in a prudent manner' so as to contribute to 'the overall stability of the Australian financial system'. Each FSS was supported by a set of measures and guidance that

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9 The Bank's FSS are available at <http://www.rba.gov.au/payments-system/clearing-settlement/standards/index.html>.

10 The MOU between ASIC and the Bank is available at <http://www.rba.gov.au/media-releases/2002/mr-02-08.html#mou>.

11 The Self-assessment is available at <http://www.rba.gov.au/payments-system/policy-framework/principles-fmi/responsibilities-of-authorities.html>.

12 The Council of Financial Regulators' recommendations to the Deputy Prime Minister and Treasurer are available at <http://www.treasury.gov.au/~/media/Treasury/Consultations%20and%20Reviews/Consultations/2012/CFRWG%20on%20Financial%20Market%20Infrastructure%20Regulation/Key%20Documents/CoFR_Letter_to_Deputy_PM.ashx>.

the Bank would take into account in assessing a licensee's compliance. Minor variations were made to the FSS in 2005 and 2009.

As noted above, following the release of the Principles, the Bank updated its FSS to bring them into line with the stability-related Principles. The updated FSS also introduce some additional and varied requirements to reflect the Australian regulatory and institutional context. These include measures to ensure that regulators can maintain appropriate influence over cross-border facilities.

Consistent with the higher level of detail of the Principles relative to the previous international standards, the new FSS are specified at a more detailed level than the earlier standards. They cover matters such as legal basis, governance, credit and liquidity management, settlement models, operational resilience, and management of business and investment risks. Reflecting standards introduced in the Principles, the new FSS include more specific requirements for financial resources held to cover any losses incurred by CCPs in the event of a participant default, and a new requirement to develop a comprehensive and effective plan for the recovery or orderly wind-down of a CCP or SSF in the event that it experienced a threat to its continued viability.

2.2.2 The Payments Systems and Netting Act

The Bank, under the governance of the PSB, has powers under the PSNA to remove two important legal risks in the Australian payments system:

- the risk that a court may apply the 'zero hour' rule and unwind any payments that have settled since midnight of the day preceding a bankruptcy order
- the risk that a court may unwind net payment obligations, restoring gross obligations.

Practically, this is achieved through the Bank having the power to 'approve' a real-time gross settlement (RTGS) system or a netting arrangement. Any RTGS system approved under the PSNA is protected from zero hour risk, while any netting arrangement approved under that Act is protected from both zero hour risk and the possible unwinding of netting. In assessing an application for approval, the PSNA sets out a number of tests including that, without such approval, the bankruptcy of a participant could cause systemic disruption.

To date, the Bank has approved three RTGS systems, including the Reserve Bank Information and Transfer System, in which all CS facilities ultimately settle in central bank money, as well as Austraclear. The Bank has also approved a number of multilateral netting arrangements, including the multilateral net settlement batch for cash equities operated by ASX Settlement.

Separately, the Commonwealth Treasury has responsibility for approving market netting arrangements under the PSNA. Approval provides legal certainty in respect of a number of matters relevant to CCPs, particularly in the event that a participant becomes insolvent. These include arrangements for novation and netting, and dealing with securities posted as collateral by participants.

2.3 ASX Clearing and Settlement Facilities

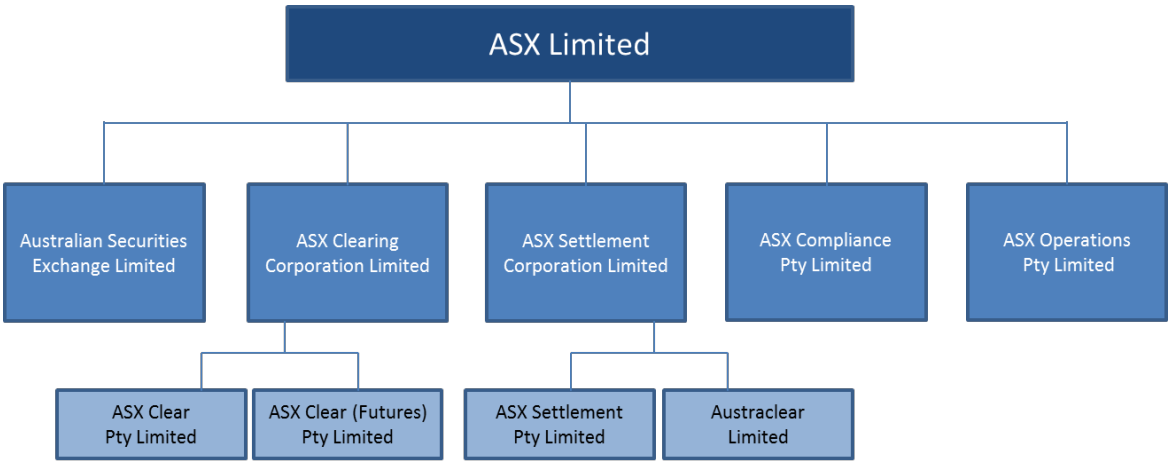
The ASX Group operates four CS facilities: two CCPs and two SSFs. Each of these facilities holds a CS facility licence, and each is required under the Corporations Act to comply with applicable FSS determined by the Bank and to do all other things necessary to reduce systemic risk. The ASX CS facilities are currently the only facilities of significant size incorporated and based primarily in

Australia, and hence for which ASIC and the Bank are the authorities responsible for primary oversight in respect of the Principles (Table 1). LCH.Clearnet Limited, a third licensed CCP, operates under an overseas CS facility licence; its primary regulator is the Bank of England.

2.3.1 ASX Group Structure

All four CS facilities are part of the ASX Group (ASX). In the ASX corporate structure, the two central counterparties (CCPs) – ASX Clear and ASX Clear (Futures) – are subsidiaries of ASX Clearing Corporation Limited (ASXCC), while the two securities settlement facilities (SSFs) – ASX Settlement and Austraclear – are subsidiaries of ASX Settlement Corporation Limited (Figure 1). ASXCC and ASX Settlement Corporation Limited are in turn subsidiaries of the ASX Group's parent entity, ASX Limited. ASX Limited is the licensed operator of the ASX market, while another subsidiary, Australian Securities Exchange Limited, is the licensed operator of the ASX 24 market. The ASX market provides a trading platform for ASX listed securities and equity derivatives, while ASX 24 is an exchange for futures products. ASX Clear and ASX Settlement provide clearing and settlement services for the ASX market, and ASX Clear (Futures) provides clearing services for the ASX 24 market.[13]

Figure 1



ASX Limited is a listed company. The ASX Limited Board is responsible for overseeing the processes for identifying significant risks to ASX and ensuring that appropriate policies as well as adequate control, monitoring and reporting mechanisms are in place. In addition, ASX Limited's Board assigns certain responsibilities to subsidiaries within the group, including the boards of the four CS facilities (the CS Boards). The CS Boards are responsible for managing the particular clearing and settlement risks faced by each respective CS facility, including through compliance with the FSS. The CS Boards are subject to common governance arrangements with high-level objectives set out in the CS Boards' Charter. A majority of the directors on the CS Boards are common to the boards of all four CS facilities; however, one of the directors on the ASX Clear and ASX Settlement Boards does not sit on

[13] ASX Clear and ASX Settlement also provide clearing and settlement services for markets other than ASX; these are noted in Section 2.3.2.

the ASX Clear (Futures) and Austraclear Boards, and two of the directors on the ASX Clear (Futures) and Austraclear Boards do not sit on the ASX Clear and ASX Settlement Boards.

ASX Clearing Corporation Limited (ASXCC) is a wholly owned subsidiary of ASX Limited. ASXCC is the holding company for and manages the financial resources of the two CCPs. It invests these resources according to a treasury investment policy and investment mandate approved by the CS Boards.

The CS facilities rely in the delivery of their services on group-wide operational and compliance resources that reside in ASX Operations Pty Limited, which is a wholly owned subsidiary of ASX Limited.

- ASX Operations Pty Limited (ASX Operations) provides most operational resources required by the CS facilities, including services to enable ASX Compliance to perform its services.
- ASX Compliance Pty Limited (ASX Compliance) provides compliance services to the licensed entities of the ASX Group, including monitoring and enforcing participants' compliance with the Operating Rules of the CS facilities.

ASX has adopted a group-wide organisational structure to manage the business operations of its various entities, including the CS facilities. Its business units are organised into nine main divisions:

- Office of the Chief Executive Officer (CEO)
- Risk
- Operations
- Technology
- Business Development
- ASX Compliance
- Office of General Counsel and Company Secretariat, Regulatory Policy and Regulatory Assurance
- Chief Financial Officer (CFO) Office
- Human Resources.

Risk contains a number of departments that play key roles in the management of risks faced by the CS facilities:

- Clearing Risk Strategy and Policy – develops and maintains policies and standards related to CCP risk management, with a focus on longer term strategic initiatives.
- Clearing Risk Quantification – maintains and validates CCP risk and pricing models.
- Clearing Risk Management – implements CCP risk management policies and standards, and maintains effective procedures for carrying out those policies and standards.
- Enterprise Risk – responsible for enterprise-wide risk management, including general business risk.
- Portfolio Risk Management – responsible for managing investment and liquidity risks associated with ASXCC's investment portfolio.
- Internal Audit – conducts risk-based reviews of internal controls and procedures across ASX. Internal Audit reports to the Chief Risk Officer for administrative purposes only.

ASX's clearing risk policy framework also sets out roles for a number of internal committees that bring together decision makers and experts from departments across the group:

- Clearing Risk Policy Committee (CRPC) – reviews policies and standards prior to CS Board submission.
- Capital and Liquidity Committee (CALCO) – advises on changes to clearing risk policies and standards related to capital, liquidity and balance sheet management.
- CCP Risk, Operations and Compliance Committee (CROCC) – discusses and shares information across relevant operational, compliance and risk management departments.
- Enterprise Risk Management Committee (ERMC) – reviews and approves enterprise risk management policy and related reporting prior to Board submission.
- Risk Quantification Group (RQG) – responsible for quantitative risk management matters.
- Default Management Committee (DMC) – coordinates ASX's response to a clearing participant default, and conducts the review and testing of the CCPs' default management approach.

ASX's settlement risk policy framework sets out roles for a number of additional internal committees:

- Settlement Risk Policy Committee (SRPC) – reviews policies and standards prior to CS Board submission.
- SSF Risk, Operations and Compliance Committee (SROCC) – discusses and shares information across relevant operational, compliance and risk management departments.
- Participant Incident Response Committee (PIRC) – coordinates ASX's response to a settlement participant incident, and provides input into policy determinations and settings as necessary in response to such incidents.

2.3.2 ASX central counterparties

The ASX Group includes two CCPs that are required to conduct their affairs in accordance with the Principles. Primary responsibility for the design and operation of a CCP in accordance with the Principles lies with a CS facility licensee's board and senior management.

- *ASX Clear* provides CCP services for cash equities, debt products and warrants traded on the ASX and Chi-X markets, and equity-related derivatives traded on the ASX market.
- *ASX Clear (Futures)* provides CCP services for futures and options on interest rate, equities, energy and commodity products, as well as Australian dollar-denominated OTC interest rate derivatives.

2.3.3 ASX securities settlement facilities

The ASX Group includes two SSFs that are required to conduct their affairs in accordance with the Principles. Primary responsibility for the design and operation of an SSF in accordance with the Principles lies with a CS facility licensee's board and senior management.

- *ASX Settlement* provides SSF services for cash equities, debt products and warrants traded on the ASX and Chi-X markets; ASX Settlement also provides SSF services for non-ASX listed securities.

- *Austraclear* provides SSF services for trades in debt securities, including government bonds and repurchase agreements.

3. Summary Assessment and Recommendations

This Section summarises ASIC's and the Bank's Assessment of the ASX CS facilities, and sets out recommendations identified by ASIC and the Bank from this Assessment.

3.1 Summary Assessment

Tables 2 to 5 summarise ASIC and the Bank's Assessment of ASX's CS facilities against the Principles. In setting out this Assessment, ASIC and the Bank have applied the rating system used in the *Principles for Financial Market Infrastructures: Disclosure Framework and Assessment Methodology* produced by CPSS and IOSCO in December 2012.[14] Under this rating system, a facility's observance of a Principle may be rated as:

Observed – The FMI observes the Principle. Any identified gaps and shortcomings are not issues of concern and are minor, manageable and of a nature that the FMI could consider taking them up in the normal course of its business.

Broadly observed – The FMI broadly observes the Principle. The assessment has identified one or more issues of concern that the FMI should address and follow up on in a defined timeline.

Partly observed – The FMI partly observes the Principle. The assessment has identified one or more issues of concern that could become serious if not addressed promptly. The FMI should accord a high priority to addressing these issues.

Not observed – The FMI does not observe the Principle. The assessment has identified one or more serious issues of concern that warrant immediate action. Therefore, the FMI should accord the highest priority to addressing these issues.

Not applicable – The Principle does not apply to the type of FMI being assessed because of the particular legal, institutional, structural or other characteristics of the FMI.

ASIC and the Bank have assessed how well each CS facility has complied with each Principle, and applied a single overall rating to each Principle, reflecting this assessment. The summarised assessments of each of the CS facilities against the Principles are supplemented by detailed information under each Key Consideration set out in Appendix A. Recommendations arising from the Assessment are set out in Section 3.2.

[14] The disclosure framework and assessment methodology are available at <http://www.bis.org/publ/cpss106.htm>.

Table 2: ASX Clear Summary Assessment

Summary Assessment by Principle
Principle 1. Legal basis ***Rating: Observed*** ASX Clear is a separate legal entity within the ASX Group that solely provides clearing services. ASX Clear's legal basis is founded on clear and understandable rules that operate within the framework of relevant laws and regulations (Key Considerations 1, 2). The certainty of this legal basis in relevant jurisdictions is reinforced by supporting legislation, including ASX Clear's protection as a netting market under the PSNA, and protection for settlements conducted via ASX Settlement and Austraclear under the same legislation, and is subject to periodic review by ASX Legal (Key Considerations 1, 4). ASX Clear has publicly outlined the key features of its legal basis on its website and, from time to time, for information, may provide legal opinions to participants or other stakeholders in respect of the legal basis of significant new services (Key Consideration 3). ASX has not identified any material risks arising from potential conflicts of law relating to the operations of ASX Clear (Key Consideration 5).
Principle 2. Governance ***Rating: Observed*** ASX Clear pursues objectives that place a high priority on risk management, through compliance with relevant FSS and the broader Corporations Act requirement to do all other things necessary to reduce systemic risk. ASX Clear must also comply with all its other obligations under Part 7.3 of the Corporations Act, including to operate in a fair and effective manner. ASX Clear also acknowledges public policy objectives directed at financial market and payments system integrity, as well as the interests of customers and other stakeholders (Key Consideration 1). ASX Clear's governance arrangements are documented and publicly disclosed. These arrangements give ultimate responsibility for the oversight of operations and risk management of ASX Clear to the ASX Limited Board and the ASX Clear Board. Board and committee charters document Board roles and lines of responsibility and accountability (Key Considerations 2, 3). ASX has conflict handling procedures in place to address potential conflicts of interest that may arise by virtue of its group structure, requiring staff and directors to act in the best interests of each facility as appropriate. Changes to the composition of the CS facility Boards (CS Boards) during 2013/14 further support these conflict handling procedures (Key Consideration 3). The performance of each relevant Board is reviewed at least annually for both individual directors and the Board as a whole. The relevant Boards each include a majority of independent non-executive directors, and the ASX Clear Board includes members appointed for their expertise in clearing and settlement matters (Key Consideration 4). Board remuneration is designed to attract and retain appropriately skilled and qualified directors. The reporting lines of management are set out in the CS Boards' Charter, along with roles and responsibilities of key management personnel (Key Consideration 5). Remuneration of senior management in risk management roles is structured to provide appropriate incentives for sound and effective risk management. ASX maintains a clear and documented risk management framework, subject to regular internal and external review. Key processes and internal controls are subject to review by ASX's Internal Audit department, which is itself subject to periodic external review (Key Consideration 6). ASX utilises formal and informal consultation processes to ensure that the design and decisions of ASX Clear reflect the interests of participants and other stakeholders. This includes the establishment of a new advisory forum, introduced in accordance with commitments under the ASX *Code of Practice for Clearing and Settlement of Cash Equities in Australia* (the Code of Practice), which provides user feedback in relation to the ongoing development of cash market clearing and settlement infrastructure and services (Key Consideration 7).
Principle 3. Framework for the comprehensive management of risks ***Rating: Broadly observed*** ASX maintains an Enterprise Risk Management Policy that sets out its framework for managing the full range of strategic, legal, financial and operational risks faced by ASX Clear. This high-level framework is supported by more granular policies and a governance structure to oversee ASX Clear's risk management activities (Key Consideration 1). ASX Clear's risk management framework imposes proportional, risk-based obligations such as initial margin, and places incentives on participants, including additional collateral requirements where required, to control the risks that they bring to the CCP (Key Consideration 2). As part of its risk management framework, ASX Clear reviews risks associated with interdependencies with other entities on an ongoing basis, and in relation to new initiatives, applying appropriate tools to manage these risks (Key Consideration 3). ASX Clear has prepared a basic recovery plan on the basis of its existing powers and plans to consult on enhancements to its Operating Rules that would support a more comprehensive recovery plan (Key Consideration 4).

Summary Assessment by Principle

Principle 4. Credit risk

Rating: Broadly observed

ASX Clear maintains a comprehensive framework for managing its credit exposures to participants (Key Consideration 1). Under this framework, ASX Clear regularly monitors information on participants' credit standing through financial reporting requirements, public information, and further investigation where required. Monitoring of participants' credit standing is risk based, and ASX maintains a list of participants deemed to warrant more intensive monitoring. In responding to any issues identified through monitoring, ASX Clear is able to impose activity restrictions or additional controls, including calls for additional collateral (Key Consideration 2).

ASX Clear also monitors and manages the magnitude of exposures to participants through both daily and intraday initial and variation margin calculations (Key Consideration 2), and through daily stress tests that measure the effects of extreme but plausible scenarios on exposures (Key Consideration 5). ASX Clear holds sufficient financial resources to cover its largest potential credit exposure to any single participant and its affiliates in the extreme but plausible scenarios covered in its stress tests (Key Considerations 4, 6). ASX Clear has the capacity to call additional margin from participants in the event that their stress-test exposures exceed pre-determined stress-test exposure limits (STELs). During 2013/14, ASX Clear enhanced the review of its capital stress-test model by introducing monthly reverse stress testing and review of market conditions to supplement the existing daily and formal annual review of scenarios. ASX Clear has also engaged an external expert to conduct an annual validation of the capital stress-test model. This work is ongoing. Responsibility for increasing financial resources in response to persistent and widespread STEL breaches that exceed available financial resources lies with the CS Boards and the ASX Limited Board (Key Consideration 5). ASX Clear can allocate any uncovered credit losses to participants via Emergency Assessments, which are subject to a cap. ASX plans to consult on proposals to enhance its loss allocation and replenishment powers (Key Consideration 7).

Principle 5. Collateral

Rating: Observed

ASX Clear limits the assets it routinely accepts as collateral to cash, or highly liquid stocks or funds with low credit and market risks (Key Consideration 1). ASX Clear applies haircuts to collateral that are calibrated to stressed market conditions, to avoid the need for procyclical adjustments (Key Consideration 2, 3). Collateral holdings are not sufficiently concentrated as to impair ASX Clear's ability to liquidate such assets quickly without significant adverse price effects (Key Consideration 4). ASX Clear does not accept cross-border or foreign currency collateral (Key Consideration 5). ASX Clear employs well-designed and operationally flexible systems to manage collateral movements for securities and derivatives trades (Key Consideration 6).

Principle 6. Margin

Rating: Broadly observed

ASX Clear applies initial and variation margin to both derivatives exposures and cash securities transactions, using margin systems that are tailored to the particular attributes of these product types (Key Consideration 1). Timely price data are available for most products subject to ASX Clear's margining systems, and ASX Clear applies appropriate models to estimate prices when timely and reliable data are not available (Key Consideration 2). ASX Clear's margin models for both cash securities and derivatives ensure that initial margin meets a single-tailed confidence level of 99.7 per cent of the estimated distribution of future exposure, applying appropriate and conservative assumptions regarding close-out periods, product risks, portfolio effects, product offsets and floors to limit the need for procyclical changes (Key Considerations 3, 5). In addition, ASX Clear applies variation margin to both securities and derivatives positions daily, and may call intraday margin on derivatives positions in the event of significant market movements (Key Consideration 4).

ASX Clear performs daily and periodic backtesting of its margin models to assess the adequacy of initial margin against the targeted level of cover, and performs an annual review of margin policy. ASX Clear uses quarterly sensitivity analysis to validate the assumptions underpinning margin models, including to test the reliability of implicit or explicit product offsets (Key Consideration 6). ASX Clear regularly reviews and validates its margin models. An external expert was recently engaged for a three-year period to conduct a comprehensive review of all key risk models, including those that support margining (Key Consideration 7). This work is ongoing.

Summary Assessment by Principle

Principle 7. Liquidity risk

Rating: Broadly observed

ASX Clear maintains a robust framework for managing its liquidity risk (Key Consideration 1). Under this framework, ASX Clear provides participants with information to assist them in managing their liquidity needs and risks, and employs an experienced Portfolio Risk Manager to monitor and manage ASX Clear's own settlement and funding flows (Key Consideration 2). ASX Clear holds sufficient liquid resources to meet its payment obligations on time in the event that the participant with the largest payment obligation to the CCP was to default in the extreme but plausible scenarios envisaged in its stress tests (Key Considerations 4, 9). These liquid resources comprise a portfolio of high-quality liquid assets managed by ASXCC on ASX Clear's behalf, supported by procedures to ensure timely and reliable access to liquidity from the portfolio as required (Key Considerations 5, 7). In addition, ASX Clear is able to source liquidity from participants via offsetting transaction arrangements to address liquidity shortfalls related to cash equity transactions (Key Consideration 4). To enhance its management of liquidity risk, ASX Clear has access, via ASXCC's Exchange Settlement Account (ESA), to Australian dollar liquidity from the Reserve Bank against eligible collateral (Key Consideration 8). The use of offsetting transaction arrangements with participants should ensure that ASX Clear does not face a liquidity shortfall in respect of cash market transactions, while ASX plans to consult on proposals to address uncovered liquidity shortfalls in respect of derivatives transactions as part of broader enhancements to its recovery plan (Key Consideration 10).

Principle 8. Settlement finality

Rating: Observed

ASX Clear's settlements involve AUD cash payments between participants and the CCP for the purposes of margin payments and other derivative related payments such as options premia and the settlement of cash securities trades. Cash settlements of margin occur via Austraclear, with interbank obligations settled on a real-time gross settlement (RTGS) basis across ESAs at the Bank, via RITS. Settlement of securities trades and lodgement of non-cash collateral takes place in ASX Settlement, with securities delivery obligations effected within CHESS and interbank cash obligations also settled via RITS on an RTGS basis.

ASX Clear defines the point at which settlement is final through contract specifications set out in its Operating Rules and Procedures, and those of ASX. The finality of its money settlements is further defined in the Austraclear Regulations and ASX Settlement Operating Rules, supported by the PSNA (Key Consideration 1). Contract specifications set out in ASX Clear's and ASX's Operating Rules and Procedures also specify procedures and timetables for final settlement (Key Consideration 2). Participants are not able to submit payment or transfer instructions in ASX Clear that may be revoked (Key Consideration 3).

Principle 9. Money settlements

Rating: Observed

ASX Clear conducts its money settlements across ESAs at the Bank, via RITS (Key Consideration 1). Margin payments are settled in RITS via Austraclear instructions, while securities-related payment obligations are settled in RITS via the CHESS batch operated by ASX Settlement. ASX Clear does not conduct settlement across its own books or in commercial bank money (Key Considerations 2, 3, 4, 5). The role and responsibilities of commercial settlement banks acting on behalf of participants for money settlements, known as Payment Providers, are governed by legal agreements between those banks, ASX Clear, ASX Settlement and the Australian Payments Clearing Association (APCA). ASX is considering the introduction of a formal framework to engage Payment Providers on changes to settlement processes.

Principle 10. Physical deliveries

Rating: Not applicable

ASX Clear does not clear any contracts with physical delivery obligations.

Principle 11. Central securities depositories

Rating: Not applicable

Principle 11 not relevant to central counterparties.

Summary Assessment by Principle

Principle 12. Exchange-of-value settlement systems

Rating: Observed

ASX Clear eliminates principal risk in the settlement of cash equity transactions by ensuring that the transfer of securities occurs if and only if the associated payment is settled at the same time (Key Consideration 1). In order to eliminate principal risk, ASX Clear employs the DvP model 3 settlement mechanism in ASX Settlement.

Principle 13. Participant-default rules and procedures

Rating: Observed

ASX Clear has sufficient powers under its Operating Rules and Procedures to manage a participant default, and has documented an internal framework setting out its default management approach (Key Consideration 1). Powers and tools available to ASX Clear include the power to suspend a defaulted participant, the power to apply margin and pooled financial resources to meet losses, and a range of close-out and hedging tools (Key Considerations 1, 2). Participants are also required to report any default event or expected default to the CCP. ASX Clear has published its Operating Rules that set out its default management powers and a high-level overview of its approach to default management (Key Consideration 3). Default management procedures are tested and reviewed on at least an annual basis (Key Consideration 4).

Principle 14. Segregation and portability

Rating: Broadly observed

ASX Clear offers three types of account structure: individual client segregation for options and futures; omnibus segregation with net margining for futures; and single accounts for all house and client cash market transactions (Key Consideration 2). Individual client segregation for options and futures provides protection to customers (or 'clients') against the default of both their clearing participant and a fellow client, and supports transfer to another clearing participant in such a scenario. ASX has proposed an arrangement for cash market transactions that ensures that commingled accounts will afford materially equivalent protection to that provided by omnibus protection. The first of two stages of implementation of arrangements to enhance protection of client cash equities positions in this way has been completed (Key Considerations 1, 2 and 3). ASX Clear has publicly disclosed its current segregation and portability arrangements, including the current obstacles to portability (Key Consideration 4).

Principle 15. General business risk

Rating: Broadly observed

ASX Clear identifies, monitors and manages its general business risks in the context of its overall Enterprise Risk Management Policy (Key Consideration 1). It has access to sufficient funds held at group level to support continued operations as a going concern if it incurs general business losses. These funds are backed by equity and invested in liquid assets. The legal basis of ASX Clear's access to funds held at group level has been enhanced through a new clause in the ASX Group Support Agreement (Key Considerations 2, 3, 4). ASX Clear has developed a basic recovery plan and has commenced work towards enhancing this plan in line with forthcoming CPSS-IOSCO guidance on recovery planning (Key Consideration 3). ASX maintains viable arrangements to raise additional equity for its CS facilities as required (Key Consideration 5).

Principle 16. Custody and investment risks

Rating: Broadly observed

The assets of ASX Clear and its participants are administered and held within the ASX Group in accordance with robust group-wide controls (Key Consideration 1). A portion of these assets is held in liquid form to ensure prompt access as required (Key Consideration 2). ASXCC invests the assets of ASX Clear according to its Investment Mandate in instruments with low credit, market and liquidity risk. Following changes during 2013/14, ASX Clear's treasury investments place less reliance on unsecured investments concentrated in the large domestic banks (Key Consideration 4). ASX is in dialogue with the Bank about its expectations for further reductions in these exposures. ASXCC does not use custodian banks for its investments (Key Consideration 3).

Summary Assessment by Principle

Principle 17. Operational risk

Rating: Observed

ASX Clear's key operating systems are DCS and CHESS.

ASX Clear manages its operational risks in the context of its group-wide Enterprise Risk Management Framework. ASX Clear considers that it has sufficient well-trained and competent personnel and other resources to operate DCS and CHESS, and has taken steps to ensure that business development work does not risk the availability of these resources for key systems (Key Consideration 1). Responsibility for approving and reviewing operational risk management policy is shared between the ASX Limited and CS Boards, the Audit and Risk Committee and individual departments. The management of each department is responsible for implementing operational risk controls in their respective areas (Key Consideration 2). ASX Clear sets clear operational reliability objectives and pursues policies designed to achieve those objectives. Key objectives for DCS and CHESS, such as minimum availability of 99.8 per cent and peak capacity utilisation of 50 per cent, were met during 2013/14 (Key Considerations 3, 4). ASX Clear maintains physical and information security policies based on relevant domestic and international standards (Key Consideration 5).

ASX Clear maintains business continuity arrangements that provide a high degree of redundancy and, through the use of dual sites, target the resumption of operations within two hours following disruptive events. These arrangements are regularly tested in real time during live operations. Participants are required to maintain appropriate operational and business continuity arrangements that complement ASX Clear's own arrangements, and are appropriate to the nature and scale of their business. ASX Clear monitors participants' compliance with these requirements, and broader operational performance, on an ongoing basis (Key Consideration 6).

ASX Clear manages operational interdependencies with participants, ASX Settlement and Austraclear through its participant monitoring processes and group-wide risk management framework. Its dependencies on service providers and utilities are subject to ongoing monitoring and contingency arrangements where appropriate. ASX Clear has introduced clauses in its legal agreements with key outsourcing and critical service providers that impose requirements on those providers equivalent to those under the FSS (which align with the Principles). Additional clauses provide for access to information for the Bank, and notice to the Bank in the case of termination (Key Consideration 7).

Principle 18. Access and participation requirements

Rating: Observed

ASX Clear has objective and transparent participation requirements set out in its Operating Rules and Procedures (Key Consideration 1). These include minimum capital and other financial requirements, which were reviewed in 2013/14, as well as the requirement that participants maintain operational and risk management arrangements tailored to the specific activities of ASX Clear. ASX Clear's participation requirements promote the efficient operation of the facility, and do not impose discriminatory or restrictive access constraints such as minimum turnover levels (Key Consideration 2). ASX Clear monitors participants' compliance with requirements on an ongoing basis, and has the authority to suspend or terminate participation, or take other disciplinary or remedial action in the event of a breach of these requirements (Key Consideration 3).

Principle 19. Tiered participation arrangements

Rating: Observed

ASX Clear applies a risk-based approach to its monitoring of tiered participation arrangements, with a particular focus on client activity in exchange-traded derivatives. ASX Clear does not formally monitor concentration in tiered participation arrangements for cash market transactions due to the relatively low exposures involved. ASX Clear has a formal standard that governs its risk-based approach to monitoring of concentration in tiered participation arrangements and documents mitigating steps (Key Consideration 4).

During 2013/14, clients of ASX Clear's participants represented 78 per cent of the initial margin held by ASX Clear to cover its derivatives-related credit exposures to both participants and (indirectly) their clients. In managing the risks associated with tiered arrangements, ASX Clear's ability to monitor tiering risks on cash market transactions is limited by the commingling of house and client positions. ASX can, however, gather more detailed information from participants on an ad hoc basis (Key Considerations 1, 2). ASX Clear does not maintain formal thresholds at which substantial indirect participants are encouraged to seek direct participation, but does actively manage risks posed by indirect participant activity through its relationship with the direct participant (Key Consideration 3). ASX Clear conducts daily monitoring of client-level data on derivatives-related exposures, with the use of predefined triggers for further action.

Summary Assessment by Principle

Principle 20. FMI links

Rating: Observed

ASX Clear maintains links to two other FMIs: ASX Settlement and Austraclear. ASX Clear assumes no direct financial risks from these links, but is exposed to operational risks. These are managed in the context of ASX's group-wide framework for operational risk management (Key Consideration 1). The legal basis of each link is supported by finality legislation (Key Consideration 2). ASX Clear does not maintain links with any other CCPs (Key Considerations 7, 8).

Principle 21. Efficiency and effectiveness

Rating: Observed

ASX Clear offers a range of participation options and clearing services designed to meet the needs of its participants and the ASX and Chi-X markets. ASX's Code of Practice for cash equities clearing and settlement addresses transparency and accessibility in the provision of these services and formalises avenues for user governance, including via a user Forum (Key Consideration 1, see also Principle 2). ASX Clear's goals and objectives are determined by the ASX Limited Board (for group-level strategic direction and business priorities) and the ASX Clear Board (for goals and objectives specific to the clearing service) (Key Consideration 2). ASX Clear measures the effectiveness of its services via participant and user feedback. ASX Clear performance reports are presented to ASX management on a monthly basis. Matters covered in these reports include operational performance, settlement and netting efficiency, incident management and participant complaints (Key Consideration 3).

Principle 22. Communication procedures and standards

Rating: Observed

While ASX Clear uses a proprietary messaging standard, this is acceptable given the domestic orientation of the service. ASX Clear is consulting with users, via a Technical Committee established under the Code of Practice, on a proposal to adopt the internationally accepted ISO 20022 SWIFT standard as part of a broader renewal of its CHESS system (Key Consideration 1).

Principle 23. Disclosure of rules, key procedures, and market data

Rating: Observed

ASX Clear fully discloses its Operating Rules and Procedures to participants, and publicly discloses its rules, fees and a range of additional relevant information on its risk management procedures (Key Consideration 1). This includes information regarding the process of novation, and general descriptions of system design and the roles and obligations of ASX Clear and its participants (Key Consideration 2). ASX Clear provides new participants with comprehensive documentation, and verifies their understanding of their responsibilities as participants; existing participants are also provided with education on their obligations where required (Key Consideration 3). A full breakdown of the various fees ASX Clear charges, including available discount and incentive schemes, is published on the ASX website (Key Consideration 4). ASX has published its response to the CPSS-IOSCO Disclosure Framework and plans to periodically update and enhance this document where appropriate (Key Consideration 5). During 2013/14, ASX redesigned its website, providing links to information that is subject to disclosure requirements from a central location.

Principle 24. Disclosure of market data by trade repositories

Rating: Not applicable

Principle 24 not relevant to central counterparties.

Table 3: ASX Clear (Futures) Summary Assessment

Summary Assessment by Principle
Principle 1. Legal basis ***Rating: Observed*** ASX Clear (Futures) is a separate legal entity within the ASX Group that solely provides clearing services. ASX Clear (Futures)' legal basis is founded on clear and understandable rules that operate within the framework of relevant laws and regulations (Key Considerations 1, 2). The certainty of this legal basis in relevant jurisdictions is reinforced by supporting legislation, including ASX Clear (Futures)' protection as a netting market under the PSNA and the protection of money settlement finality through Austraclear under the same legislation, and is subject to periodic review by ASX Legal (Key Considerations 1, 4). ASX Clear (Futures) has publicly outlined the key features of its legal basis on its website and, from time to time, for information, provides legal opinions to participants or other stakeholders in respect of the legal basis of significant new services (Key Consideration 3). ASX has not identified any material risks arising from potential conflicts of law relating to the operations of ASX Clear (Futures) (Key Consideration 5).
Principle 2. Governance ***Rating: Observed*** ASX Clear (Futures) pursues objectives that place a high priority on risk management, through compliance with relevant FSS and the broader Corporations Act requirement to do all other things necessary to reduce systemic risk. ASX Clear (Futures) must also comply with all its other obligations under Part 7.3 of the Corporations Act, including to operate in a fair and effective manner. ASX Clear (Futures) also acknowledges public policy objectives directed at financial market and payments system integrity, as well as the interests of customers and other stakeholders (Key Consideration 1). ASX Clear (Futures)' governance arrangements are documented and publicly disclosed. These arrangements give ultimate responsibility for the oversight of operations and risk management of ASX Clear (Futures) to the ASX Limited Board and the ASX Clear (Futures) Board. Board and committee charters document Board roles and lines of responsibility and accountability (Key Considerations 2, 3). ASX has conflict handling procedures in place to address potential conflicts of interest that may arise by virtue of its group structure, requiring staff and directors to act in the best interests of each facility as appropriate. Changes to the composition of the CS Boards during 2013/14 further support these conflict handling procedures (Key Consideration 3). The performance of each relevant Board is reviewed at least annually for both individual directors and the Board as a whole. The relevant Boards each include a majority of independent non-executive directors and the ASX Clear (Futures) Board includes directors appointed for their expertise in clearing and settlement matters (Key Consideration 4). Board remuneration is designed to attract and retain appropriately skilled and qualified directors. The reporting lines of management are set out in the CS Boards' Charter, along with roles and responsibilities of key management personnel (Key Consideration 5). Remuneration of senior management in risk management roles is structured to provide appropriate incentives for sound and effective risk management. ASX maintains a clear and documented risk management framework, subject to regular internal and external review. Governance of this risk management framework is supported by a newly established participant Risk Committee. Key processes and internal controls are subject to review by ASX's Internal Audit unit, which is itself subject to periodic external review (Key Consideration 6). ASX utilises formal and informal consultation processes to ensure that the design and decisions of ASX Clear (Futures) reflect the interests of participants and other stakeholders, including via the new participant Risk Committee (Key Consideration 7).
Principle 3. Framework for the comprehensive management of risks ***Rating: Broadly observed*** ASX maintains an Enterprise Risk Management Policy that sets out its framework for managing the full range of strategic, legal, financial and operational risks faced by ASX Clear (Futures). This high-level framework is supported by more granular policies and a governance structure to oversee ASX Clear (Futures)' risk management activities (Key Consideration 1). ASX Clear (Futures)' risk management framework imposes proportional, risk-based obligations such as initial margin and contributions to pooled risk resources that are related to exposures, and places incentives on participants, including additional collateral requirements where required, to control the risks that they bring to the CCP (Key Consideration 2). As part of its risk management framework, ASX Clear (Futures) reviews risks associated with interdependencies with other entities on an ongoing basis, and in relation to new initiatives, applying appropriate tools to manage these risks (Key Consideration 3). ASX Clear (Futures) has prepared a basic recovery plan on the basis of its existing powers and plans to consult on enhancements to its Operating Rules that would support a more comprehensive recovery plan (Key Consideration 4).

Summary Assessment by Principle

Principle 4. Credit risk

Rating: Broadly observed

ASX Clear (Futures) maintains a comprehensive framework for managing its credit exposures to participants (Key Consideration 1). Under this framework, ASX Clear (Futures) regularly monitors information on participants' credit standing through financial reporting requirements, public information, and further investigation where required. Monitoring of participants' credit standing is risk based, and ASX maintains a list of participants deemed to warrant more intensive monitoring. In responding to any issues identified through monitoring, ASX Clear (Futures) is able to impose activity restrictions or additional controls, including calls for additional collateral (Key Consideration 2).

ASX Clear (Futures) also monitors and manages the magnitude of exposures to participants through both daily and intraday initial and variation margin calculations (Key Consideration 2), and through daily stress tests that measure the effects of extreme but plausible scenarios on exposures (Key Consideration 5). ASX Clear (Futures) holds sufficient financial resources to cover its largest potential credit exposure to any two participants and their affiliates in the extreme but plausible scenarios covered in its stress tests, consistent with the Bank's view that ASX Clear (Futures) is systemically important in multiple jurisdictions (Key Considerations 4, 6). ASX Clear (Futures) has the capacity to call additional margin from participants in the event that their stress-test exposures exceed predetermined STELs. During 2013/14, ASX Clear (Futures) enhanced the review of its capital stress-test model by introducing monthly reverse stress testing and review of market conditions to supplement the existing daily and formal annual review of scenarios. ASX Clear (Futures) has also engaged an external expert to conduct an annual validation of the capital stress-test model. This work is ongoing. Responsibility for increasing financial resources in response to persistent and widespread STEL breaches that exceed available financial resources lies with the CS Boards and the ASX Limited Board (Key Consideration 5). While ASX Clear (Futures) has some discretionary powers to address uncovered credit losses, these are not sufficient to reliably and fully address losses in all scenarios. ASX plans to consult on proposals to enhance its loss allocation and replenishment powers (Key Consideration 7).

Principle 5. Collateral

Rating: Observed

ASX Clear (Futures) limits the assets it routinely accepts as collateral to cash, or assets with low credit and market risks (Key Consideration 1). ASX Clear (Futures) applies haircuts to collateral. These are calibrated to stressed market conditions, to limit the need for procyclical adjustments (Key Considerations 2, 3). Collateral holdings are not sufficiently concentrated as to impair ASX Clear (Futures)' ability to liquidate such assets quickly without significant adverse price effects (Key Consideration 4). ASX Clear (Futures) retains discretion over whether to accept foreign currency collateral on a case-by-case basis, and takes into account concentration limits in exercising this discretion (Key Consideration 5). ASX Clear (Futures) employs well-designed and operationally flexible systems to manage collateral movements for securities and derivatives trades (Key Consideration 6).

Principle 6. Margin

Rating: Broadly observed

ASX Clear (Futures) applies initial and variation margin to derivatives exposures, using margin systems that are tailored to the particular attributes of the cleared products (Key Consideration 1). Timely price data are available for most products subject to ASX Clear (Futures)' margin systems, and ASX Clear (Futures) applies appropriate models to estimate prices when timely and reliable data are not available (Key Consideration 2). ASX Clear (Futures)' margin models ensure that initial margin meets a single-tailed confidence level of 99.7 per cent of the estimated distribution of future exposure, applying appropriate and conservative assumptions regarding close-out periods, product risks, portfolio effects, product offsets and floors to limit the need for procyclical changes (Key Considerations 3, 5). In addition, ASX Clear (Futures) applies variation margin to derivatives positions daily, and may call intraday margin as part of scheduled processes or in the event of significant market movements (Key Consideration 4).

ASX Clear (Futures) performs daily and periodic backtesting of its margin models to assess the adequacy of initial margin against the targeted level of cover and performs an annual review of margin policy. ASX Clear (Futures) uses quarterly sensitivity analysis to validate the assumptions underpinning margin models, including to test the reliability of implicit or explicit product offsets (Key Consideration 6). ASX Clear (Futures) regularly reviews and validates its margin models. An external expert was recently engaged for a three-year period to conduct a comprehensive review of all key risk models, including those that support margining (Key Consideration 7). This work is ongoing.

Summary Assessment by Principle

Principle 7. Liquidity risk

Rating: Broadly observed

ASX Clear (Futures) maintains a robust framework for managing its liquidity risk (Key Consideration 1). Under this framework, ASX Clear (Futures) provides participants with information to assist them in managing their liquidity needs and risks, and employs an experienced Portfolio Risk Manager to monitor and manage ASX Clear (Futures)' own settlement and funding flows (Key Consideration 2). ASX Clear (Futures) holds sufficient liquid resources to meet its payment obligations on time in the event that the two participants with the largest aggregate payment obligation to the CCP were to default in the extreme but plausible scenarios envisaged in its stress tests (Key Considerations 4, 9). These liquid resources comprise a portfolio of high quality assets managed by ASXCC on ASX Clear (Futures)' behalf, supported by procedures to ensure timely and reliable access to liquidity from the portfolio as required (Key Considerations 5, 7). To enhance its management of liquidity risk, ASX Clear (Futures) has access, via ASXCC as an ESA holder, to Australian dollar liquidity from the Reserve Bank against eligible collateral (Key Consideration 8). ASX plans to consult on proposals to address uncovered liquidity shortfalls in ASX Clear (Futures) as part of broader enhancements to its recovery plan (Key Consideration 10).

Principle 8. Settlement finality

Rating: Observed

The vast majority of ASX Clear (Futures) settlements involve AUD cash payments between participants and the CCP for the purposes of margin payments and the settlement of cash-settled derivatives contracts. Each day, ASX Clear (Futures) calculates the net obligations of each of its participants. Those participants with a net obligation to the CCP are required to make payments to ASX Clear (Futures) by 11.00 am, for both AUD and NZD-denominated contracts. Once these payments have been received, ASX Clear (Futures) makes payments to those participants with a net obligation from the CCP. AUD cash settlements occur via Austraclear, with interbank obligations settled on an RTGS basis across ESAs at the Reserve Bank of Australia, via RITS. NZD cash settlements occur via NZClear, an SSF owned and operated by the Reserve Bank of New Zealand.

ASX Clear (Futures) defines the point at which settlement is final through contract specifications set out in its Operating Rules and Procedures, and those of ASX 24. The finality of its money settlements is further defined in the Austraclear and NZClear rules, supported by finality legislation in the relevant jurisdictions (Key Consideration 1). Contract specifications set out in ASX Clear (Futures)' and ASX 24's Operating Rules and Procedures also specify procedures and timetables for final settlement (Key Consideration 2). ASX Clear (Futures) does not allow settlement instructions that may be revoked (Key Consideration 3).

Principle 9. Money settlements

Rating: Observed

ASX Clear (Futures) conducts its AUD money settlements, which constitute over 98 per cent of its settlement flows, via Austraclear instructions that settle across ESAs at the Bank, via RITS. NZD money settlements are also conducted in central bank money via participation as a non-bank in the NZClear system (Key Consideration 1). Other foreign currency settlements take place in commercial bank money (Key Considerations 2, 4). Commercial banks involved in the settlement of foreign currency transactions must be highly rated and subject to prudential regulation to ensure that credit, liquidity and operational risks are minimised (Key Consideration 3). Arrangements with commercial banks are also governed by standard legal agreements that include general information regarding the timing and availability of funds (Key Consideration 5).

Principle 10. Physical deliveries

Rating: Observed

ASX Clear (Futures)' Operating Rules and Procedures clearly state its and participants' obligations with respect to the delivery of physical instruments or commodities (Key Consideration 1). In accordance with these rules and procedures, ASX Clear (Futures) monitors and enforces compliance with delivery procedures (Key Consideration 2).

Principle 11. Central securities depositories

Rating: Not applicable

Principle 11 not relevant to central counterparties.

Summary Assessment by Principle

Principle 12. Exchange-of-value settlement systems

Rating: Observed

ASX Clear (Futures) eliminates principal risk in the settlement of derivatives contracts involving the transfer of a security or physical asset in exchange for cash by ensuring that delivery occurs only if payment occurs (Key Consideration 1). For transactions involving securities transfers, ASX Clear (Futures) employs the DvP model 1 settlement mechanism in Austraclear.

Principle 13. Participant-default rules and procedures

Rating: Observed

ASX Clear (Futures) has sufficient powers under its Operating Rules and Procedures to manage a participant default, and has documented an internal framework setting out its default management approach (Key Consideration 1). Powers and tools available to ASX Clear (Futures) include the power to suspend a defaulted participant, the power to apply margin and pooled financial resources to meet losses, and a range of close-out and hedging tools, including the auction of open OTC derivatives positions to surviving participants (Key Considerations 1, 2). During 2013/14, ASX introduced a mechanism to encourage participants to participate competitively in the auction of a defaulted participants' portfolio. Participants are also required to report any default event or expected default to the CCP. ASX Clear (Futures) has published its Operating Rules that set out its default management powers, and a high-level overview of its approach to default management (Key Consideration 3). Default management procedures are tested and reviewed on at least an annual basis. Participants clearing OTC derivatives are represented on a Default Management Group that participates in annual tests of OTC default management arrangements, including the auction process (Key Consideration 4).

Principle 14. Segregation and portability

Rating: Observed[15]

ASX Clear (Futures) offers individual and omnibus segregation to customers (or 'clients') of its OTC clearing participants and in July 2014 added an individual segregation offering to the existing omnibus segregation for exchange-traded derivatives (Key Consideration 2). Individual segregation provides protection to clients not only in the event of the default of their clearing participant, but also the concurrent default of a fellow client (Key Consideration 1). The availability of individually segregated client accounts, margined on a gross basis, also increases the likelihood that client positions could be transferred in the event of a clearing participant default (Key Consideration 3). ASX Clear (Futures) plans to extend its segregation arrangements to support the posting of excess client collateral. ASX Clear (Futures) has produced a fact sheet on its segregation and portability arrangements, which it requires that participants make available to their clients. This is published on ASX's website (Key Consideration 4).

Principle 15. General business risk

Rating: Broadly observed

ASX Clear (Futures) identifies, monitors and manages its general business risks in the context of its overall Enterprise Risk Management Policy (Key Consideration 1). It has access to sufficient funds held at group level to support continued operations as a going concern if it incurs general business losses. These funds are backed by equity and invested in liquid assets. The legal basis of ASX Clear (Futures)' access to funds held at group level has been enhanced through a clause in the ASX Group Support Agreement (Key Considerations 2, 3, 4). ASX Clear (Futures) has developed a basic recovery plan and has commenced work towards enhancing this plan in line with forthcoming CPSS-IOSCO guidance on recovery planning (Key Consideration 3). ASX maintains viable arrangements to raise additional equity for its CS facilities, as required (Key Consideration 5).

[15] While ASX Clear (Futures) is assessed as observing Principle 14, the Bank has assessed that ASX Clear (Futures) broadly observes the corresponding CCP Standard 13. This difference in ratings is due to an additional requirement under the Bank's supplementary interpretation of CCP Standards 13.2 and 13.3 that ASX Clear (Futures) offer an account structure that provides protection for client collateral in excess of margin requirements lodged with the CCP. ASX Clear (Futures) is consulting on proposals to provide this additional protection for client collateral.

Summary Assessment by Principle

Principle 16. Custody and investment risks

Rating: Broadly observed

The assets of ASX Clear (Futures) and its participants are administered and held within the ASX Group in accordance with robust group-wide controls (Key Consideration 1). A portion of these assets is held in liquid form to ensure prompt access as required (Key Consideration 2). ASXCC invests the assets of ASX Clear (Futures) according to an Investment Mandate in instruments with low credit, market and liquidity risk. Following changes during 2013/14, ASX Clear (Futures)' treasury investments place less reliance on unsecured investments concentrated in the large domestic banks (Key Consideration 4). ASX is in dialogue with the Bank about its expectations for further reductions in these exposures. ASXCC does not use custodian banks for its investments (Key Consideration 3).

Principle 17. Operational risk

Rating: Observed

ASX Clear (Futures)' key operating systems are Genium INET (Genium) and Calypso. Genium replaced the previous SECUR system for the clearing of exchange-traded derivatives in May 2014. Calypso was first used for the clearing of OTC derivatives transactions in September 2013.

ASX Clear (Futures) manages its operational risks in the context of its group-wide Enterprise Risk Management Framework. ASX Clear (Futures) considers that it has sufficient well-trained and competent personnel and other resources to operate Genium and Calypso, and has taken steps to ensure that business development work does not risk the availability of these resources for key systems, including recently for the introduction of Genium and Calypso (Key Consideration 1). Responsibility for approving and reviewing operational risk management policy is shared between the ASX Limited and CS Boards, the Audit and Risk Committee and individual departments. The management of each department is responsible for implementing operational risk controls in their respective areas (Key Consideration 2). ASX Clear (Futures) sets clear operational reliability objectives and pursues policies designed to achieve those objectives. Key objectives for Genium, SECUR and Calypso, such as minimum availability of 99.8 per cent and peak capacity utilisation of 50 per cent, were met during 2013/14 (Key Consideration 3, 4). ASX Clear (Futures) maintains physical and information security policies based on relevant domestic and international standards (Key Consideration 5).

ASX Clear (Futures) also maintains business continuity arrangements that provide a high degree of redundancy and, through the use of dual sites, target the resumption of operations within two hours following disruptive events. These arrangements are regularly tested in real time during live operations. Participants are required to maintain appropriate operational and business continuity arrangements that complement ASX Clear (Futures)' own arrangements, and are appropriate to the nature and scale of their business. ASX Clear (Futures) monitors participants' compliance with these requirements, and broader operational performance, on an ongoing basis (Key Consideration 6).

ASX Clear (Futures) manages operational interdependencies with participants and Austraclear through its participant monitoring processes and group-wide risk management framework. Its dependencies on service providers and utilities are subject to ongoing monitoring and contingency arrangements where appropriate, including an escrow arrangement for Genium and Calypso source code subject to third-party vendor support. ASX Clear (Futures) has introduced clauses in its legal agreements with key outsourcing and critical service providers that impose requirements on those providers equivalent to those under the FSS (which align with the Principles). Additional clauses provide for access to information for the Bank, and notice to the Bank in the case of termination (Key Consideration 7).

Principle 18. Access and participation requirements

Rating: Observed

ASX Clear (Futures) has objective and transparent participation requirements set out in its Operating Rules and Procedures (Key Consideration 1). These include minimum capital and other financial requirements, as well as the requirement that participants maintain operational and risk management arrangements tailored to the specific activities of ASX Clear (Futures). Additional requirements apply for OTC derivatives clearing participants. ASX Clear (Futures)' participation requirements promote the efficient operation of the facility, and do not impose discriminatory or restrictive access constraints such as minimum turnover levels or location requirements (Key Consideration 2). ASX Clear (Futures) monitors participants' compliance with requirements on an ongoing basis and has the authority to suspend or terminate participation or take other disciplinary or remedial action in the event of a breach of these requirements (Key Consideration 3).

Summary Assessment by Principle

Principle 19. Tiered participation arrangements

Rating: Observed

ASX Clear (Futures) applies a risk-based approach to its monitoring of tiered participation arrangements. To date, the focus of this monitoring has been on client activity in exchange-traded derivatives, since an account structure that permits client clearing of OTC derivatives transactions has only relatively recently been introduced. ASX Clear (Futures) has a formal standard that governs its risk-based approach to monitoring of concentration in tiered participation arrangements and documents mitigating steps (Key Consideration 4).

During 2013/14, clients of ASX Clear (Futures)' participants represented 69 per cent of initial margin held by ASX Clear (Futures) to cover its credit exposures to both participants and (indirectly) their clients. In managing the risks associated with tiered arrangements, ASX Clear (Futures) is able to gather information on indirect participation, although with some limitations. ASX Clear (Futures) will obtain better data to support its monitoring as participants and their clients make use of the newly introduced individually segregated account structure for both OTC and exchange-traded derivatives. Where data limitations remain, ASX can also seek more detailed information from participants on an ad hoc basis (Key Considerations 1, 2). ASX Clear (Futures) does not maintain formal thresholds at which large indirect participants are encouraged to seek direct participation, but does actively manage risks posed by indirect participant activity through its relationship with the direct participant (Key Consideration 3). ASX Clear (Futures) conducts daily monitoring of its client-level data, with the use of predefined triggers for further action.

Principle 20. FMI links

Rating: Observed

ASX Clear (Futures) maintains links to two other FMIs: Austraclear and NZClear. ASX Clear (Futures) assumes no direct financial risks from these links, but is exposed to operational risks. These are managed in the context of the operational risk management practices of both FMIs (Key Consideration 1). The legal basis of each link is supported by finality legislation (Key Consideration 2). ASX Clear (Futures) does not maintain links with any other CCPs (Key Considerations 7, 8).

Principle 21. Efficiency and effectiveness

Rating: Observed

ASX Clear (Futures) offers a range of participation options and clearing services designed to meet the needs of its participants and the ASX 24 market. ASX Clear (Futures) participants are able to influence risk management policies and broader service developments via a participant Risk Committee and OTC Product Committee that make recommendations and proposals to the ASX Clear (Futures) Board (Key Consideration 1, see also Principle 2). ASX Clear (Futures)' goals and objectives are determined by the ASX Limited Board (for group-level strategic direction and business priorities) and the ASX Clear (Futures) Board (for goals and objectives specific to the clearing service) (Key Consideration 2). ASX Clear (Futures) measures the effectiveness of its services via participant and user feedback. ASX Clear (Futures) performance reports are presented to ASX management on a monthly basis. Matters covered in these reports include operational performance, netting efficiency, incident management and participant complaints (Key Consideration 3).

Principle 22. Communication procedures and standards

Rating: Observed

ASX Clear (Futures) uses the internationally used OMnet Application Programming Interface as a communication standard for clearing of financial products traded on ASX 24. For OTC interest rate derivatives, ASX Clear (Futures) uses the internationally used Calypso clearing system for clearing-related messaging (Key Consideration 1).

Principle 23. Disclosure of rules, key procedures, and market data

Rating: Observed

ASX Clear (Futures) fully discloses its Operating Rules and Procedures (including the OTC Handbook) to participants, and publicly discloses its rules, fees and a range of additional relevant information on its risk management procedures (Key Consideration 1). This includes information regarding the process of novation, and general descriptions of system design and the roles and obligations of ASX Clear (Futures) and its participants (Key Consideration 2). ASX Clear (Futures) provides new participants with comprehensive documentation, and verifies their understanding of their responsibilities as participants; existing participants are also provided with education on their obligations where required (Key Consideration 3). A full breakdown of the various fees ASX Clear (Futures) charges, including available discount and incentive schemes, is published on the ASX website (Key Consideration 4). ASX has published its response to the CPSS-IOSCO Disclosure Framework and plans to periodically update and enhance this document where appropriate (Key Consideration 5). During 2013/14, ASX redesigned its website, providing links to information that is subject to disclosure requirements from a central location.

Summary Assessment by Principle
Principle 24. Disclosure of market data by trade repositories ***Rating: Not applicable*** Principle 24 not relevant to central counterparties.

Table 4: ASX Settlement Summary Assessment

Summary Assessment by Principle
Principle 1. Legal basis ***Rating: Observed*** ASX Settlement is a legal entity within the ASX Group that solely provides settlement services. ASX Settlement's legal basis is founded on clear and understandable rules that operate within the framework of relevant laws and regulations (Key Considerations 1, 2). The certainty of this legal basis in relevant jurisdictions is reinforced by supporting legislation, including ASX Settlement's protection as an approved netting arrangement under the PSNA, and is subject to periodic review by ASX Legal (Key Considerations 1, 4). ASX Settlement has publicly outlined the key features of its legal basis on its website and, from time to time, for information, may provide legal opinions to participants or other stakeholders in respect of the legal basis of significant new services (Key Consideration 3). ASX has not identified any material risks arising from potential conflicts of law relating to the operations of ASX Settlement (Key Consideration 5).
Principle 2. Governance ***Rating: Observed*** ASX Settlement pursues objectives that place a high priority on risk management, through compliance with relevant FSS and the broader Corporations Act requirement to do all other things necessary to reduce systemic risk. ASX Settlement must also comply with all its other obligations under Part 7.3 of the Corporations Act, including to operate in a fair and effective manner. ASX Settlement also acknowledges public policy objectives directed at financial market and payments system integrity, as well as the interests of customers and other stakeholders (Key Consideration 1). ASX Settlement's governance arrangements are documented and publicly disclosed. These arrangements give ultimate responsibility for the oversight of the operations and risk management of ASX Settlement to the ASX Limited Board and the ASX Settlement Board. Board and committee charters document Board roles and lines of responsibility and accountability (Key Considerations 2, 3). ASX has conflict handling procedures in place to address potential conflicts of interest that may arise by virtue of its group structure, requiring staff and directors to act in the best interests of each facility as appropriate. Changes to the composition of the CS Boards during the 2013/14 further support these conflict handling procedures (Key Consideration 3). The performance of each relevant Board is reviewed at least annually for both individual directors and the Board as a whole. The relevant Boards each include a majority of independent non-executive directors and the ASX Settlement Board includes directors appointed for their expertise in clearing and settlement matters (Key Consideration 4). Board remuneration is designed to attract and retain appropriately skilled and qualified directors. The reporting lines of management are set out in the CS Boards' Charter, along with roles and responsibilities of key management personnel (Key Consideration 5). Remuneration of senior management in risk management roles is structured to provide appropriate incentives for sound and effective risk management. ASX maintains a clear and documented risk management framework, subject to regular internal and external review. Key processes and internal controls are subject to review by ASX's Internal Audit department, which is itself subject to periodic external review (Key Consideration 6). ASX utilises formal and informal consultation processes to ensure that the design and decisions of ASX Settlement reflect the interests of participants and other stakeholders. This includes the establishment of a new advisory forum, introduced in accordance with commitments under the ASX *Code of Practice for Clearing and Settlement of Cash Equities in Australia* (the Code of Practice), which provides user feedback in relation to the ongoing development of cash market clearing and settlement infrastructure and services (Key Consideration 7).
Principle 3. Framework for the comprehensive management of risks ***Rating: Broadly observed*** ASX maintains an Enterprise Risk Management Policy that sets out its framework for managing the full range of strategic, legal, financial and operational risks faced by ASX Settlement. This high-level framework is supported by more granular policies (currently being refreshed) and a governance structure to oversee ASX Settlement's risk management activities (Key Consideration 1). ASX Settlement's risk management framework does not place financial obligations on participants, but provides incentives to participants to control the risks that they bring to the SSF (Key Consideration 2). As part of its risk management framework, ASX Settlement reviews on an ongoing basis risks associated with interdependencies with other entities, and in relation to new initiatives, applies appropriate tools to manage these risks (Key Consideration 3). ASX Settlement has prepared a basic recovery plan on the basis of its existing powers and intends to enhance this plan in line with forthcoming CPSS-IOSCO guidance on recovery planning (Key Consideration 4).
Principle 4. Credit risk ***Rating: Not applicable*** ASX Settlement does not extend credit to participants or provide a settlement guarantee. Accordingly, ASX Settlement does not assume credit risk as principal. ASX Settlement's use of a DvP settlement mechanism ensures that participants do not face credit risks arising from ASX Settlement's settlement processes.

Summary Assessment by Principle

Principle 5. Collateral

Rating: Not applicable

Since ASX Settlement does not assume credit risk as principal (see Principle 4), it does not collect collateral from participants.

Principle 6. Margin

Rating: Not applicable

Principle 6 not relevant to securities settlement facilities.

Principle 7. Liquidity risk

Rating: Observed

ASX Settlement conducts settlement on a DvP Model 3 basis, and does not assume payment obligations in the settlement process. While participants face liquidity exposures arising from the possible reconstitution of the multilateral net batch in a default, including via the implementation of offsetting transaction arrangements related to novated transactions, ASX Settlement's back-out procedures are designed to limit concentrated liquidity exposures for non-defaulting participants (Key Consideration 1). These procedures are disclosed to participants through ASX Settlement's Operating Rules and Procedures (Key Consideration 2). ASX Settlement does not assume liquidity risk as principal through its settlement process (Key Considerations 3, 5, 6, 7, 8, 9, 10). ASX is considering whether any additional information could be disclosed to participants on the potential liquidity impact of reconstitution of the ASX Settlement batch in scenarios that extend beyond the management of an ASX Clear participant default.

Principle 8. Settlement finality

Rating: Observed

ASX Settlement defines the point at which settlement is final in its Operating Rules, and finality is ensured by its approval under Part 3 of the PSNA. Money settlements linked to securities transfers in ASX Settlement occur in RITS. The finality of interbank obligations arising from its settlements is protected by the approval of RITS under Part 2 of the same legislation (Key Consideration 1). Final settlement occurs each day in a single multilateral net batch on a DvP Model 3 basis (Key Consideration 2). ASX Settlement defines clear cut-off times for the cancellation of payment or transfer instructions (Key Consideration 3).

Principle 9. Money settlements

Rating: Observed

ASX Settlement conducts its money settlements across the ESAs of Payment Providers at the Bank, via RITS (Key Consideration 1). ASX Settlement does not conduct settlements across its own books or in commercial bank money (Key Considerations 2, 3, 4, 5). Payment Providers that effect money settlements on behalf of participants must be prudentially regulated and meet ASX Settlement's application criteria. The roles and responsibilities of commercial bank Payment Providers are governed by legal agreements between those banks, ASX Settlement, ASX Clear and the Australian Payments Clearing Association (APCA). ASX is considering the introduction of a formal framework to engage Payment Providers on changes to settlement processes.

Principle 10. Physical deliveries

Rating: Not applicable

ASX Settlement does not settle obligations requiring physical delivery.

Summary Assessment by Principle

Principle 11. Central securities depositories

Rating: Observed

ASX Settlement operates a central securities depository that maintains a record of securities holdings and movements for ASX-listed securities, and securities listed by Approved Listing Market Operators (ALMOs), through the CHESS sub-register. Securities registries maintain a separate record of holdings on behalf of issuers, using information on securities movements provided by CHESS. ASX Settlement employs a range of controls to ensure the integrity of these securities. These controls are subject to annual audit. ASX Settlement's Operating Rules and Procedures identify participants' interests in each type of security held within ASX Settlement, identify how these interests can be transferred within the facility, and provide that participants' securities would not be subject to claims by creditors in the event that ASX Settlement entered external administration (Key Consideration 1).

ASX Settlement does not allow overdrafts or debit balances in securities accounts within its system, and all securities (or interests in securities) are held in a dematerialised form (Key Considerations 2, 3). ASX Settlement's Operating Rules set out its obligations in providing safekeeping of participant assets, and ASX Settlement employs operational controls and insurance to mitigate custody risk (Key Consideration 4). Participant assets are segregated from ASX Settlement's own assets, and ASX Settlement supports the segregation of participant and client assets through the use of identifiers for securities holders (Key Consideration 5). ASX Settlement does not provide any ancillary services that could pose a risk to its central securities depository function (Key Consideration 6).

Principle 12. Exchange-of-value settlement systems

Rating: Observed

ASX Settlement eliminates principal risk in settlements involving the transfer of a security in exchange for cash by ensuring that delivery occurs if and only if the associated payment is settled at the same time (Key Consideration 1). For the purchase of securities, ASX Settlement does this through the use of a DvP Model 3 settlement mechanism, which completes settlement via a multilateral net batch.

Principle 13. Participant-default rules and procedures

Rating: Observed

ASX Settlement has powers under its Operating Rules and Procedures to manage a participant default, and has documented procedures setting out how to manage a default. Powers available to ASX Settlement include powers to suspend or terminate the participant status of a defaulted participant (Key Considerations 1, 2). Participants are also required to report any default event or expected default to the SSF. ASX Settlement sets out its default management powers in its Operating Rules and Procedures (Key Consideration 3). Given that ASX Settlement is not exposed to financial loss in the event of a participant default, its handling of a default situation is largely procedural in nature (Key Consideration 4).

Principle 14. Segregation and portability

Rating: Not applicable

Principle 14 not relevant to securities settlement facilities.

Principle 15. General business risk

Rating: Broadly observed

ASX Settlement identifies, monitors and manages its general business risks in the context of its overall Enterprise Risk Management Policy (Key Consideration 1). It has access to sufficient funds held at group level to support continued operations as a going concern if it incurs general business losses. These funds are backed by equity and invested in liquid assets. The legal basis of ASX Settlement's access to funds held at group level has been enhanced through a clause in the ASX Group Support Agreement (Key Considerations 2, 3, 4). ASX Settlement has developed a basic recovery plan and has commenced work towards enhancing this plan in line with forthcoming CPSS-IOSCO guidance on recovery planning (Key Consideration 3). ASX maintains viable arrangements to raise additional equity for its CS facilities as required (Key Consideration 5).

Principle 16. Custody and investment risks

Rating: Not applicable

ASX Settlement does not have any financial investments, and its participants do not lodge collateral or other assets with the SSF. General business risk capital covering the needs of ASX Settlement is invested at the group level. Arrangements for the investment of those funds are discussed under Principle 15.

Summary Assessment by Principle

Principle 17. Operational risk

Rating: Observed

ASX Settlement's key operating system is CHESS.

ASX Settlement manages its operational risks in the context of its group-wide Enterprise Risk Management Framework. ASX Settlement considers that it has sufficient well-trained and competent personnel and other resources to operate CHESS, and has taken steps to ensure that business development work does not risk the availability of these resources for key systems (Key Consideration 1). Responsibility for approving and reviewing operational risk management policy is shared between the ASX Limited and CS Boards, the Audit and Risk Committee and individual departments. The management of each department is responsible for implementing operational risk controls in their respective areas (Key Consideration 2). ASX Settlement sets clear operational reliability objectives and pursues policies designed to achieve those objectives. Key objectives for CHESS, such as minimum availability of 99.8 per cent and peak capacity utilisation of 50 per cent, were met during 2013/14 (Key Considerations 3, 4). ASX Settlement maintains physical and information security policies based on relevant domestic and international standards (Key Consideration 5).

ASX Settlement also maintains business continuity arrangements that provide a high degree of redundancy and, through the use of dual sites, target the resumption of operations within two hours following disruptive events. These arrangements are regularly tested in real time during live operations. Participants are required to maintain appropriate operational and business continuity arrangements that complement ASX Settlement's own arrangements, and are appropriate to the nature and scale of their business. ASX Settlement monitors participants' compliance with these requirements, and broader operational performance, on an ongoing basis (Key Consideration 6).

ASX Settlement manages operational interdependencies with participants and ASX Clear through its participant monitoring processes and group-wide risk management framework. Its dependencies on service providers and utilities are subject to ongoing monitoring and contingency arrangements where appropriate. ASX Settlement has introduced clauses in its legal agreements with key outsourcing and critical service providers that impose requirements on those providers equivalent to those under the FSS (which align with the Principles). Additional clauses provide for access to information for the Bank, and notice to the Bank in the case of termination (Key Consideration 7).

Principle 18. Access and participation requirements

Rating: Observed

ASX Settlement has objective and transparent participation requirements set out in its Operating Rules and Procedures (Key Consideration 1). These include financial requirements, as well as the requirement that participants maintain operational arrangements tailored to the specific activities of ASX Settlement. ASX Settlement's participation requirements promote the efficient operation of the facility, and do not impose discriminatory or restrictive access constraints such as minimum turnover levels (Key Consideration 2). ASX Settlement monitors participants' compliance with requirements on an ongoing basis, and has the authority to suspend or terminate participation or take other disciplinary or remedial action in the event of a breach of these requirements (Key Consideration 3).

Principle 19. Tiered participation arrangements

Rating: Observed

In managing the risks associated with tiered arrangements, ASX Settlement is able to gather basic information on indirect participation (Key Considerations 1, 2). ASX Settlement does not maintain formal thresholds at which substantial indirect participants are encouraged to seek direct participation, but does actively manage risks posed by indirect participant activity through its relationship with the direct participant (Key Consideration 3). The partially overlapping participation base between ASX Settlement and ASX Clear allows for tiered participation risks to be monitored and addressed jointly (Key Consideration 4).

Principle 20. FMI links

Rating: Observed

ASX Settlement maintains a link to one other FMI, ASX Clear, for the settlement of novated securities transactions. There are no direct financial risks associated with this link, but ASX Settlement is exposed to operational risks. These are managed in the context of ASX's group-wide framework for operational risk management (Key Consideration 1). The legal basis of the link is supported by finality legislation (Key Consideration 2). ASX Settlement does not maintain links with any other central securities depositories (Key Considerations 3, 4, 5, 6).

Summary Assessment by Principle

Principle 21. Efficiency and effectiveness

Rating: Observed

ASX Settlement offers a range of participation options and settlement services designed to meet the needs of its participants, the ASX and Chi-X markets, and the ALMOs that it serves. ASX's Code of Practice for cash equities clearing and settlement addresses transparency and accessibility in the provision of these services and formalises avenues for user governance, including via a user Forum (Key Consideration 1, see also Principle 2). ASX Settlement's goals and objectives are determined by the ASX Limited Board (for group-level strategic direction and business priorities) and the ASX Settlement Board (for goals and objectives specific to the cash market settlement service). ASX Settlement measures the effectiveness of its services via participant and user feedback. ASX Settlement performance reports are presented to ASX management on a monthly basis. Matters covered in these reports include operational performance, settlement and netting efficiency, incident management and participant complaints (Key Consideration 3).

Principle 22. Communication procedures and standards

Rating: Observed

While ASX Settlement uses a proprietary messaging standard, this is acceptable given the domestic orientation of its service. ASX Settlement is consulting with users, via a Technical Committee established under the Code of Practice, on a proposal to adopt the internationally accepted ISO 20022 SWIFT standard as part of a broader renewal of its CHESS system (Key Consideration 1).

Principle 23. Disclosure of rules, key procedures, and market data

Rating: Observed

ASX Settlement fully discloses its Operating Rules and Procedures to participants, and publicly discloses its rules, fees and a range of additional relevant information on its risk management procedures (Key Consideration 1). This includes information regarding the general descriptions of system design and the roles and obligations of ASX Settlement and its participants (Key Consideration 2). ASX Settlement provides new participants with comprehensive documentation, and verifies their understanding of their responsibilities as participants; existing participants are also provided with education on their obligations where required (Key Consideration 3). A full breakdown of the various fees ASX Settlement charges, including available discount and incentive schemes, is published on the ASX website (Key Consideration 4). ASX has published its response to the CPSS-IOSCO Disclosure Framework and plans to periodically update and enhance this document where appropriate (Key Consideration 5). During 2013/14, ASX redesigned its website, providing links to information that is subject to disclosure requirements from a central location.

Principle 24. Disclosure of market data by trade repositories

Rating: Not applicable

Principle 24 not relevant to securities settlement facilities.

Table 5: Austraclear Summary Assessment

Summary Assessment by Principle
Principle 1. Legal basis ***Rating: Observed*** Austraclear is a separate legal entity within the ASX Group that solely provides settlement and related depository services. Austraclear's legal basis is founded on clear and understandable rules that operate within the framework of relevant laws and regulations (Key Considerations 1, 2). The certainty of this legal basis in relevant jurisdictions is reinforced by supporting legislation, including Austraclear's protection as an RTGS system under the PSNA, and is subject to periodic review by ASX Legal (Key Considerations 1, 4). Austraclear has publicly outlined the key features of its legal basis on its website and, from time to time, for information, provides legal opinions to participants or other stakeholders in respect of the legal basis of significant new services (Key Consideration 3). ASX has not identified any material risks arising from potential conflicts of law relating to the operations of Austraclear (Key Consideration 5).
Principle 2. Governance ***Rating: Observed*** Austraclear pursues objectives that place a high priority on risk management, through compliance with relevant FSS and the broader Corporations Act requirement to do all other things necessary to reduce systemic risk. Austraclear must also comply with all its other obligations under Part 7.3 of the Corporations Act, including to operate in a fair and effective manner. Austraclear also acknowledges public policy objectives directed at financial market and payments system integrity, as well as the interests of customers and other stakeholders (Key Consideration 1). Austraclear's governance arrangements are documented and publicly disclosed. These arrangements give ultimate responsibility for the oversight of operations and risk management of Austraclear to the ASX Limited Board and the Austraclear Board. Board and committee charters document Board roles and lines of responsibility and accountability (Key Considerations 2, 3). ASX has conflict handling procedures in place to address potential conflicts of interest that may arise by virtue of its group structure, requiring staff and directors to act in the best interests of each facility as appropriate. Changes to the composition of the CS Boards during 2013/14 further support these conflict handling procedures (Key Consideration 3). The performance of each relevant Board is reviewed at least annually for both individual directors and the Board as a whole. The relevant Boards each include a majority of independent non-executive directors and the Austraclear Board includes directors appointed for their expertise in clearing and settlement matters (Key Consideration 4). Board remuneration is designed to attract and retain appropriately skilled and qualified directors. The reporting lines of management are set out in the CS Boards' Charter, along with roles and responsibilities of key management personnel (Key Consideration 5). Remuneration of senior management in risk management roles is structured to provide appropriate incentives for sound and effective risk management. ASX maintains a clear and documented risk management framework subject to regular internal and external review. Key processes and internal controls are subject to review by ASX's Internal Audit unit, which is itself subject to periodic external review (Key Consideration 6). ASX utilises formal and informal consultation processes to ensure that the design and decisions of Austraclear reflect the interests of participants and other stakeholders. Austraclear has also established an Advisory Committee that provides a standing forum for user feedback on the design and ongoing development of services (Key Consideration 7).
Principle 3. Framework for the comprehensive management of risks ***Rating: Broadly observed*** ASX maintains an Enterprise Risk Management Policy that sets out its framework for managing the full range of strategic, legal, financial and operational risks faced by Austraclear. This high-level framework is supported by more granular policies (currently being refreshed) and a governance structure to oversee Austraclear's risk management activities (Key Consideration 1). Austraclear's risk management framework does not place financial obligations on participants, but provides incentives to participants, such as additional operational requirements for collateral managers, to control the risks that they bring to the SSF (Key Consideration 2). As part of its risk management framework, Austraclear reviews risks associated with interdependencies with other entities on an ongoing basis, and in relation to new initiatives, applying appropriate tools to manage these risks (Key Consideration 3). Austraclear has prepared a basic recovery plan on the basis of its existing powers and intends to enhance this plan in line with forthcoming CPSS-IOSCO guidance on recovery planning (Key Consideration 4).
Principle 4. Credit risk ***Rating: Not applicable*** Austraclear does not extend credit to participants or provide a settlement guarantee. Accordingly, Austraclear does not assume credit risk as principal. Austraclear's use of a DvP settlement mechanism ensures that participants do not face credit risks arising from Austraclear's settlement processes.

Summary Assessment by Principle
Principle 5. Collateral ***Rating: Not applicable*** Since Austraclear does not assume credit risk as principal (see Principle 4), it does not collect collateral from participants.
Principle 6. Margin ***Rating: Not applicable*** Principle 6 not relevant to securities settlement facilities.
Principle 7. Liquidity risk ***Rating: Observed*** Austraclear settlements are conducted in real time on a DvP Model 1 basis, allowing participants to manage their liquidity risk exposures to bilateral counterparties (Key Consideration 1). Austraclear does not assume liquidity risk as principal through its settlement process (Key Considerations 2, 3, 5, 6, 7, 8, 9, 10).
Principle 8. Settlement finality ***Rating: Observed*** Austraclear defines the point at which settlement is final in its Regulations, and finality is ensured by its approval under Part 2 of the PSNA. The finality of interbank obligations arising from its settlements is protected by the approval of RITS under the same legislation (Key Consideration 1). Final settlement occurs on a DvP (or equivalent simultaneous exchange of assets) Model 1 basis in real time (Key Consideration 2). Austraclear defines clear cut-off times for the cancellation of payment or transfer instructions (Key Consideration 3).
Principle 9. Money settlements ***Rating: Observed*** Austraclear conducts its AUD money settlements across the ESAs of Participating Banks at the Bank, via RITS (Key Consideration 1). Participating Banks that effect money settlements on their own behalf or on behalf of other participants must be prudentially regulated and meet Austraclear's participation requirements (Key Consideration 3). In July 2014 Austraclear began offering a foreign currency settlement service, initially supporting the settlement of payments in Chinese renminbi across the books of the Bank of China (Sydney branch) (Key Considerations 2, 3). Austraclear's Regulations and legal agreement with Bank of China state that payments through this service settle with finality in real time (Key Consideration 5).
Principle 10. Physical deliveries ***Rating: Not applicable*** Austraclear does not settle obligations requiring physical delivery.
Principle 11. Central securities depositories ***Rating: Observed*** Austraclear acts as central securities depository for the securities that it settles. Austraclear employs a range of controls to ensure the integrity of these securities. These controls are subject to annual audit. Austraclear's Regulations and Procedures identify the interests held by participants in each type of security held within Austraclear, identify how these interests can be transferred within the facility, and provide that participants' securities would not be subject to claims by creditors in the event that Austraclear entered external administration (Key Consideration 1). Austraclear does not allow overdrafts or debit balances in securities accounts within its system, and maintains paper securities in immobilised form, with other securities dematerialised (Key Considerations 2, 3). Austraclear's Regulations set out its obligations in providing safe keeping of participant assets, and Austraclear employs operational controls and insurance to mitigate custody risk (Key Consideration 4). Participant assets are segregated from Austraclear's own assets, and Austraclear supports the segregation of participant and client assets through optional sub-accounts (Key Consideration 5). Austraclear's provision of ancillary services to issuers is subject to operational risk controls (Key Consideration 6).

Summary Assessment by Principle

Principle 12. Exchange-of-value settlement systems

Rating: Observed

Austraclear eliminates principal risk in settlements involving the transfer of a security in exchange for cash or another security by ensuring that delivery occurs if and only if the associated payment is settled at the same time (Key Consideration 1). For the purchase of securities, Austraclear does this through the use of a DvP Model 1 settlement mechanism, which simultaneously settles linked payment and securities obligations on an item-by-item basis in real time. Collateral substitutions arising from the ASX Collateral service are performed on a delivery-versus-delivery (DvD) basis, whereby linked securities transactions settle simultaneously, including where a chain of substitutions are being performed.

Principle 13. Participant-default rules and procedures

Rating: Observed

Austraclear has powers under its Operating Rules and Procedures to manage a participant default, and has documented procedures setting out how to manage a default, including in respect of special purpose participants that are collateral managers. Powers available to Austraclear include powers to suspend or terminate the participant status of a defaulting participant (Key Considerations 1, 2). Participants are also required to report any default event or expected default to the SSF. Austraclear sets out its default management powers in its Regulations and Procedures (Key Consideration 3). Since Austraclear is not exposed to financial loss in the event of a participant default, its handling of a default situation is largely procedural in nature (Key Consideration 4).

Principle 14. Segregation and portability

Rating: Not applicable

Principle 14 not relevant to securities settlement facilities.

Principle 15. General business risk

Rating: Broadly observed

Austraclear identifies, monitors and manages its general business risks in the context of its overall Enterprise Risk Management Policy (Key Consideration 1). It has access to sufficient funds held at group level to support continued operations as a going concern if it incurs general business losses. These funds are backed by equity and invested in liquid assets. The legal basis of Austraclear's access to funds held at group level has been enhanced through a clause in the ASX Group Support Agreement (Key Considerations 2, 3, 4). Austraclear has developed a basic recovery plan and has commenced work towards enhancing this plan in line with forthcoming CPSS-IOSCO guidance on recovery planning (Key Consideration 3). ASX maintains viable arrangements to raise additional equity for its CS facilities as required (Key Consideration 5).

Principle 16. Custody and investment risks

Rating: Observed

The assets of Austraclear are invested on its own behalf in cash or other high-quality liquid assets, which allow prompt access to its assets when required (Key Considerations 1, 2). Austraclear controls investment risk by limiting its approved counterparties to large Australian banks, and investing predominantly in cash (Key Consideration 4). Austraclear does not use custodian banks for its investments (Key Consideration 3).

Summary Assessment by Principle

Principle 17. Operational risk

Rating: Observed

Austraclear's key operating system is EXIGO.

Austraclear manages its operational risks in the context of its group-wide Enterprise Risk Management Framework. Austraclear considers that it has sufficient well-trained and competent personnel and other resources to operate EXIGO, and has taken steps to ensure that business development work does not risk the availability of these resources for key systems (Key Consideration 1). Responsibility for approving and reviewing operational risk management policy is shared between the ASX Limited and CS Boards, the Audit and Risk Committee and individual departments. The management of each department is responsible for implementing operational risk controls in their respective areas (Key Consideration 2). Austraclear sets clear operational reliability objectives and pursues policies designed to achieve those objectives. Key objectives for EXIGO, such as minimum availability of 99.9 per cent and peak capacity utilisation of 50 per cent, were met during 2013/14 (Key Consideration 3, 4). Austraclear maintains physical and information security policies based on relevant domestic and international standards (Key Consideration 5).

Austraclear also maintains business continuity arrangements that provide a high degree of redundancy and, through the use of dual sites, target the resumption of operations within two hours following disruptive events. These arrangements are regularly tested in real time during live operations. Participants are required to maintain appropriate operational and business continuity arrangements that complement Austraclear's own arrangements, and are appropriate to the nature and scale of their business. Austraclear monitors participants' compliance with these requirements, and broader operational performance, on an ongoing basis (Key Consideration 6).

Austraclear manages operational interdependencies with participants, and ASX Clear and ASX Clear (Futures) through its participant monitoring processes and group-wide risk management framework respectively. Its dependencies on service providers and utilities are subject to ongoing monitoring and contingency arrangements where appropriate. Austraclear has introduced clauses in its legal agreements with key outsourcing and critical service providers that impose requirements on those providers equivalent to those under the FSS (which align with the Principles). Additional clauses provide for access to information for the Bank, and notice to the Bank in the case of termination (Key Consideration 7).

Principle 18. Access and participation requirements

Rating: Observed

Austraclear has objective and transparent participation requirements set out in its Regulations and Procedures (Key Consideration 1). These include minimum capital and other financial requirements, as well as the requirement that participants maintain operational arrangements tailored to the specific activities of Austraclear, including additional requirements for special purpose participants that are collateral managers. Austraclear's participation requirements promote the efficient operation of the facility, and do not impose discriminatory or restrictive access constraints such as minimum turnover levels (Key Consideration 2). Austraclear monitors participants' compliance with requirements on an ongoing basis, and has the authority to suspend or terminate participation or take other disciplinary or remedial action in the event of a breach of these requirements (Key Consideration 3).

Principle 19. Tiered participation arrangements

Rating: Observed

In managing the risks associated with tiered arrangements, Austraclear is able to gather basic information on indirect participation (Key Considerations 1, 2). Austraclear does not maintain formal thresholds at which substantial indirect participants are encouraged to seek direct participation, but does actively manage risks posed by indirect participant activity through its relationship with the direct participant (Key Consideration 3). Austraclear is not directly exposed to financial risks arising from tiered participation (Key Consideration 4).

Summary Assessment by Principle

Principle 20. FMI links

Rating: Observed

Austraclear maintains three links to other FMIs:

- ASX Clear, for funds transfers in relation to margin payments
- ASX Clear (Futures), for AUD funds transfers in relation to margin payments, lodgement of AUD-denominated non-cash collateral, and settlement of 90-day bank bill futures
- Clearstream, in relation to Euroentitlements managed in Austraclear.

There are no direct financial risks associated with these links but Austraclear is exposed to operational risks. These are managed in the context of the operational risk management practices of each FMI (Key Consideration 1). The legal basis of each link is supported by finality legislation (Key Consideration 2). Austraclear's link with Clearstream does not involve the extension of credit, provisional transfers of securities or the use of custodians (Key Considerations 3, 4, 6).

Principle 21. Efficiency and effectiveness

Rating: Observed

Austraclear meets the needs of its participants and the markets it serves by: providing an appropriate range of registry, central securities depository and settlement services; maintaining a flexible participation structure; and by establishing the Austraclear Advisory Committee, comprised of user representatives, to provide input on the design, operation and future development of Austraclear (Key Consideration 1, see also Principle 2). Austraclear's goals and objectives are determined by the ASX Limited Board (for group-level strategic direction and business priorities) and the Austraclear Board (for goals and objectives specific to the settlement service). Austraclear measures the effectiveness of its services via participant and user feedback. Austraclear performance reports are presented to ASX management on a monthly basis. Matters covered in these reports include operational performance, settlement failures, incident management and participant complaints.

Principle 22. Communication procedures and standards

Rating: Observed

The Austraclear System supports the internationally accepted SWIFT Message Protocol. Participants can also access Austraclear via the internet or a secure private network (Key Consideration 1).

Principle 23. Disclosure of rules, key procedures, and market data

Rating: Observed

Austraclear fully discloses its Regulations and Procedures to participants, and publicly discloses its rules, fees and a range of additional relevant information on its risk management procedures (Key Consideration 1). This includes information regarding the general descriptions of system design and the roles and obligations of Austraclear and its participants (Key Consideration 2). Austraclear provides new participants with comprehensive documentation, and verifies their understanding of their responsibilities as participants; existing participants are also provided with education on their obligations where required (Key Consideration 3). A full breakdown of the various fees ASX Clear charges, including available discount and incentive schemes, is published on the ASX website (Key Consideration 4). ASX has published its response to the CPSS-IOSCO Disclosure Framework and plans to periodically update and enhance this document where appropriate (Key Consideration 5). During 2013/14, ASX redesigned its website, providing links to information that is subject to disclosure requirements from a central location.

Principle 24. Disclosure of market data by trade repositories

Rating: Not applicable

Principle 24 not relevant to securities settlement facilities.

3.2 Recommendations

Where a CS facility has been assessed to observe a Principle, ASIC and the Bank nevertheless expect ASX to work towards continual strengthening of its observance of the Principle. ASX recognises this and has governance arrangements in place to motivate and encourage continuous improvement. Tables 6 to 9 include some recommendations encouraging such improvement in some specific areas. These are not exhaustive, and ASX is encouraged to continue to seek further improvements to its observance of the Principles.

Where a facility has been assessed to broadly observe a Principle, ASIC and the Bank will have sought evidence that a plan is in place to address the identified issue of concern within a clear, defined and reasonable timeframe, and that it would not be reasonably practicable for the facility to take such actions immediately in order to fully observe the Principle. Tables 6 to 9 also include recommendations that identify the steps required by ASX to address the relevant issues of concern and fully observe the applicable Principle.

Table 6: ASX Clear Recommendations

Principle	Rating	Recommendations
3. Framework for the comprehensive management of risks	Broadly observed	In order to fully observe Principle 3, ASX Clear should implement plans to enhance its recovery plan consistent with forthcoming CPSS-IOSCO guidance on recovery planning.
4. Credit risk	Broadly observed	In order to fully observe Principle 4, ASX Clear should implement mechanisms consistent with forthcoming CPSS-IOSCO guidance on recovery planning that would fully address any uncovered credit losses and replenish financial resources following a participant default. ASX Clear should also complete the full validation of its capital stress test model by external experts and consider further enhancements to its reverse stress testing approach that take into account the impact of systematic shocks across multiple products. ASX Clear is encouraged to continually refine and enhance its reverse stress testing methodology and its integration into existing risk management processes.
6. Margin	Broadly observed	In order to fully observe Principle 6, ASX Clear should complete the full validation of its SPAN margin model and Derivatives Pricing System by external experts, and carry out plans for these external experts to perform a full validation of the Cash Market Margining model within the next two years. ASX Clear is encouraged to continually refine and enhance its margin backtesting and sensitivity analysis methodologies and their integration into existing risk management processes.
7. Liquidity risk	Broadly observed	In order to fully observe Principle 7, ASX Clear should implement mechanisms consistent with forthcoming CPSS-IOSCO guidance on recovery planning that would fully address any uncovered liquidity shortfall related to derivatives transactions following a participant default. ASX Clear should also complete the full validation of its liquidity stress test model by external experts, and enhance its sensitivity analysis approach to allow it to systematically examine the effect of underlying assumptions. This should include assumptions on the porting of client derivatives positions and the degree to which timely settlement can be achieved without the use of offsetting transaction arrangements.
9. Money settlements	Observed	ASX Clear is encouraged to work with ASX Settlement to introduce a framework to formally engage Payment Providers on changes to settlement processes in response to regulatory or market-driven change.
14. Segregation and portability	Broadly observed	In order to fully observe Principle 14, ASX Clear should complete implementation of enhanced client protection arrangements for cash equities that provide materially equivalent protection to house/client omnibus account segregation.

Principle	Rating	Recommendations
15. General business risk	Broadly observed	In order to fully observe Principle 15, ASX Clear should carry out plans to enhance its recovery plan in line with forthcoming CPSS-IOSCO guidance, and ensure that the capital it holds under Key Consideration 2 continues to be sufficient to fund the enhanced plan. As ASX Clear further develops its recovery plan, it should also review and integrate its recapitalisation processes with its broader recovery planning arrangements.
16. Custody and investment risks	Broadly observed	In order to fully observe Principle 16, ASX Clear should implement plans to further reduce the concentration of unsecured exposures to the large domestic banks under the ASXCC treasury investment policy. The Bank has opened a dialogue with ASX on the detail of its expectations for the credit and liquidity risk profile of ASXCC's investment portfolio, as well as the time frame over which these expectations should be met.
17. Operational risk	Observed	In order to continue to observe Principle 17, ASX Clear will need to review its operational arrangements in light of the proposed establishment of a special resolution regime for FMIs in Australia. In particular, ASX Clear will need to ensure that its operations are organised in such a way as to facilitate effective crisis management actions under that regime once finalised.
22. Communication procedures and standards	Observed	ASX Clear is encouraged to implement proposals to move to internationally accepted messaging standards as part of a future renewal of the CHESS system.

Table 7: ASX Clear (Futures) Recommendations

Principle	Rating	Recommendations
3. Framework for the comprehensive management of risks	Broadly observed	In order to fully observe Principle 3, ASX Clear (Futures) should implement plans to enhance its recovery plan consistent with forthcoming CPSS-IOSCO guidance on recovery planning.
4. Credit risk	Broadly observed	In order to fully observe Principle 4, ASX Clear (Futures) should implement mechanisms consistent with forthcoming CPSS-IOSCO guidance on recovery planning that would fully address any uncovered credit losses and replenish financial resources following a participant default. ASX Clear (Futures) should also complete the full validation of its capital stress test model by external experts. ASX Clear (Futures) is encouraged to continually refine and enhance its reverse stress testing methodology and its integration into existing risk management processes.
6. Margin	Broadly observed	In order to fully observe Principle 6, ASX Clear (Futures) should complete the full validation of its SPAN and OTC IRS Historic VaR margin models by external experts. ASX Clear (Futures) is encouraged to carry out plans to further enhance its margin backtesting and sensitivity analysis to test coverage of actual static participant portfolios on a daily and periodic basis. ASX Clear (Futures) is also encouraged to continually refine and enhance its margin backtesting and sensitivity analysis methodologies and their integration into existing risk management processes.
7. Liquidity risk	Broadly observed	In order to fully observe Principle 7, ASX Clear (Futures) should implement mechanisms consistent with forthcoming CPSS-IOSCO guidance on recovery planning that would fully address any uncovered liquidity shortfall following a participant default. ASX Clear (Futures) should also complete the full validation of its liquidity stress test model by external experts. ASX Clear (Futures) is encouraged to continually refine and enhance its liquidity reverse stress testing methodology and its integration into existing risk management processes.
14. Segregation and portability	Observed[16]	ASX Clear (Futures) should carry out plans to implement enhanced client segregation arrangements that support the lodgement of excess client collateral in order to meet requirements of the corresponding CCP Standard 13.
15. General business risk	Broadly observed	In order to fully observe Principle 15, ASX Clear (Futures) should carry out plans to enhance its recovery plan in line with forthcoming CPSS-IOSCO guidance, and ensure that the capital it holds under Key Consideration 2 continues to be sufficient to fund the enhanced plan. As ASX Clear (Futures) further develops its recovery plan, it should also review and integrate its recapitalisation processes with its broader recovery planning arrangements.
16. Custody and investment risks	Broadly observed	In order to fully observe Principle 16, ASX Clear (Futures) should implement plans to further reduce the concentration of unsecured exposures to the large domestic banks under the ASXCC treasury investment policy. The Bank has opened a dialogue with ASX on the detail of its expectations for the credit and liquidity risk profile of ASXCC's investment portfolio, as well as the time frame over which these expectations should be met.
17. Operational risk	Observed	In order to continue to observe Principle 17, ASX Clear (Futures) will need to review its operational arrangements in light of the proposed establishment of a special resolution regime for FMIs in Australia. In particular, ASX Clear (Futures) will need to ensure that its operations are organised in such a way as to facilitate effective crisis management actions under that regime once finalised.

[16] As noted in Table 3, the Bank has assessed that ASX Clear (Futures) broadly observes the corresponding CCP Standard 13.

Table 8: ASX Settlement Recommendations

Principle	Rating	Recommendations
3. Framework for the comprehensive management of risks	Broadly observed	In order to fully observe Principle 3, ASX Settlement should implement plans to enhance its recovery plan consistent with forthcoming CPSS-IOSCO guidance on recovery planning.
9. Money settlements	Observed	ASX Settlement is encouraged to work with ASX Clear to introduce a framework to formally engage Payment Providers on changes to settlement processes in response to regulatory or market-driven change.
15. General business risk	Broadly observed	In order to fully observe Principle 15, ASX Settlement should carry out plans to enhance its recovery plan in line with forthcoming CPSS-IOSCO guidance, and ensure that the capital it holds under Key Consideration 2 continues to be sufficient to fund the enhanced plan. As ASX Settlement further develops its recovery plan, it should also review and integrate its recapitalisation processes with its broader recovery planning arrangements.
17. Operational risk	Observed	In order to continue to observe Principle 17, ASX Settlement will need to review its operational arrangements in light of the proposed establishment of a special resolution regime for FMIs in Australia. In particular, ASX Settlement will need to ensure that its operations are organised in such a way as to facilitate effective crisis management actions under that regime once finalised.
22. Communication procedures and standards	Observed	ASX Settlement is encouraged to implement proposals to move to internationally accepted messaging standards as part of a future renewal of the CHESS system.

Table 9: Austraclear Recommendations

Principle	Rating	Recommendations
3. Framework for the comprehensive management of risks	Broadly observed	In order to fully observe Principle 3, Austraclear should implement plans to enhance its recovery plan consistent with forthcoming CPSS-IOSCO guidance on recovery planning.
15. General business risk	Broadly observed	In order to fully observe Principle 15, Austraclear should carry out plans to enhance its recovery plan in line with forthcoming CPSS-IOSCO guidance, and ensure that the capital it holds under Key Consideration 2 continues to be sufficient to fund the enhanced plan. As Austraclear further develops its recovery plan, it should also review and integrate its recapitalisation processes with its broader recovery planning arrangements.
17. Operational risk	Observed	In order to continue to observe Principle 17, Austraclear will need to review its operational arrangements in light of the proposed establishment of a special resolution regime for FMIs in Australia. In particular, Austraclear will need to ensure that its operations are organised in such a way as to facilitate effective crisis management actions under that regime once finalised.

Appendix A: Details Supporting Assessment of Clearing and Settlement Facilities

This Appendix sets out detailed evidence relevant to each Key Consideration supporting ASIC's and the Bank's assessment of how well the four licensed CS facilities in the ASX Group – the two CCPs, ASX Clear and ASX Clear (Futures); and the two SSFs, ASX Settlement and Austraclear – observed the requirements of the Principles as at 30 June 2014. In their assessment, ASIC and the Bank have applied the rating system described in Section 3.

Part 7.3 of the Corporations Act divides responsibility for the oversight of CS facilities between ASIC and the Bank. Consistent with this division of responsibilities, ASIC and the Bank have agreed on the appropriate division of oversight responsibilities for each of the Principles between the two regulators, as set out in Table A1. This allocation of responsibilities was reflected in the process of completing the Assessment.

Table A1: Allocation of Responsibilities for Principles

Principle	Responsible authority
1. Legal basis	Joint responsibility of ASIC and the Reserve Bank
2. Governance	
11. Central securities depositories	
13. Participant default rules and procedures	
14. Segregation and portability	
15. General business risk	
16. Custody and investment risks	
17. Operational risk	
18. Access and participation requirements	
19. Tiered participation arrangements	
20. Financial market infrastructure links	
23. Disclosure of rules, key procedures and market data	

3. Framework for the comprehensive management of risks 4. Credit risk 5. Collateral 6. Margin 7. Liquidity risk 8. Settlement finality 9. Money settlements 10. Physical deliveries 12. Exchange-of-value settlement systems	Reserve Bank
21. Efficiency and effectiveness 22. Communication procedures and standards	ASIC
24. Disclosure of market data by trade repositories	Not applicable to CCPs or SSFs

A1.2 ASX Clear (Futures)

ASX Clear (Futures) is a wholly owned subsidiary of ASX Clearing Corporation Limited (ASXCC), itself a wholly owned subsidiary of ASX Limited. ASX Clear (Futures) acts as the central counterparty (CCP) for all futures and options products that are traded on the ASX 24 market. In July 2013 ASX Clear (Futures) began offering a clearing service for over-the-counter (OTC) interest rate derivatives.

Standard 1: Legal basis

A central counterparty should have a well-founded, clear, transparent and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.

Rating: Observed

ASX Clear (Futures) is a separate legal entity within the ASX Group that solely provides clearing services (CCP Standard 1.1). ASX Clear (Futures)' legal basis is founded on clear and understandable rules that operate within the framework of relevant laws and regulations (CCP Standards 1.2, 1.3). The certainty of this legal basis in relevant jurisdictions is reinforced by supporting legislation, including ASX Clear (Futures)' protection as a netting market under the *Payment Systems and Netting Act 1998* (PSNA) and the protection of money settlement finality through Austraclear under the same legislation, and is subject to periodic review by ASX Legal (CCP Standards 1.2, 1.5). ASX Clear (Futures) has publicly outlined the key features of its legal basis on its website and, from time to time, for information, provides legal opinions to participants or other stakeholders in respect of the legal basis of significant new services (CCP Standard 1.4). ASX has not identified any material risks arising from potential conflicts of law relating to the operations of ASX Clear (Futures) (CCP Standard 1.6).

The Bank's assessment is that ASX Clear (Futures) has observed the requirements of CCP Standard 1 during the 2013/14 Assessment period. The legal basis of ASX Clear (Futures) is described in further detail under the following sub-standards.

1.1 A central counterparty should be a legal entity which is separate from other entities that may expose it to risks unrelated to those arising from its function as a central counterparty.

ASX Clear (Futures) is a wholly owned subsidiary of ASX Clearing Corporation Limited, which is itself a wholly owned subsidiary of ASX Limited. As a separate legal entity, ASX Clear (Futures)' central clearing activities are separate from the activities conducted by ASX's other clearing and settlement (CS) facilities and the rest of the ASX Group, notwithstanding the sharing of operational resources across multiple entities within the group.

ASX Clear (Futures)' services are limited to CCP clearing of futures and options products that are traded on the ASX 24 market and certain OTC derivatives in accordance with the ASX Clear (Futures) Operating Rules and Procedures, the OTC Rules and the OTC Handbook. Accordingly, ASX Clear (Futures) does not provide any services that have a distinct profile from, or pose additional risks to, its activity of operating a CCP.

1.2 The legal basis should provide a high degree of certainty for each material aspect of a central counterparty's activities in all relevant jurisdictions.

Legal basis

ASX Clear (Futures) novates and nets transactions submitted for clearing by its participants. These activities require a high degree of legal certainty. Key components of the legal framework under which the CCP operates are:

- ASX Clear (Futures) holds a CS facility licence, under Part 7.3 of the *Corporations Act 2001*. This licence is administered by the Australian Securities and Investments Commission (ASIC) in consultation with the Bank, with the Minister acting as ultimate decision-maker on licensing matters.
- ASX Clear (Futures) has defined Operating Rules and Procedures. Under section 822B of the Corporations Act, these Rules and Procedures have effect as a contract under seal between: ASX Clear (Futures) and each of its participants; each participant and each other participant.
- ASX Clear (Futures) is protected as a 'netting market' under Part 5 of the PSNA (see also CCP Standard 1.5).

The legal basis of ASX Clear (Futures)' activities is reviewed by ASX Legal whenever there are material amendments to the Operating Rules or Procedures. Two such reviews occurred for ASX Clear (Futures) during the Assessment period.

Rights and interests

The rights and interests of ASX Clear (Futures), its participants and, where relevant, its participants' customers in cleared positions and collateral are defined in ASX Clear (Futures)' Operating Rules and Procedures, OTC Rules and OTC Handbook. The OTC Handbook sets out the procedures, timings, contract terms and other details of the OTC derivatives clearing service. Changes to the Operating Rules were made during the Assessment period to support client clearing arrangements. These changes give the customers of participants a contractual right to deal directly with ASX Clear (Futures) in the event of the default of the direct participant that acts as their clearing agent (see CCP Standard 13.3). ASX Clear (Futures) has obtained legal advice confirming the enforceability of these arrangements and establishing that the arrangements do not interfere with protections for close-out netting arrangements between participants and their customers under the PSNA.

1.3 A central counterparty should have rules, procedures and contracts that are clear, understandable and consistent with relevant laws and regulations.

Section 822A of the Corporations Act establishes a framework to prescribe the matters that must be dealt with in the Operating Rules and those that may instead be considered under the Procedures. Rule changes are subject to a Ministerial disallowance process. The Corporations Act also establishes how any inconsistency between the licensed facility's rules and applicable laws and regulations (in particular, derivative transaction rules and derivative trade repository rules) would be resolved.

The ASX Clear (Futures) Operating Rules and Procedures are supplemented with explanatory material, published on the ASX public website and the ASX restricted participant website, to support participants' (and prospective participants') understanding of the risks they face through participation in the system. Publicly available material includes high-level descriptions of ASX Clear (Futures)' risk management framework, the Standard Portfolio Analysis of Risk (SPAN) margining methodology, business continuity arrangements and the

Default Management Framework (DMF). Participants have access to additional manuals, reports and explanatory notes covering such topics as the application process for new participants, compliance, technical and operational details, counterparty risk assessment and fees.

There is a clear process for changing ASX Clear (Futures)' Operating Rules and Procedures. Proposed rule changes may be submitted informally to ASIC. In consultation with the Bank, ASIC will consider the changes and advise ASX of any regulatory concerns. Once such concerns are satisfactorily addressed, ASIC will invite formal submission of the proposed changes, which triggers a 28-day 'disallowance' period (referred to above), during which the Minister may choose to disallow the changes. The Minister considers a number of factors, including whether the proposed changes are consistent with the public interest. To assist the Minister in this process, ASIC provides detailed advice to the Minister, incorporating the views of the Bank as appropriate. If changes to the Operating Rules are not disallowed by the Minister, they are notified to participants via the ASX website.

1.4 A central counterparty should be able to articulate the legal basis for its activities to the Reserve Bank and other relevant authorities, participants and, where relevant, participants' customers, in a clear and understandable way.

The legal basis for the activities of ASX Clear (Futures) and the facility's protection as an approved netting market under the PSNA – see also CCP Standard 1.5 – are described on the ASX public website in its Disclosure Framework document, which sets out in detail how each CS facility meets the requirements of each Principle within the *Principles for Financial Market Infrastructures* developed by the Committee on Payment and Settlement Systems (CPSS) and the International Organization of Securities Commissions (IOSCO) (see CCP Standard 20.5).[1]

On behalf of each licensed entity within the ASX Group, including all CS facilities, ASX Limited submits an Annual Group Licence Report to ASIC and the Bank. This report sets out the legal basis for the CS facilities' activities under their licence obligations, and is used by ASIC in the preparation of ASIC's Market Assessment Report for the ASX Group.

ASX Clear (Futures) may seek independent legal opinions on relevant legal matters relating to significant new services, including any implications that their introduction may have for the legal basis of existing functionality. These opinions may, in some circumstances, be shared with participants or other stakeholders, for their information, particularly to demonstrate that new Operating Rules will have the intended legal effect.

1.5 A central counterparty should have rules, procedures and contracts that are enforceable in all relevant jurisdictions. There should be a high degree of certainty that actions taken by the central counterparty under such rules and procedures will not be voided, reversed or subject to stays, including in the event that the central counterparty enters into external administration or that one or more of its participants defaults or is suspended.

ASX 24's Operating Rules state that trades executed on the trading platform are extinguished and replaced by contracts with ASX Clear (Futures) upon registration of the trades with ASX Clear (Futures), and the ASX Clear (Futures) Operating Rules set out the risk controls that apply against clearing exposures. Such risk controls are calibrated to participants' net

[1] Available at <http://www.asx.com.au/documents/regulation/pfmi_disclosure_framework.pdf>. As of 1 September 2014, CPSS is now known as the Committee on Payments and Market Infrastructures (CPMI).

obligations to the CCP. Payment obligations arising from clearing, including those related to margin obligations, are settled in Austraclear. The point at which settlement of these obligations is final and irrevocable is established in Austraclear's Regulations.

Novation and netting

Part 5 of the PSNA protects the effectiveness of market netting contracts, including contracts entered into in accordance with the rules of a netting market. ASX Clear (Futures) is an approved netting market. This protection from the application of any other law, including insolvency provisions, is relevant to the function of a CCP. In particular, it provides protection for:

- novation, the process whereby matched trades between participants are replaced by separate contracts between the buyer and the CCP and the seller and the CCP
- the process of reducing each participant's contracts to a net exposure (reflecting the exposure to the participant's portfolio of contracts)
- the CCP's rules covering default, such that future exposures may be terminated and a net payout obligation calculated
- payments made on a net basis, by protecting against the voiding of net payments in the event of insolvency of a participant.

Settlement finality

Payment obligations arising between ASX Clear (Futures) and its participants are settled in Austraclear. The legal certainty of settlement finality is supported by Austraclear's approval as a real-time gross settlement system under Part 2 of the PSNA. This approval provides protection against application of the so-called 'zero-hour rule' in insolvency law, whereby transactions settled after the point at which an insolvency is legally deemed to have started could potentially otherwise be reversed. Any interbank transactions arising from these settlements are settled in real time in the Reserve Bank Information and Transfer System (RITS), across Exchange Settlement Accounts (ESAs) held with the Bank. Finality of funds transfers in RITS is again supported by the approval of RITS under Part 2 of the PSNA.

Assumption of risk

Through novation, the obligations of ASX Clear (Futures) are to each participant as principal – although new client clearing arrangements also establish a legal relationship between clients and the CCP (see CCP Standard 13). Equally, participants' obligations are to ASX Clear (Futures) for all transactions that have been novated (i.e. both proprietary and client transactions).

Importantly for the legal protections provided under the PSNA, as noted above, the point of novation is established by ASX Clear (Futures)' Operating Rules. For exchange-traded transactions, ASX Clear (Futures)' Operating Rules specify that a transaction on the ASX 24 market is novated upon the registration of a matched trade by the market, which occurs in ASX 24's SYCOM system. Non-market trades are novated once their details have been approved and registered by ASX Clear (Futures). Acceptance rules for registration of OTC derivatives trades are set out in the OTC Rules. Requirements include, for example, that the OTC transaction has been submitted in accordance with procedures and eligibility criteria in the OTC Handbook, that participants are authorised and not in default, and that the transaction passes limit checks. If an OTC transaction satisfies the requirements and is

accepted by ASX Clear (Futures) for registration, the transaction is novated with effect from the time at which the transaction details were received by ASX Clear (Futures).

Enforceability of ASX rules while under external administration

ASX Legal has analysed the legal enforceability of ASX Clear (Futures)' Operating Rules upon the CCP's entry into external administration. ASX Clear (Futures) has also obtained legal advice to confirm the enforceability under Australian law of Operating Rules under which novated contracts may be closed out in the event that ASX Clear (Futures) was subject to an insolvency event. No material legal risks to enforceability have been identified. During the 2013/14 Assessment period ASX Clear (Futures) introduced rules giving participants the right to terminate novated contracts in the event that ASX Clear (Futures) defaulted on its obligations, with calculation of a net obligation to or from each participant on termination ('close-out netting'). Close-out netting rights are a prerequisite for participants that are authorised deposit-taking institutions (ADIs) to apply capital requirements to their net (rather than gross) trade exposures to CCPs, and similarly to report these exposures as net in their financial accounts. The rules do not interfere with ASX Clear's existing liquidity management arrangements, and ASX will review the continued appropriateness of close-out netting rights in light of future developments in FMI recovery and resolution.

1.6 A central counterparty conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflicts of law across jurisdictions. A central counterparty should provide the Reserve Bank with a legal opinion that demonstrates the enforceability of its rules and addresses relevant conflicts of law across the jurisdictions in which it operates. This should be reviewed on a periodic basis or when material changes occur that may have an impact on the opinion, and updated where appropriate.

Although participants of ASX Clear (Futures) include subsidiaries and branches of entities that are based in foreign countries (including France, Germany, Hong Kong, Switzerland, United Kingdom and United States), the Operating Rules are governed by Australian law and require that all participants submit to the exclusive jurisdiction of New South Wales courts. ASX has obtained an external legal opinion in relation to foreign participation that has identified no material legal risks.

Standard 2: Governance

A central counterparty should have governance arrangements that are clear and transparent, promote the safety of the central counterparty, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.

Rating: Observed

ASX Clear (Futures) pursues objectives that place a high priority on risk management, through compliance with relevant Financial Stability Standards (FSS) and the broader Corporations Act requirement to do all other things necessary to reduce systemic risk. ASX Clear (Futures) also acknowledges public policy objectives directed at financial market and payments system integrity, as well as the interests of customers and other stakeholders (CCP Standard 2.1). ASX Clear (Futures)' governance arrangements are documented and publicly disclosed. These arrangements give ultimate responsibility for the oversight of operations and risk management of ASX Clear (Futures) to the ASX Limited Board and the ASX Clear (Futures) Board (see 'ASX Group Structure' in Appendix A). Board and committee charters document Board roles and lines of responsibility and accountability

(CCP Standards 2.2, 2.3). The performance of each relevant Board is reviewed at least annually for both individual directors and the Board as a whole. The relevant Boards each include a majority of independent non-executive directors and the ASX Clear (Futures) Board includes directors appointed for their expertise in clearing and settlement matters (CCP Standard 2.4). Board remuneration is designed to attract and retain appropriately skilled and qualified directors.

The reporting lines of management are set out in the CS Boards' Charter, along with roles and responsibilities of key management personnel. Remuneration of senior management in risk management roles is structured to provide appropriate incentives for sound and effective risk management (CCP Standard 2.5). ASX maintains a clear and documented risk management framework, subject to regular internal and external review. Governance of this risk management framework is supported by a newly established participant Risk Committee (CCP Standard 2.6). Key processes and internal controls are subject to review by ASX's Internal Audit unit, which is itself subject to periodic external review (CCP Standard 2.7). ASX utilises formal and informal consultation processes to ensure that the design and decisions of ASX Clear (Futures) reflect the interests of participants and other stakeholders, including via the new participant Risk Committee (CCP Standard 2.8). ASX has conflict handling procedures in place to address potential conflicts of interest that may arise by virtue of its group structure. These require that staff and directors act in the best interests of each facility, as appropriate. Changes to the composition of CS facility boards during the Assessment period further support these conflict handling procedures (CCP Standard 2.9).

The Bank's assessment is that ASX Clear (Futures) has observed the requirements of CCP Standard 2 during the 2013/14 Assessment period. Details of ASX Clear (Futures)' governance arrangements are described in further detail under the following sub-standards.

2.1 A central counterparty should have objectives that place a high priority on the safety of the central counterparty and explicitly support the stability of the financial system and other relevant public interest considerations.

The high-level objectives of ASX Clear (Futures) are set out in the CS Boards' Charter, which is available on the ASX public website. The objectives prioritise the Boards' responsibilities in the area of risk management and, in particular, ASX Clear (Futures)' responsibility for complying with relevant FSS.

ASX Clear (Futures)' objectives recognise the public interest. These objectives are reflected in the ASX Limited Board Charter, which provides that the Board has a responsibility to oversee the conduct of the affairs of the ASX Group consistent with licence obligations, as well as public policy objectives directed at financial market and payments system integrity. The CS Boards' Charter also specifically acknowledges the Board's public interest responsibilities, as well as its obligations under Part 7.3 of the Corporations Act. These include that ASX Clear (Futures), to the extent it is reasonably practicable to do so, comply with relevant FSS and do all other things necessary to reduce systemic risk arising from its services, and do all things necessary to ensure that its services are provided in a fair and effective way.

To support the interests of its customers, ASX has developed a Customer Charter, which is referenced in the CS Boards' Charter. The Customer Charter commits that ASX: work with its customers to deliver products and services that meet their needs and provide them with choice; make its products and services available on a non-discriminatory basis and on reasonable commercial terms; and manage its businesses and operations on a commercial basis to benefit its customers and provide appropriate returns to ASX shareholders. The Customer Charter recognises ASX's role as a provider of critical infrastructure to the

Australian financial markets and commits to make the necessary investments to ensure it can fulfil this role and provide confidence to market participants, investors and regulators.

ASX Clear (Futures)' governance arrangements allow for appropriate consideration of stakeholder views. When considering major operational or risk management changes, or new services, ASX uses stakeholder forums, and formal and informal consultation processes to communicate proposed changes to relevant stakeholders (see CCP Standard 2.8). Consultations and responses to consultations are made available on the ASX website. In addition, the ASX Group has disclosure obligations under the Corporations Act and Listing Rules which it manages in accordance with those laws and rules.

2.2 A central counterparty should have documented governance arrangements that provide clear and direct lines of responsibility and accountability. These arrangements should be disclosed to owners, the Reserve Bank and other relevant authorities, participants and, at a more general level, the public.

The governance arrangements of ASX Clear (Futures) are documented on the ASX public website. This documentation includes the Charters of the ASX Limited Board, the CS Boards (including that of ASX Clear (Futures)), and other subsidiary boards and committees. The charter documents provide information about the role and composition of the CS Boards and board committees, as well as the key senior managers of the clearing facilities; namely the Managing Director and CEO, the Chief Risk Officer, and the Executive responsible for settlement risk. Profiles of all CS facility directors are also publicly available online. Key governance policies and charters are reviewed regularly by the relevant boards and committees.

The ASX Limited Annual Report provides information about ASX Group's risk management arrangements, including the role of boards, key committees, key subsidiary boards (e.g. ASX Compliance), and the roles of senior group executives who report directly to the Managing Director and CEO. Explanatory documentation on the website also describes: the FSS and the CPSS-IOSCO Principles; group and business structure, including an organisational chart showing senior group executives; and risk management policies (in summary form).

Under the Corporations Act, ASX must notify ASIC as soon as practicable after a person becomes or ceases to become a director, secretary or senior manager of ASX Clear (Futures), including when a person changes from one of those positions to another. Changes to senior risk management personnel are also notified to the Bank.

2.3 The roles and responsibilities of a central counterparty's board of directors (or equivalent) should be clearly specified, and there should be documented procedures for its functioning, including procedures to identify, address and manage member conflicts of interest. The board should regularly review both its overall performance and the performance of its individual board members.

Ultimate responsibility for oversight of the risks faced by ASX Clear (Futures) lies with the ASX Limited Board and the ASX Clear (Futures) Board. The ASX Limited Board Charter delegates certain responsibilities to the ASX Clear (Futures) Board, including the review and oversight of the management of ASX Clear (Futures)' clearing- and settlement-related risks, and its compliance with the FSS. The CS Boards' Charter elaborates on other roles and responsibilities of the ASX Clear (Futures) Board. The CS Boards' Charter places requirements on the structure of the CS Boards, including that the majority of directors and the Chair be

independent. The ASX Clear (Futures) Board meets regularly (seven times in the Assessment period) and receives detailed reports on ASX Clear (Futures)' business and operations, risk management and financial performance.

Board performance is dealt with periodically in private session by the relevant boards. The process may be facilitated by external independent consultants. A number of tools are used, which may include private session review, skills matrices and surveys, and externally facilitated group discussions. Details of Board performance reviews are set out in the ASX Limited Annual Report (the same process applies for the key subsidiary boards).

The CS Boards' Charter sets out how the Boards address directors' interests and potential conflicts. Directors of the CS Boards must disclose all material personal interests (such as shareholdings, directorships and consultancy arrangements) which may potentially conflict with their duties at the time of their appointment. If there is a change in a director's material personal interests, the director must notify that change at the next meeting of the CS Boards. If there is a real possibility of a material conflict of interest and duty on a matter subject to vote at a meeting of the CS Boards, the director must not be present for the discussion or vote related to that matter.

2.4 The board should comprise suitable members with the appropriate skills and incentives to fulfil its multiple roles. This typically requires the inclusion of non-executive board member(s).

At the end of the Assessment period, the ASX Limited Board had eight members, comprising the ASX CEO and seven independent, non-executive directors. As set out in the CS Boards' Charter, the CS Boards, in consultation with the Nomination Committee and the ASX Limited Board, determine the composition of the CS Boards, with directors selected based on relevant skills and expertise. Currently, the ASX Clear (Futures) Board comprises one executive director (the ASX CEO) and six non-executive directors. During the Assessment period, one non-executive director resigned and two new directors were appointed. Three of the non-executive directors, including the Chair, are also members of the ASX Limited Board, while the remaining three are external directors appointed for their expertise in clearing and settlement operational and risk management matters. This ensures that directors have the capacity to conduct informed independent review of relevant issues. During the Assessment period, ASX made changes to the composition of the CS Boards. Previously, all four CS Boards shared common directors; now, the ASX Clear (Futures) and Austraclear Boards share common directors, but two of these directors do not serve on the ASX Clear or ASX Settlement Boards. This change was made primarily for business reasons, but also supports ASX's conflict handling arrangements (see CCP Standard 2.9).

ASX has adopted a policy that the majority of directors on each of its CS Boards must be independent. The Board Policy and Guideline to Relationships Affecting Independent Status is available on the ASX website. The independence of directors is assessed according to this policy, which is aligned to the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations* for listed companies. The policy requires, for example, that independent directors be free of business or other relationships that could interfere with the independent exercise of the director's judgement. Specifically considered is whether the director is a substantial shareholder of ASX, as well as whether in the last three years the director was previously employed by ASX or was an adviser to ASX. The biographies of the

directors, which show their relationship with other ASX Group companies, are set out on the ASX website.[2]

Selection, succession planning and training for board members are dealt with in private session by the Nomination Committee and Boards at appropriate intervals. New directors receive a comprehensive induction from Board and Nomination Committee members, as well as senior managers and other key staff. Directors' fees at both ASX Limited and ASX Clear (Futures) are considered by the ASX Limited Remuneration Committee, recognising the level of skill and expertise that a director must have to effectively meet its responsibilities. Remuneration of directors is determined in private session by the ASX Limited Board on the recommendation of the Remuneration Committee at regular intervals. The ASX Limited Board reviews its fees regularly to ensure ASX non-executive directors are remunerated fairly for their services, recognising the level of skill and experience required. It also reviews its fees to ensure that it has in place a fee scale that enables ASX to attract and retain appropriately skilled and qualified non-executive directors. Non-executive directors' fees are broadly aligned to the top quartile of the marketplace. In conducting a review, the Board may take advice from an external remuneration consultant. The process involves benchmarking against a group of peer companies. The last fee review took place at the end of 2013 following changes to relevant governance and regulatory arrangements. The revised fees took effect on 1 January 2014.

2.5 The roles and responsibilities of management should be clearly specified. A central counterparty's management should have the appropriate experience, mix of skills and integrity necessary to effectively discharge its responsibilities for the operation and risk management of the central counterparty. Compensation arrangements should be structured in such a way as to promote the soundness and effectiveness of risk management.

ASX has clear and direct reporting lines between management and the CS Boards. These are set out in the CS Boards' Charter, along with the roles and responsibilities of the Managing Director and CEO, the Chief Risk Officer (CRO), and the Group Executive, Operations (GE, Operations). The Managing Director and CEO has responsibility for the overall operational and business management and profit performance of ASX, while the CRO has responsibility for the overall clearing risk management of the CS facilities and for ensuring that CS facility licence obligations are met. The CRO has a direct reporting line to the CS Boards and is entitled to attend and be heard at CS Board meetings.

ASX has a comprehensive remuneration policy and performance management framework in place, which aims to ensure that management personnel have an appropriate mix of skills and experience to discharge their responsibilities. The ASX Limited Remuneration Committee has delegated responsibility from the ASX Limited Board to conduct detailed examination of certain matters including oversight of the remuneration and incentive framework, succession plans, recruitment, retention and termination strategies, and the remuneration of the Managing Director and CEO and ASX Group non-executive directors. The Committee members are appointed by the ASX Limited Board, and must consist of only non-executive directors, with at least three members, a majority of independent directors, and an independent chair who is not Chairman of ASX Limited. The Committee has direct access to ASX senior management and the authority to seek independent advice. The CS Boards have

[2] Available at <http://www.asx.com.au/about/board-and-management.htm>.

delegated responsibility to the Committee for compensation arrangements and performance management processes relating to the CRO and the GE, Operations. The CS Boards provide input on the setting of Key Performance Indicators and may review the performance outcomes for the CRO and the GE, Operations.

ASX carries out succession planning and management processes in order to ensure leadership continuity in key positions, and develop intellectual depth and business knowledge. This includes the biannual review of a 'talent assessment tool' by Group Executives and Human Resources to identify and manage the development of high potential staff according to individual and business needs. Succession and contingency planning is conducted for Group Executives, General Managers and other key staff.

2.6 The board should establish a clear, documented risk management framework that includes the central counterparty's risk tolerance policy, assigns responsibilities and accountability for risk decisions, and addresses decision-making in crises and emergencies. Governance arrangements should ensure that the risk management and internal control functions have sufficient authority, independence, resources and access to the board, including through the maintenance of a separate and independent internal audit function.

ASX has a documented risk management framework, which is described under CCP Standard 3.1. The CS Boards are responsible for approving and reviewing high-level risk management policy relevant to clearing and settlement operations. The Boards approve all new clearing and settlement risk policies and standards, as well as material changes to existing clearing and settlement policies and standards. The Boards consider these policies and standards at a concurrent meeting; where the policy or standard is relevant to more than one facility, the Boards of those facilities would simultaneously determine whether to approve the policy or standard. If the policy requirements under consideration differ across facilities, the Boards of each relevant facility would separately determine whether to approve the policy or standard (during the concurrent meeting). Board feedback is incorporated before risk policies and standards are approved.

Responsibilities under the high-level risk management policy are distributed as follows:

- Key policies and standards, such as margin policy, stress-testing standards and investment mandates, are reviewed by the CS Boards on an annual basis. Detailed reporting to the CS Boards occurs quarterly on the operation of the CCPs and their compliance with risk management policies and standards, and on broader management and operational matters. Internal Audit conducts a rotational risk-based audit program, which includes ensuring that relevant operational units comply with Board-approved policies and standards, where necessary using external specialists to assist with reviews. The CS Boards may also request external reviews. Clearing and settlement risk management policies and standards were reviewed during the 2013/14 Assessment period. The reviews, along with the development of new policies and standards, will be continued during the 2014/15 Assessment period.
- The Audit and Risk Committee has responsibility for the oversight of the Enterprise Risk Framework.
- The Enterprise Risk Management Committee, comprising executives from across the departments, is responsible for enterprise risk management policy and reviewing controls, processes and procedures to identify and manage risks. This committee is also

responsible for formally approving significant operational risk policies prepared by individual departments.

- Individual departments are responsible for: identifying business-specific risks; applying controls; maintaining risk management systems; reporting on the effectiveness of risk controls; and implementing enhancements and taking remedial action as appropriate. Each department is required to maintain a record of its risk profile, reviewing this on a six-monthly basis and updating as appropriate. This record includes 'Key Risk Indicators' and action plans to address any identified risk that is not adequately mitigated. Policies are formally reviewed every 18 months to three years. More frequent reviews are undertaken where there are potential changes to technology, legal or regulatory requirements, or business drivers.

The CRO has a direct reporting line to the CS Boards. Within ASX's management structure, those departments primarily responsible for CCP financial risk management report to the CRO, who in turn reports directly to the CEO. The CRO is not responsible for any other functions, and none of the departments within the CRO's portfolio have a primary revenue or profit objective. There are four functional departments with at least some responsibility for CCP financial risk management: the Clearing Risk Strategy and Policy department; the Clearing Risk Quantification (CRQ) department; the Clearing Risk Management department; and the Portfolio Risk Manager. The CRQ department was created specifically to maintain and validate risk and pricing models, allowing Clearing Risk Strategy and Policy to focus on higher level risk policies and longer term initiatives. In addition, ASX maintains a number of executive committees that have some responsibility for financial risk management.

Directors are entitled to obtain independent advice. The Annual Report addresses directors' access to information, management and advice. To the extent that directors wish to seek independent advice, they can raise this in board meetings, with the Managing Director and CEO, or with the Chairman. The new participant Risk Committee (see CCP Standard 2.8) also provides advice to the ASX Clear (Futures) Board on risk management matters, consistent with the Bank's supplementary interpretation of this sub-standard (see Introduction to Appendix A).

Model validation

The Boards of ASX Clear and ASX Clear (Futures) (the 'Clearing Boards') regularly review and discuss with management matters of risk policy, including changes to margin and stress-testing methodologies.

ASX has developed a framework for model validation. This framework identifies models to be validated, defines what constitutes 'model validation', describes the model validation approach to be applied to the identified models, and specifies model validation governance arrangements. Key models at ASX Clear (Futures) include SPAN margining for exchange-traded derivatives, the OTC IRS Historic VaR model for OTC derivatives, the pricing system for derivatives and the capital stress-testing model. Governance arrangements specify criteria for ranking model risk, validation roles and responsibilities, validation frequency, the assessment approach and whether the validation should be carried out by an internal or external expert. ASX assigns each of its risk models a weighted risk score between one and five to determine how critical it is, based on factors such as the internal and external impact of the model, frequency of use and complexity. ASX uses the risk score to determine the frequency of

comprehensive independent model validations and whether models are to be validated internally or externally.

The approach to model validation is based on objective statistical tests, including sensitivity analysis, with each model validation strategy to be reviewed and approved by an internal management committee known as the Risk Quantification Group (RQG). Backtesting is used to provide systematic comparison of model forecasts with observed outcomes. Model validation reviews are coordinated by Internal Audit, including the use of external experts as required under the framework or where this is deemed necessary by the RQG or Internal Audit. ASX Clear (Futures)' approach to model validation is discussed in more detail in Section 4 and under CCP Standards 4.5 and 6.7.

2.7 A central counterparty's operations, risk management processes, internal control mechanisms and accounts should be subject to internal audit and, where appropriate, periodic external independent expert review. Internal audits should be performed, at a minimum, on an annual basis. The outcome of internal audits and external reviews should be notified to the Reserve Bank and other relevant authorities.

ASX maintains an internal audit plan that provides for a three-to-five year review cycle of key operational and risk management processes, and internal control mechanisms that are governed by ASX's Enterprise Risk Framework, business continuity framework, enterprise compliance framework and internal audit methodology. The internal audit plan is approved by the ASX Limited Audit and Risk Committee and the audit work that is relevant to the CS Boards and ASX Compliance Board is endorsed by those Boards. The key governance frameworks are reviewed by external independent experts, as required. ASX's internal audit arrangements are set out in an Internal Audit Charter which is reviewed and approved by the ASX Limited Audit and Risk Committee on an annual basis and made available on ASX's public website.

The Internal Audit department is a separate department within ASX that reports to the CRO for administrative purposes, and the Audit and Risk Committee and Managing Director and CEO for audit purposes. The Internal Audit department's reporting structure also includes reports to the CS Boards and ASX Compliance Board. Internal Audit's principal objective is to 'provide independent, objective assurance and consulting services designed to add value and improve the operations of ASX'. Its scope covers the policies, processes and procedures of all risk management and internal control systems. The General Manager of Internal Audit has direct access to the ASX Limited Audit and Risk Committee, CS Boards and ASX Compliance Board. Members of the Internal Audit department are required to hold appropriate undergraduate and postgraduate qualifications relevant to their roles.

The role and performance of the Internal Audit function is regularly reviewed by the ASX Limited Audit and Risk Committee. Internal Audit is also reviewed by external independent auditors on a three-year cycle. The last such audit was carried out in 2011, with the next assessment scheduled for October/November 2014.

ASX has a clearly defined methodology for internal audit, based on the International Professional Practices Framework set out by the Institute of Internal Auditors.[3] The audit

[3] The Institute of Internal Auditors is the leading international organisation representing internal auditors. It has developed a set of standards that provide a framework for carrying out and evaluating the performance of internal audits.

process includes phases for planning, fieldwork, reporting, final sign-off, and issues logging and follow-up. The planning phase includes the preparation of terms of reference that define the purpose, timing, approach and scope of the audit.

The internal audit methodology allows for ad hoc reviews if, for example, material new risks are identified or other changes to ASX's business occur. This is a matter which the General Manager, Internal Audit and the Audit and Risk Committee consider. The ASX Compliance Board and the CS Boards may also request ad hoc reviews.

2.8 Governance arrangements should ensure that the central counterparty's design, rules, overall strategy and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other relevant stakeholders. Governance arrangements should provide for consultation and stakeholder engagement through appropriate forums on operational arrangements, risk controls and default management rules and procedures. Major decisions should be clearly disclosed to relevant stakeholders and, where there is a broad market impact, the public.

The interests of direct and indirect participants and other relevant stakeholders are recognised in the ASX Limited Board Charter, the CS Boards' Charter and the ASX Customer Charter.

The views of participants and other stakeholders are sought through formal and informal means. ASX Clear (Futures) routinely conducts public consultations when considering major changes to existing services or new service offerings. These consultations allow for written submissions and discussion in both bilateral and open forums. Participants' views may also be gathered through the induction program for new participants, as well as ongoing participant liaison and compliance checks. ASX Clear (Futures) has formalised in its Operating Rules a requirement that it consult participants on proposed rule amendments, except those requested by its regulators or required to enable ASX Clear (Futures) to comply with its CS facility licence or other regulatory obligations.

During the 2013/14 Assessment period, ASX Clear (Futures) implemented additional formal structures for participant consultation. The first meeting of the ASX Clear (Futures) Risk Committee, comprising representatives from 18 futures and OTC participants, was held in April. It is a self-governing body chaired by an elected member. The Risk Committee is consulted on material changes to the margin methodology, the default fund, position or liquidity limits, participation criteria, new products, and other changes affecting either the risk model or the rules. The Risk Committee's proposals and recommendations are presented to the ASX Clear (Futures) Board, which is not obliged to accept the Risk Committee's advice but is required to provide reasons for any decision not to follow such advice. ASX established an OTC Product Committee that advises ASX Clear (Futures) on the types of OTC derivatives transactions that are eligible for clearing and material changes to the terms of OTC derivatives contracts, new product timelines and service releases. ASX intends to establish an ASX Clear (Futures) Product Committee in the December Quarter 2014, which will have a wider remit than the OTC Product Committee and will cover similar matters relating to the product scope of exchange-traded futures.

ASX Clear (Futures) has also established a Default Management Groups (DMG), comprised of experts from OTC participants selected on a rotational basis, each for an annual term. The DMG met twice in June 2014. The DMG will be consulted on aspects of the default management process as set out in the Operating Rules, and while the ASX Clear (Futures)

Board is not obliged to accept the DMG's advice, it is required to provide reasons for any decision not to follow such advice.

2.9 A central counterparty that is part of a group of companies should ensure that measures are in place such that decisions taken in accordance with its obligations as a central counterparty cannot be compromised by the group structure or by board members also being members of the board of other entities in the same group. In particular, such a central counterparty should consider specific procedures for preventing and managing conflicts of interest, including with respect to intragroup outsourcing arrangements.

ASX has conflict handling arrangements to help manage potential conflicts of interest that its directors and staff may face. The potential for intragroup conflicts arising from ASX's group structure is addressed by 'intragroup' service agreements, which set out the basis on which other group entities will provide services to the CS facilities and specify that the entities providing the services must have sufficient financial and other resources to meet their obligations. These agreements provide that ASX Group staff are under a duty to act in the best interests of the facility that is receiving the services.

ASX's governance arrangements are designed to ensure that shared directorships within the ASX Group cannot compromise each CS facility's compliance with its licence obligations, including observance of the FSS. ASX considers that there is limited potential for shared directorships to create conflicts between ASX's group-wide commercial interests and the risk management function of the CS facilities. More broadly, it considers that conflicts between directors' roles on the CS Boards and the ASX Limited Board are unlikely given the distinct roles the separate entities perform, and in view of group-wide arrangements to manage matters such as operations and compliance. If a conflict were to arise, a director sitting on multiple CS Boards would be expected to make decisions in the best interests of each facility.

The restructuring of the CS Boards to reduce the number of common directors between each of the CS facilities and ASX Limited further limits the potential for conflict. Two directors will now be able to form a quorum of the ASX Clear (Futures) Board, allowing 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.

Standard 3: Framework for the comprehensive management of risks

A central counterparty should have a sound risk management framework for comprehensively managing legal, credit, liquidity, operational and other risks.

Rating: Broadly observed

ASX maintains an Enterprise Risk Management Policy that sets out its framework for managing the full range of strategic, legal, financial and operational risks faced by ASX Clear (Futures). This high-level framework is supported by more granular policies and a governance structure to oversee ASX Clear (Futures)' risk management activities (CCP Standard 3.1). ASX Clear (Futures)' risk management framework imposes proportional, risk-based obligations such as initial margin and contributions to pooled risk resources that are related to exposures, and places incentives on participants, including additional collateral requirements where required, to control the risks that they bring to the CCP (CCP Standards 3.2, 3.3). As part of its risk management framework, ASX Clear (Futures) reviews risks associated with interdependencies with other entities on an ongoing basis, and in relation to new initiatives, applying appropriate tools to manage these risks (CCP Standard 3.4). ASX Clear (Futures)

has prepared a basic recovery plan on the basis of its existing powers and plans to consult on enhancements to its Operating Rules that would support a more comprehensive recovery plan (CCP Standard 3.5).

The Bank's assessment is that ASX Clear (Futures) has broadly observed the requirements of CCP Standard 3 during the 2013/14 Assessment period. In order to fully observe CCP Standard 3, ASX Clear (Futures) should:

- implement plans to enhance its recovery plan consistent with forthcoming CPSS-IOSCO guidance on recovery planning.

ASX Clear (Futures)' risk management framework is described in further detail under the following sub-standards.

3.1 A central counterparty should have risk management policies, procedures and systems that enable it to identify, measure, monitor and manage the range of risks that arise in or are borne by the central counterparty. This risk management framework should be subject to periodic review.

Identification of risk

ASX's high-level framework for risk management is described in its Enterprise Risk Management Policy. This policy divides risks identified by ASX into two broad categories: strategic risks and operational risks. Operational risks are further categorised into financial risks, legal and regulatory risks, and technological and operational risks. Specific risks identified by ASX are described within these broad categories. For each identified risk, ASX judges how likely it is the risk event will occur within the next 12 months and the potential impact. Reputational and participant impacts are considered along with the financial, operational and regulatory impacts of risks.

Comprehensive risk policies, procedures and controls

ASX's Enterprise Risk Management Policy has been developed with reference to the international standard ISO 31000 *Risk Management – Principles and Guidelines* (see CCP Standard 2.6).[4] At a high level, the ASX Enterprise Risk Management Policy outlines: the overall risk environment in the ASX Group; the objectives of risk management policies; the process by which risks are identified and assessed; the controls in place to detect and mitigate risks; and how risks are monitored and communicated. ASX's stated tolerance for financial, operational, legal and regulatory risks is 'very low'.

ASX uses key risk indicators to measure levels of risk in the organisation and categorise risk levels according to a scale: satisfactory; within risk tolerance but requiring action to further control the level of risk; exceeding ASX's risk tolerance.

The Enterprise Risk Management Policy also assigns specific risk responsibilities across the ASX Group, including to the ASX Limited Board of Directors, the Audit and Risk Committee, the Enterprise Risk Management Committee, the General Manager, Enterprise Risk and managers of individual business units. Managers of each business unit are responsible for identifying and monitoring risks relevant to their unit's activities, as well as for designing and

[4] ISO is an international standard-setting body and ISO 31000 is considered to be relevant guidance for enterprise risk management. The ISO 31000 standard has been reproduced by Standards Australia and Standards New Zealand as AS/NZS 31000.

implementing risk management policies and controls to manage identified risks. Business unit managers assess the appropriateness and operational effectiveness of these controls twice a year; these assessments are reviewed by Internal Audit and the Enterprise Risk Management Committee.

In 2012/13, ASX adopted an updated and formalised Clearing Risk Policy Framework to better align both it and related governance structures with the new FSS. The Clearing Risk Policy Framework sets out a comprehensive set of clearing and treasury risk policies to support the risk management approach of ASX's CCPs, including ASX Clear (Futures). These policies govern more granular internal standards, which in turn govern detailed procedures for the management of clearing and treasury risk. The structure of policies, standards and procedures reflects the requirements of the FSS. During 2013/14, ASX has developed or updated standards covering most relevant aspects of the FSS. The Bank will continue to monitor the maintenance of existing policies and standards, and the finalisation of remaining policies and standards by ASX over the coming Assessment period.

A number of boards and internal committees oversee clearing risk management policy, including:

- *The CS Boards*. Each CS facility has a board (see CCP Standard 2.3 and 'ASX Group Structure' in Appendix A), which shares members with the other ASX CS facilities, has oversight of the Clearing Risk Policy Framework, and is responsible for any significant amendments. Policies and designated key standards under the framework are governed by the CS Boards.
- *The Clearing Risk Policy Committee (CRPC)*. The CRPC was formed in June 2013, to review and approve clearing risk policies and standards prior to submission to the CS Boards. The CRPC is chaired by the CRO and includes the ASX Group Legal Counsel, CFO and Group Executive, Operations. It will generally meet quarterly in line with meetings of the CS Boards.
- *The Capital and Liquidity Committee (CALCO).* CALCO is constituted to ensure the structural integrity and efficient use of the liquidity, on- and off-balance sheet assets, liabilities and capital resources of the ASX Group. CALCO advises on changes to the clearing risk policies related to capital, liquidity and balance sheet management, CALCO is chaired by the CRO and comprises senior managers and executives from Finance, Risk and Internal Audit. CALCO generally meets on a quarterly basis.
- *The CCP Risk, Operations and Compliance Committee (CROCC)*. CROCC is chaired by the GE, Operations and is made up of senior managers and executives from the clearing and settlement risk management, operations and compliance areas of ASX. The committee acts as an information-sharing and discussion body for the purpose of enhancing ASX's ability to identify, assess and reduce systemic risk, operational or compliance risk, and manage clearing risk. The CROCC currently meets on a monthly basis.
- *Risk Quantification Group*. ASX established the RQG in early 2013 to strengthen the technical oversight of risk management policy. The RQG is chaired by either the CRO, the General Manager, CRQ, or the General Manager, Clearing Risk Strategy and Policy, and is made up of key staff from ASX's CRQ, Clearing Risk Strategy and Policy and Clearing Risk Management departments most familiar with ASX's margin and other risk management models. The focus of the group is the review and application of

quantitative risk policies and the Model Validation Framework, including oversight of model governance and regular reviews of margining and stress-test models. The group meets at least on a monthly basis or more frequently as required.

- *Default Management Steering Group (DMSG).* ASX formed the DMSG in 2010/11 to provide oversight of the CCPs' DMF. The DMSG is chaired by the CRO and comprises key representatives from ASX Legal, Compliance, Operations and Risk. The DMSG currently meets at least on a monthly basis or more frequently as required.

Information and control systems

ASX Clear (Futures) employs information systems that provide timely and accurate information relevant to its risk policies, procedures and controls. This includes information on risk exposures to individual participants, as well as aggregated information on risk exposures across the central counterparty. Key information systems include:

- *Margining*. ASX Clear (Futures) uses the SPAN system for margining of exchange-traded derivatives and the Historical Simulation of Value at Risk (HSVaR) based Calypso margin system for OTC derivatives.
- *Capital and liquidity stress testing*. Stress testing is carried out daily to gauge the adequacy of ASX Clear (Futures)' financial resources and to monitor the risks associated with individual participants' positions. Capital stress testing estimates the loss that would result from the realisation of extreme but plausible price changes. Liquidity stress testing estimates the liquidity exposures that would result from extreme but plausible price changes.

ASX Clear (Futures) monitors daily risk management reports produced by its information management systems to identify changes in positions that may require mitigating action. ASX Clear (Futures)' information systems also provide information to participants about positions and margin requirements, which assists in their management of credit and liquidity positions. ASX publishes detailed margining information on its website, including descriptions of the margining methodology, schedules of margin rates, and daily SPAN margin parameter files. This information is sufficient for participants to perform their own margin calculations on hypothetical or actual portfolios. To facilitate this, third-party vendors use this information to provide margin estimation software to participants. ASX has also developed a web portal to estimate margin requirements for OTC derivatives portfolios.

Internal controls

ASX's risk management policies are generally reviewed formally every 18 months to 3 years, although more frequent reviews may occur depending on changes to technology, business drivers or legal requirements. Reviews are conducted by specific working groups and committees. Final approval of reviews for more significant policies is the responsibility of the Enterprise Risk Management Committee. Under the Enterprise Risk Management Policy, ASX's business units are required to update a risk profile every six months, which identifies relevant risks and sets out planned actions to respond to those risks.

Risk management arrangements are also subject to periodic review by Internal Audit. Such audits provide assurance that the risk management framework continues to be effective. Risk management arrangements may also be subject to review by external experts from time to time. The last such review of the Enterprise Risk Management Policy was undertaken by PricewaterhouseCoopers in 2011 and the next review is scheduled for the second half of 2015.

Previously, the Enterprise Risk Management Policy was reviewed by the Audit and Risk Committee approximately every three years, with the committee informed of material changes in the interim. Following the most recent review in August 2013, future reviews will be conducted on a two year cycle.

3.2 A central counterparty should ensure that financial and other obligations imposed on participants under its risk management framework are proportional to the scale and nature of individual participants' activities.

Financial obligations are imposed upon participants through ASX Clear (Futures)' *ex ante* and *ex post* risk controls. These are position-based controls.

ASX Clear (Futures) collects initial margin from participants based on actual positions. ASX Clear (Futures) may also collect Additional Initial Margin (AIM) where positions produce relatively high stress-test losses (beyond a predetermined threshold, see CCP Standards 4.2 and 4.4) or are high compared with the participant's underlying capital. Since margins are proportional to the size and volatility of a participant's positions, they are proportional to the scale and nature of individual participants' activities.

Futures participants' contributions to prefunded pooled financial resources are $100 million (see CCP Standard 4.4), with each participant contributing a fixed component of $2 million and a variable component that is recalculated quarterly based on each participant's share of average initial margin over the previous quarter. OTC participants' prefunded contributions to pooled financial resources rose to $100 million over the Assessment period, as eight participants joined the OTC derivatives clearing service over late 2013 and early 2014. Initially, each participant's contribution is $12.5 million. However, once aggregate initial margin in the OTC derivatives clearing services exceeds $500 million and at least four participants each contribute 15 per cent of initial margin, each participant's contributions will instead comprise a fixed component of $5 million and a variable component that is recalculated quarterly based on each participant's share of average initial margin over the previous quarter. At 30 June, aggregate initial margin from OTC participants totalled $ 59 million.

Furthermore, the order in which survivors' contributions to pooled financial resources would be used (i.e. the default waterfall) is proportional to the profile of the defaulter's activities. The proportion of futures and OTC participant contributions that would be used after each tranche of ASX Clear (Futures) capital is based on the defaulter's share of initial margin for exchange-traded compared with OTC derivatives products (including cross-margined futures) over the previous 90 days (see CCP Standard 12). ASX reviews at least annually the appropriateness of supporting both exchange-traded and OTC products with a single pool of financial resources. OTC participants are also required to bid competitively in any auction of a defaulted participant's OTC derivatives portfolio. Otherwise their contributions to pooled financial resources may be used ahead of the contributions of other non-defaulting participants (see CCP Standard 12.1).

ASX Clear (Futures)' Operating Rules also set out non-financial participation requirements, such as operational requirements. These requirements are not prescriptive, and take into account the size and nature of a participant's business.

3.3 A central counterparty should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the central counterparty.

The use of margin and additional margin at ASX Clear (Futures) creates an incentive for participants to manage the exposures that they bring to the CCP, as does the requirement to contribute to pooled financial resources in proportion to initial margin obligations. Participants are also required to post additional collateral or increase their capital levels if they create exposures that are large relative to the size of their capital. ASX is proactive in monitoring participant exposures and utilises conservatively set triggers for additional monitoring or action, such as requiring participants to actively manage down exposures (see CCP Standard 4.2).

ASX Clear (Futures) may also apply sanctions to, or place additional requirements on, participants that fail to comply with its Operating Rules. Participants may ultimately be required to seek alternative clearing arrangements.

3.4 A central counterparty should regularly review the material risks it bears from and poses to other entities (such as other FMIs, money settlement agents, liquidity providers and service providers) as a result of interdependencies, and develop appropriate risk management tools to address these risks.

ASX Clear (Futures) reviews the material risks that it bears from and poses to other entities in the context of its ongoing review of enterprise risks (such as the six-monthly update of business unit risk profiles, see CCP Standard 3.1), and its processes for identifying risks associated with new activities. In the case of new products and services, ASX undertakes risk assessments when undertaking an expansion of its activities or in the event of material changes to its business. Risk assessments are built into ASX's Project Management Framework (see CCP Standards 14.1, 16.4).

For instance, ASX Clear (Futures) has identified risks to its operational activities arising from participants' increased usage of third-party vendors for back-office systems, and participants outsourcing their back-office processing offshore. ASX Clear (Futures) has also identified interdependencies with service providers. ASX Clear (Futures)' response to these interdependencies is outlined in CCP Standard 16.5.

Interdependencies with Austraclear for the settlement of margin and other payment obligations are managed within the context of ASX Group's broader risk management framework (see CCP Standard 19).

3.5 A central counterparty should identify scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern and assess the effectiveness of a full range of options for recovery or orderly wind-down. A central counterparty should prepare appropriate plans for its recovery or orderly wind-down based on the results of that assessment. Where applicable, a central counterparty should also provide relevant authorities with the information needed for purposes of resolution planning.

ASX Clear (Futures) has developed a basic recovery plan that identifies scenarios that could threaten its ongoing provision of critical clearing services and sets out how it would respond to such scenarios on the basis of its existing powers under its Operating Rules and Procedures. The recovery plan sets out the likely sequence of actions that ASX would take under each identified recovery scenario, and analyses the advantages and disadvantages of

tools available to ASX Clear (Futures) to respond to such scenarios. In particular, ASX's analysis has identified that ASX Clear (Futures)' existing Operating Rules do not provide it with sufficient tools to be able to fully address uncovered credit losses and liquidity shortfalls, and replenish financial resources following a participant default or a non default-related financial loss (see also CCP Standards 4.8 and 7.9).

ASX has commenced work to develop a more comprehensive recovery plan supported by tools to fully address uncovered credit losses and liquidity shortfalls, and replenish financial resources. It intends to base these tools on forthcoming CPSS-IOSCO guidance on recovery planning, expected to be published in late 2014 (see Section 3.6.1, Box B). ASX intends to consult on its proposed recovery approach in the second half of 2014.

Standard 4: Credit risk

A central counterparty should effectively measure, monitor and manage its credit exposures to participants and those arising from its clearing processes. A central counterparty should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence.

Rating: Broadly observed

ASX Clear (Futures) maintains a comprehensive framework for managing its credit exposures to participants (CCP Standard 4.1). Under this framework, ASX Clear (Futures) regularly monitors information on participants' credit standing through financial reporting requirements, public information, and further investigation where required. Monitoring of participants' credit standing is risk based, and ASX maintains a list of participants deemed to warrant more intensive monitoring (CCP Standard 4.2). In responding to any issues identified through monitoring, ASX Clear (Futures) is able to impose activity restrictions or additional controls, including calls for additional collateral (CCP Standard 4.3).

ASX Clear (Futures) also monitors and manages the magnitude of exposures to participants through both daily and intraday initial and variation margin calculations (CCP Standard 4.2), and through daily stress tests that measure the effects of extreme but plausible scenarios on exposures (CCP Standard 4.5). ASX Clear (Futures) holds sufficient financial resources to cover its largest potential credit exposure to any two participants and their affiliates in the extreme but plausible scenarios covered in its stress tests, consistent with obligations for a facility that is systemically important in multiple jurisdictions (CCP Standards 4.4, 4.6). ASX Clear (Futures) has the capacity to call additional margin from participants in the event that their stress-test exposures exceed predetermined stress-test exposure limits (STELs). During the Assessment period, ASX Clear (Futures) enhanced the review of its capital stress-test model by introducing monthly reverse stress testing and review of market conditions to supplement the existing daily and formal annual review of scenarios. ASX Clear (Futures) has also engaged an external expert to conduct an annual validation of the capital stress-test model. Responsibility for increasing financial resources in response to persistent and widespread STEL breaches that exceed available financial resources lies with the CS Boards and the ASX Limited Board (CCP Standard 4.7). While ASX Clear (Futures) has some discretionary powers to address uncovered credit losses, these are not currently sufficient to reliably and fully address losses in all scenarios. ASX plans to consult on proposals to enhance its loss allocation and replenishment powers (CCP Standard 4.8).

The Bank's assessment is that ASX Clear (Futures) has broadly observed the requirements of CCP Standard 4 during the 2013/14 Assessment period. In order to fully observe CCP Standard 4, ASX Clear (Futures) should:

- implement mechanisms consistent with forthcoming CPSS-IOSCO guidance on recovery planning that fully address any uncovered credit losses and replenish financial resources following a participant default.
- complete the full validation of its capital stress-test model by external experts

ASX Clear (Futures) is encouraged to continually refine and enhance its reverse stress testing methodology and its integration into existing risk management processes.

ASX Clear (Futures)' approach to managing its credit risk is described in further detail under the following sub-standards.

4.1 A central counterparty should establish a robust framework to manage its credit exposures to its participants and the credit risks arising from its clearing processes. Credit exposures may arise from current exposures, potential future exposures, or both.

ASX Clear (Futures) maintains a comprehensive framework for managing credit exposures to its participants. This framework comprises: a stress-testing regime (see CCP Standards 4.5 to 4.7); the use of variation margin to mark positions to market (see CCP Standard 6); and the maintenance of pre-funded financial resources. These financial resources comprise initial margin (see CCP Standard 6), other collateral calls based on participants' positions, and fully pre-funded pooled financial resources of $650 million (see CCP Standard 4.4). Financial resources received in cash are invested in high-quality assets in accordance with ASXCC's treasury investment policy (see CCP Standard 15).

4.2 A central counterparty should identify sources of credit risk, routinely measure and monitor credit exposures, and use appropriate risk management tools to control these risks. To assist in this process, a central counterparty should ensure it has the capacity to calculate exposures to participants on a timely basis as required, and to receive and review timely and accurate information on participants' credit standing.

ASX's Clearing Risk Management (CRM) unit is responsible for monitoring participants' credit standing and credit exposures to participants.

Within CRM, the Exposure Management team monitors day-to-day developments in, among other things, market price moves, open positions and settlement obligations to the CCPs. Participants' positions are marked to market and ASX Clear (Futures) calculates initial and variation margin requirements at the end of each business day. ASX Clear (Futures) also has in place intraday margining processes to ensure that it calculates and manages credit risk exposures on a timely basis.

For exchange-traded products, ASX Clear (Futures) performs automated intraday margin calculations at 8.30 am and 11.30 am each business day, and may also perform ad hoc calculations if there is significant movement in the prices of individual contracts. Based on these calculations, intraday margin calls are made if margin coverage is eroded by 25 per cent or more (decreased from 40 per cent during the Assessment period), and if intraday margin calculations exceed $100 000 for a portfolio (see CCP Standard 6.4). ASX is considering whether to modify the timing of intraday calls to better align with overnight margin calls, and take into account price movements and changes in position later in the day.

For OTC derivatives positions, including cross-margined futures, ASX Clear (Futures) recalculates its exposures to participants on approximately an hourly basis. To manage the additional credit risk exposure arising from offering real-time novation of OTC products, ASX Clear (Futures) places a limit on the interest rate sensitivity of new transactions (currently set to $500 000), conducts frequent portfolio exposure checks and may prevent further novation until an intraday margin call is met. By imposing pre-novation limits on the interest-rate sensitivity of each trade (set using the maximum present value of a basis point shift in interest rates), ASX Clear (Futures) minimises the possibility that novating a single large trade results in a significant increase in credit exposure. The approximately hourly portfolio exposure checks by CRM reveal circumstances in which the sum of initial and variation margin owed (beyond excess collateral held by ASX Clear (Futures)) exceeds $1 million, at which point ASX Clear (Futures) would call for intraday margin (see CCP Standard 6.4). The threshold is based on the most recent collateral data and is reviewed at least daily by CRM. From July 2014, margin erosion thresholds for intraday margin calls have been set at 10 per cent for OTC derivatives only portfolios, or 20 per cent for cross-margined OTC and exchange-traded derivatives portfolios.

ASX Clear (Futures) conducts daily stress testing to monitor the effects of extreme but plausible scenarios on participants' portfolios. Where stress-test results are above a defined limit, AIM is called (see CCP Standard 4.4).

Within CRM, the Counterparty Risk Assessment (CRA) team is responsible for ongoing monitoring, assessment and investigation of matters relating to financial requirements (including participants' monthly financial statements). CRA is also responsible for determining and reviewing participants' credit standing, drawing in part on information provided by participants in regular financial returns to ASX. ASX determines an Internal Credit Rating (ICR) for each participant. The ICR takes into account the participant's external credit rating as appropriate. Other metrics monitored by CRA, including factors used in determining the CROCC watch list (see below), can be used as an alternative or supplementary means for ICR determination where these indicate an assessment of credit risk that differs from external credit ratings. In other cases, the ICR is based on the participant's capital position (or that of its parent where that parent is unrated but provides a formal guarantee to the CCP).

CRM also coordinates a 'watch list' of participants deemed to warrant more intensive monitoring. Inclusion on the watch list is based on a range of factors, such as: concentration risk; concerns emerging from a specific event or media report; significant changes in a participant's own share price, bond yield or credit default swap price; ICR downgrades; calls for AIM; operational issues; compliance issues; or issues arising from ASX's routine review of financial returns (for example regular losses or breaches of minimum capital requirements). The assessment of watch list factors monitored by CRA, ASX Compliance and the Operations Division is coordinated by the CROCC. Based on such an assessment, ASX Clear (Futures) may decide to place restrictions on a participant's trading, clearing and settlement activities (see CCP Standard 4.3). During the 2013/14 Assessment period, there were no ASX Clear (Futures) participants on the watch list.

During the 2013/14 Assessment period, ASX undertook a broad review of concentration risk. As a result of this review, ASX developed a formal Concentration Risk Standard, setting out a risk-based approach to monitoring concentration risks in three areas:

- Concentrations in participants' exposures to their clients (discussed under CCP Standard 18).

- Concentrations of individual participants' positions in particular products. Evidence of such concentration indicates individual participant exposure to large price movements in a particular product that could challenge its capacity to meet obligations to the CCP. CRM monitors the concentration of participants' exchange-traded positions in single products, by number of contracts or value of underlyings. Further review would be triggered should exposure to a particular product exceed a specified share of a participant's total portfolio, subject to a materiality threshold.
- Concentration of positions in a market in a single participant. Evidence of a single participant accounting for a large share of positions in a particular market segment could indicate the potential for complications in closing out or transferring these positions if the participant were to default. CRM monitors the market shares of participants in each exchange-traded product. Further review would be triggered if a single participant held more than 25 per cent of the contracts in the market for that product and the size of the position (relative to average market turnover for that product) suggested that it could take more than two days to close out that participant's position.

If a trigger were met under its Concentration Risk Standard, ASX would not automatically take action. In determining whether further investigation or action was warranted, ASX would take into account a number of factors, including the materiality of the breach and the credit standing and activity profile of the relevant participant (see CCP Standard 4.3).

Under its risk-based approach to monitoring concentration risk, ASX Clear (Futures) has prioritised formal concentration monitoring for exchange-traded products over OTC products. This reflects the currently relatively low level of exposures generated by OTC derivatives transactions. ASX Clear (Futures) nevertheless monitors concentration risks in OTC products via its ongoing monitoring of participant credit exposures.

For details of ASX Clear (Futures)' other participation requirements and participant monitoring arrangements, see CCP Standard 17.

4.3 A central counterparty should have the authority to impose activity restrictions or additional credit risk controls on a participant in situations where the central counterparty determines that the participant's credit standing may be in doubt.

Participants on ASX's watch list may be subject to trading restrictions, or additional credit risk controls. For instance, they may be subject to calls for additional margin, higher capital requirements, additional capital reporting requirements, or a reduced STEL (such that additional margin would be called at a lower level of capital stress-test exposure (see CCP Standard 4.7)). CRM typically also carries out a detailed credit review of participants on the watch list.

Similar steps may be taken, at ASX's discretion, where a participant exceeds a trigger under the Concentration Risk Standard.

ASX Clear (Futures) will also call capital-based position limit (CBPL) AIM from a participant with a large portfolio (measured by initial margin requirements) relative to its net tangible assets, or may make an additional cover call where it has other counterparty credit risk concerns.

4.4 A central counterparty should cover its current and potential future exposures to each participant fully with a high degree of confidence using margin and other prefunded financial resources (see CCP Standard 5 on collateral and CCP Standard 6 on margin). In

addition, a central counterparty that is involved in activities with a more complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure for the central counterparty in extreme but plausible market conditions. All other central counterparties should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure for the central counterparty in extreme but plausible market conditions. In all cases, a central counterparty should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount of total financial resources it maintains.

During the 2013/14 Assessment period, ASX Clear (Futures) increased its total prefunded pooled financial resources to $650 million, from $370 million at the end of June 2013. $180 million of the additional funds was sourced from a capital raising conducted in June 2013, while $100 million was contributed by participants of ASX Clear (Futures)' OTC derivatives clearing service. ASX Clear (Futures) also replaced $20 million of contributions from futures clearing participants with funds from a subordinated loan from ASX Limited. Following these changes, pooled financial resources consist of (in order of application in the event of a futures participant default): $30 million of ASXCC equity; a $90 million subordinated loan from ASXCC (ultimately funded by a subordinated loan from ASX Limited); $100 million from futures participants (the ordering of OTC and futures participant contributions would be switched in the event of an OTC participant default); $150 million of ASXCC equity; $100 million from OTC participants; and $180 million of ASXCC equity. The increase in pooled financial resources reflects the launch of the OTC derivatives clearing service, and the move to testing the adequacy of financial resource against the default of the two largest participants plus affiliates (in accordance with the requirements of the Bank's supplementary interpretation of CCP Standard 4.4; see discussion below). The magnitude of the increase reflects stress tests of participant portfolios provided to ASX Clear (Futures) as part of a design study for the OTC derivatives clearing service carried out in 2012.

ASX Clear (Futures) conducts daily stress tests to ensure that the level of its prefunded financial resources is sufficient to cover the default of the two participants (and their affiliates) that would potentially cause the largest aggregate credit exposure to the CCP under a wide range of scenarios (see CCP Standards 4.5 to 4.7). Since ASX Clear (Futures) clears primarily transactions in exchange-traded futures and OTC interest rate swap (IRS) derivatives, the Bank does not consider that ASX Clear (Futures) is involved in activities with a complex risk profile. However, ASX Clear (Futures) is systemically important within Australia. The Bank has issued supplementary interpretation of the FSS that clarifies how it will determine systemic importance in multiple jurisdictions. One indicator, among other things, is the need to seek 'recognition' in other jurisdictions (see Section 3.8). Reflecting this supplementary interpretation, the Bank has concluded that ASX Clear (Futures) is systemically important in multiple jurisdictions and therefore subject to higher financial resource requirements (i.e. to cover the default of two participants and their affiliates).

Under ASX Clear (Futures)' AIM methodology, a participant is required to post additional collateral should stress-test outcomes reveal that the potential loss arising from its positions (as at the close of the previous day) exceeds a predetermined STEL (see CCP Standard 4.7). The objective of this regime is to provide additional participant-specific cover against non-

systematic spikes in individual participants' exposures. This mitigates the risk that the default of a participant with a large exposure, in more extreme market conditions than are contemplated by regular initial margin, may deplete or even exhaust prefunded pooled financial resources. By upholding the 'defaulter pays' principle, the AIM regime also provides an incentive for participants to manage the risk they bring to the CCP. However, it is not a substitute for holding sufficient pooled financial resources. There are potential shortcomings to relying too heavily on variable calls related to stress-test exposures, particularly given lags in the calculation and settlement of such calls (see CCP Standard 4.7).

4.5 A central counterparty should, through rigorous stress testing, determine the amount and regularly test the sufficiency of its total financial resources available in the event of a default or multiple defaults in extreme but plausible market conditions. Stress tests should be performed daily using standard and predetermined parameters and assumptions. On at least a monthly basis, a central counterparty should perform a comprehensive and thorough analysis of stress-testing scenarios, models and underlying parameters and assumptions used to ensure they are appropriate for determining the central counterparty's required level of default protection in light of current and evolving market conditions. A central counterparty should perform this analysis of stress testing more frequently when the products cleared or markets served display high volatility, become less liquid, or when the size or concentration of positions held by a central counterparty's participants increases significantly. A full validation of a central counterparty's risk management model should be performed at least annually.

ASX Clear (Futures) uses daily capital stress tests to monitor risk exposures to individual participants and the adequacy of its financial resources. Capital stress tests are based on a range of scenarios covering extreme price moves and volatility shifts at the market-wide, sector and individual-stock levels (see CCP Standard 4.6). The scenarios have been developed based on statistical analysis of historical market movements, which takes into account correlations between contracts and uses the 'student t distribution' (allowing for more extreme events than a normal distribution). On a daily basis, ASX reviews the scenarios which underpin the capital stress-testing regime for ASX Clear (Futures), and on a monthly basis carries out a review of market conditions to determine whether there is any evidence of stress that would support a change to scenarios. Any observed changes in price, volatility or interest rate curves in excess of the stress-test scenarios would constitute an event beyond what was previously considered to be extreme but plausible. Accordingly, it is likely that a revision to the relevant stress-test scenario would be presented for consideration by the Clearing Boards. In addition, ASX conducts monthly reverse stress tests to confirm the sufficiency of pooled financial resources and to cross-validate the capital stress-test scenarios (see CCP Standard 4.6).

ASX's Model Validation Standard requires that all models that are critical to ASX (as measured against a series of risk factors) undergo a full annual validation (see CCP Standard 2.6). Under this framework the capital stress-test model must be externally validated annually. ASX has engaged external experts to conduct a validation of the capital stress-test model during the third quarter of 2014. The Bank will monitor the outcome of this validation.

4.6 In conducting stress testing, a central counterparty should consider the effect of a wide range of relevant stress scenarios in terms of both defaulters' positions and possible price changes in liquidation periods. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves,

multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions.

ASX Clear (Futures) uses its capital stress test to establish the overall adequacy of financial resources and to determine whether a participant is required to post AIM (see CCP Standard 4.4).

The stress-testing regime comprises a suite of portfolio and single-contract stress-test scenarios based on statistical analysis of historical market movements. Scenarios are tailored to ASX Clear (Futures)' risk tolerance, as defined by its Board. All stress-test scenarios are based on historical observations and aim to capture extreme market moves that have a probability of occurrence of once in 30 years for single-asset scenarios, and once in 100 years for multi-asset scenarios. To meet these targeted probabilities, stress-test scenarios are calibrated to cover 99.987 per cent of daily price and volatility movements for the single-asset scenarios and 99.996 per cent of daily price and volatility movements for the multi-asset scenarios, based on a sample distribution constructed from 20 years of price and volatility data. The sample distribution used by ASX Clear reflects the period in which ASX has judged historical data as consistent and relevant to current market structures.

ASX Clear (Futures) uses 30 scenarios that involve movements of price and volatility across the four major futures contracts: SPI 200; 90-day bank accepted bill; 3-year bond; and 10-year bond.

- Twenty 'multi-asset' scenarios model combinations of price movements across all four contracts. Sixteen of these scenarios model a range of tilts, twists and bends of the yield curve, as represented by different price shocks across the 90-day, three-year and 10-year contracts; for example, the 'tilt (back end up)' scenario has progressively increasing price shocks from short-term to long-term interest rate contracts, with a 0 per cent move in the price of the 90-day contract, a 2 per cent move in the price of the three-year contract, and a 5 per cent move in the price of the 10-year contract. The remaining four of the multi-asset scenarios model moves in equities with balanced movements in the three interest rate contracts, equivalent to a 'parallel' move of the yield curve.
- Eight 'single contract' scenarios model extreme price movements in the four contracts individually.
- Two scenarios model large movements in the interest rate contracts with no movement in equities.

For participants that clear OTC derivatives, ASX Clear (Futures) applies the same multi-asset and single-asset scenarios, with extensions to capture movements in the bank bill swap rate (BBSW) and Australian overnight index average (AONIA) for overnight indexed swaps. Accordingly, the scenarios test shocks to exchange-traded derivatives and IRS simultaneously. The BBSW and AONIA curves are split into segments based on differences in participation and activity in the underlying market. The price shocks are calibrated using 20 years of data history for the Australian interest rate derivatives market, and take into account the assumed five-day close-out period for OTC derivatives transactions. As for the futures-only scenarios, the combined futures and OTC scenarios are sized to be equivalent to one in 30 year price movements for single-asset shifts, and one in 100 year outcomes for multi-asset shifts.

In February 2014, ASX added 10 new scenarios that consider various forms of basis risk. Two of these new scenarios expand on two pre-existing scenarios modelling the basis risk that results from a potential change – either temporary or permanent – in the economic relationship between interest rate futures and IRS. Two other new scenarios model the effect of a change in the spread between AONIA and BBSW rates at various tenors, while six new scenarios model changes in the tenor spread for BBSW. Each pairwise basis risk spread has been sized to a once in 100 year event. The new scenarios bring the total number of capital stress-test scenarios for OTC participants to 42.

In addition to the active scenarios for OTC derivatives, ASX introduced 14 internal scenarios in early 2014. These model shocks affecting a single tenor, the effect of assuming an increased close-out period and the impact of an absolute interest rate shock. Review of scenarios used in ASX Clear (Futures)' capital stress test against observed market movements also occurs on a daily basis and against overall market conditions on a monthly basis (see CCP Standard 4.5).

Over the course of the Assessment period, ASX developed a reverse stress test for ASX Clear (Futures) that takes into account the impact of systematic shocks across multiple contracts and considers changes to other model assumptions. For instance, an assumed change in equities prices (up or down), which affects the size of exposures on SPI-200 positions, is combined with an assumed change to the level or shape of the interest rate curve (e.g. to steepen, twist, or effect a parallel shift up or down) which affects the three major interest rate futures contracts. In developing these combinations of market movements, ASX considers the prevailing capital stress-test scenarios, and observed historical and statistical relationships between the relevant market variables. The reverse stress test then simulates a level shift to this fixed combination of market movements to discover the point at which pooled financial resources would be exhausted.

In order to test the sensitivity of the stress-test models to other model assumptions, the reverse stress test is repeated for a wide range of scenarios. These include assuming the default of multiple participants beyond the available financial resources of ASX, and varying assumptions on the size, concentration or directionality of participants' portfolios. To test these assumptions, reverse stress tests are applied to participant portfolios that exhibit certain characteristics, such as concentrated exposure to certain products or a highly directional interest rate exposure. ASX also conducts tests of extreme hypothetical portfolios that would generate losses sufficient to exhaust pooled financial resources under plausible market scenarios.

In interpreting the results of reverse stress testing, ASX considers the plausibility of any scenarios that could exhaust pooled financial resources. Any recommended changes to stress-test scenarios or pooled financial resources would first be considered by the RQG and then escalated to the Clearing Boards for approval. A summary of reverse stress testing outcomes is reported alongside the monthly margin backtesting and capital stress test review reports and included in quarterly risk management reports to the Clearing Boards.

The Bank will continue to monitor the implementation of these enhancements to ASX Clear (Futures) approach to reverse stress testing.

4.7 A central counterparty should have clearly documented and effective rules and procedures to report stress-test information to appropriate decision-makers and ensure that additional financial resources are obtained on a timely basis in the event that projected stress-test losses exceed available financial resources. Where projected stress-test losses of a single or

only a few participants exceed available financial resources, it may be appropriate to increase non-pooled financial resources; otherwise, where projected stress-test losses are frequent and consistently widely dispersed across participants, clear processes should be in place to augment pooled financial resources.

Capital stress-test exposures are routinely reported to ASX management, the Clearing Boards and the Bank. Participant stress-test losses are used to gauge the adequacy of ASX Clear (Futures)' available financial resources, with widespread and/or large STEL breaches an indicator that resources may need to be increased. STEL breaches are reported to management and persistent breaches are escalated in the first instance to the CRO and CALCO. The CS Boards and ASX Limited Board are responsible for approving any increase to pooled prefunded financial resources where this is considered necessary (see below).

Each participant in ASX Clear (Futures) is allocated a STEL based on its ICR. The maximum STEL represents one half of ASX Clear (Futures)' total pooled prefunded financial resources, reflecting that ASX Clear (Futures) holds prefunded resources to cover multiple participant defaults. ASX Clear (Futures) made a number of adjustments to STELs during the Assessment period, reflecting the move to cover multiple participant defaults, and increases in pooled prefunded financial resources (including contributions received from OTC participants).

Where the projected stress-test losses of a participant exceed its STEL, ASX will call for STEL AIM. Like other margins, STEL AIM is calculated overnight, notified to participants by approximately 8.00 am the next day, and must be met by 11.00 am. Participants may meet these obligations using cash or non-cash collateral, including Australian Government securities and bank bills or negotiable certificates of deposit from ADIs. ASX Clear (Futures) does not accept collateral issued by a clearing participant or associated entity, in order to reduce the possibility that it might face the default of both a clearing participant and a collateral issuer.

In deciding whether ASX Clear (Futures) has sufficient pooled financial resources, ASX considers the size, frequency, duration and distribution of AIM calls across participants. ASX Clear (Futures) would consider increasing these resources if stress-test results in excess of pre-funded pooled resources were persistent, significant and widespread. In other cases, ASX Clear (Futures) would generally rely on additional collateral collected under the AIM regime.

4.8 A central counterparty should establish explicit rules and procedures that address fully any credit losses it may face as a result of any individual or combined default among its participants with respect to any of their obligations to the central counterparty. These rules and procedures should address how potentially uncovered credit losses would be allocated, including the repayment of any funds a central counterparty may borrow from liquidity providers. These rules and procedures should also indicate the central counterparty's process to replenish any financial resources that the central counterparty may employ during a stress event, so that the central counterparty can continue to operate in a safe and sound manner.

In March 2014, ASX finalised a basic recovery plan that relies on existing tools and powers within the CS facilities' Operating Rules. In preparing the plan for ASX Clear (Futures), ASX identified that the existing Operating Rules do not provide the CCP with sufficient tools to be able to fully address any uncovered credit losses and replenish financial resources following a participant default (see CCP Standard 3.5). While ASX's recovery plan identifies measures that could be used to mitigate this in part (such as adjustments to STELs and the collection of

additional margin), additional measures will be required to comprehensively allocate uncovered losses and adequately and reliably replenish financial resources.

In relation to replenishment, responsibility for determining if resources will be replenished and, if so, how this should be achieved, ultimately lies with the ASX Limited Board, which would make this decision in consultation with the ASX Clear (Futures) Board. ASX has documented replenishment intentions, which include several options; the particular approach taken to replenishment would depend on the specific circumstances, including the severity of the loss and the market environment (see CCP Standard 12.1). ASX Limited has also committed to maintaining a certain level of equity capital in ASX Clear (Futures) (including via ASXCC), provided certain conditions are met, including that the CCP is solvent.

ASX has commenced work to develop a more comprehensive recovery plan supported by tools to fully address uncovered credit losses and replenish financial resources. It intends to base these tools on forthcoming CPSS-IOSCO guidance on recovery planning, expected to be published in late 2014 (see Section 3.6.1, Box B). ASX intends to consult on its proposed recovery approach in the second half of 2014.

Standard 5: Collateral

A central counterparty that requires collateral to manage its or its participants' credit exposures should accept collateral with low credit, liquidity and market risks. A central counterparty should also set and enforce appropriately conservative haircuts and concentration limits.

Rating: Observed

ASX Clear (Futures) limits the assets it routinely accepts as collateral to cash, or assets with low credit and market risks (CCP Standard 5.1). Assets accepted as collateral are commonly accepted in the Australian market and there is sufficient depth in these assets that their eligibility as collateral is not considered to have any material market impact (CCP Standard 5.2). ASX Clear (Futures) applies haircuts to collateral. These are calibrated to stressed market conditions, to limit the need for procyclical adjustments (CCP Standards 5.3, 5.4). Collateral holdings are not sufficiently concentrated as to impair ASX Clear (Futures)' ability to liquidate such assets quickly without significant adverse price effects (CCP Standard 5.5). ASX Clear (Futures) retains discretion over whether to accept foreign currency collateral on a case-by-case basis, and takes into account concentration limits in exercising this discretion (CCP Standard 5.6). ASX Clear (Futures) employs well-designed and operationally flexible systems to manage collateral movements for securities and derivatives trades (CCP Standard 5.7).

The Bank will continue to discuss with ASX its approach to monitoring collateral concentration risks.

The Bank's assessment is that ASX Clear (Futures) has observed the requirements of CCP Standard 5 during the 2013/14 Assessment period. ASX Clear (Futures)' collateral acceptance policies are described in further detail under the following sub-standards.

5.1 A central counterparty should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity and market risks.

The acceptable collateral depends upon the type of margin called.

- Futures participants generally meet their initial margin obligations using AUD cash, although they may also use high-quality non-cash collateral, such as eligible debt

securities, and deposits in major foreign currencies. The acceptable types of non-cash collateral are Australian Government and some semi-government securities, and US Treasury bills. Acceptable foreign currencies are NZD, EUR, JPY, USD and GBP. Acceptable collateral is reviewed annually, with haircuts applied to all non-cash collateral posted and all cash collateral that is not in the same currency as the product being covered.

- Participants may meet STEL AIM obligations using AUD cash or non-cash collateral, including Australian Government and some semi-government securities, bank bills and negotiable certificates of deposit from ADIs. Foreign currencies are not eligible for STEL AIM calls.
- Variation margin and intraday margin must be settled in cash.

ASX Clear (Futures) does not accept collateral that is issued by a clearing participant or associated entity for any margin calls. This reduces the possibility that it might face the default of both a clearing participant and a collateral issuer ('wrong-way risk'). In April 2014, an amendment to the ASX Clear (Futures) Operating Rules removed the ability for participants to use letters of credit to meet contributions to pooled financial resources.

During the Assessment period, ASX formally documented its approach to collateral in a Collateral Policy and a Collateral Standard. These documents set out ASX's collateral eligibility criteria, procedures for review of eligibility, the basis for calibrating haircuts and arrangements for the review of collateral settings.

5.2 In determining its collateral policies, a central counterparty should take into consideration the broad effect of these policies on the market. As part of this, a central counterparty should consider allowing the use of collateral commonly accepted in the relevant jurisdictions in which it operates.

ASX Clear (Futures) takes into account market liquidity in determining the eligibility of collateral. ASX Clear (Futures) considers the debt securities that it will accept as collateral – Australian Government and some semi-government securities, US Treasury bills, bank bills and negotiable certificates of deposit from Australian ADIs – to be sufficiently liquid that the eligibility of these assets as collateral will not have any material impact on market liquidity or price. In light of the depth of liquidity in these assets, ASX Clear (Futures) would also expect to be able to liquidate such collateral in a timely fashion as required (see CCP Standard 5.1). These assets are also commonly accepted in the Australian market, including by the Bank.

5.3 A central counterparty should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions.

Since the eligible assets for non-cash collateral at ASX Clear (Futures) – Australian Government and some semi-government securities, US Treasury bills, bank bills and negotiable certificates of deposit from Australian ADIs – are highly liquid, price information is readily available. ASX revalues non-cash collateral on a daily basis using end-of-day prices.

ASX Clear (Futures) sets haircuts on non-cash collateral to cover a fall in the collateral value of stocks over a one-day period under extreme but plausible scenarios. Haircuts are calculated based on the same methodology that is used to calculate price falls of contracts in capital stress-test scenarios (see CCP Standard 4.6). Haircuts are also applied to cash collateral lodged to meet margin requirements for products denominated in a currency other than the

collateral (currently between 6 and 10 per cent, depending on the currency). Collateral haircuts are reviewed at least annually to take into account any changes to historically observed volatility trends. Collateral haircuts were most recently reviewed in January 2014, with a supplementary review of haircuts applied to foreign currencies in June 2014. In addition, since collateral haircuts are calibrated to the same stress scenarios as those used in the stress-testing regime, the ongoing review of capital stress-test scenarios also verifies the appropriateness of haircut rates (see CCP Standard 4.4).

5.4 In order to reduce the need for procyclical adjustments, a central counterparty should establish stable and conservative haircuts that are calibrated to include periods of stressed market conditions, to the extent practicable and prudent.

ASX Clear (Futures)' collateral haircutting policy is designed to cover extreme but plausible scenarios based on market price and volatility movements observed in the past 20 years, which includes the extreme volatility observed during the 2008-09 financial crisis. This is intended to ensure that haircuts remain stable over the business cycle, even in stressed market conditions.

5.5 A central counterparty should avoid concentrated holdings of certain assets where this would significantly impair the ability to liquidate such assets quickly without significant adverse price effects.

During the Assessment period, ASX developed a risk-based policy for managing concentration risks in its CCPs (see CCP Standards 4.2, 18.4); however, this policy does not address concentrations in collateral holdings since non-cash collateral has made up only a small proportion of total collateral received. The maximum holding of non-cash collateral during the Assessment period was $111 million (around 4 per cent of total margin). Cash remains the sole form of collateral utilised by the majority of participants. ASX also considers that the assets eligible for non-cash collateral – Australian Government and some semi-government securities, US Treasury bills, bank bills and negotiable certificates of deposit from Australian ADIs – are sufficiently liquid that concentration is unlikely to be a significant concern. Concentration risk in foreign currencies is considered whenever a participant approaches ASX for approval to lodge foreign currency collateral (see CCP Standard 5.6). As the materiality of non-cash collateral increases, restrictions on concentrations are expected to align with those of the investment mandate (see Standard 15.4). The Bank will continue to discuss with ASX its approach to monitoring collateral concentration risks.

5.6 A central counterparty that accepts cross-border collateral should mitigate the risks associated with its use and ensure that the collateral can be used in a timely manner

ASX Clear (Futures) accepts cross-border collateral for initial margin in the form of selected foreign currencies and US Treasury bills. During the Assessment period, maximum foreign cash holdings were around $499 million (AUD equivalent) in comparison to average total collateral holdings of around $3.3 billion (daily average of initial margin held over 2013/14), while no US Treasury bills were held. Holdings of non-AUD collateral in excess of 25 per cent of liquid assets held by ASXCC trigger escalation to senior management. Haircuts are applied to both foreign cash collateral and US Treasury bills (see CCP Standard 5.3). Participants must lodge a request to post foreign currency, which is reviewed and then approved or denied by the Portfolio Risk Management team. In making this determination, the Portfolio Risk Manager will take into account the limits on foreign currency, as well as the concentration risk in accepting the request. ASX Clear (Futures) has the ability to use foreign exchange

swaps to facilitate the timely use of collateral in foreign currencies. Arrangements for the settlement of foreign currencies are described in CCP Standard 9.

5.7 A central counterparty should use a collateral management system that is well designed and operationally flexible.

Collateral management system

ASX Clear (Futures) manages the calculation and execution of margin calls through internal risk analysis and margin management systems. These are linked to its core Genium system for information on positions, and Austraclear's EXIGO system for the lodgement of settlement instructions. These systems accurately monitor initial and variation margin levels and flows on an intraday basis. The direct link to Austraclear facilitates the timely deposit, withdrawal and substitution of non-cash collateral and settlement of cash collateral.

ASX Clear (Futures)' participants can also make use of ASX's collateral management service, ASX Collateral, for the management of non-cash collateral lodged with the CCP. However, ASX Collateral was not used for the lodgement of any collateral at ASX Clear (Futures) during the Assessment period.

Re-use of collateral

ASX Clear (Futures) does not re-use non-cash collateral posted by participants and the re-use of such collateral is not supported under its Operating Rules.

Standard 6: Margin

A central counterparty should cover its credit exposures to its participants for all products through an effective margin system that is risk based and regularly reviewed.

Rating: Broadly observed

ASX Clear (Futures) applies initial and variation margin to derivatives exposures, using margin systems that are tailored to the particular attributes of the cleared products (CCP Standard 6.1). Timely price data are available for most products subject to ASX Clear (Futures)' margin systems, and ASX Clear (Futures) applies appropriate models to estimate prices when timely and reliable data are not available (CCP Standard 6.2). ASX Clear (Futures)' margin models ensure that initial margin meets a single-tailed confidence level of 99.7 per cent of the estimated distribution of future exposure, applying appropriate and conservative assumptions regarding close-out periods, product risks, portfolio effects, product offsets and floors to limit the need for procyclical changes (CCP Standards 6.3, 6.5). In addition, ASX Clear (Futures) applies variation margin to derivatives positions daily, and may call intraday margin as part of scheduled processes or in the event of significant market movements (CCP Standard 6.4).

ASX Clear (Futures) performs daily and periodic backtesting of its margin models to assess the adequacy of initial margin against the targeted level of cover and performs an annual review of margin policy. ASX Clear (Futures) uses quarterly sensitivity analysis to validate the assumptions underpinning margin models, including to test the reliability of implicit or explicit product offsets (CCP Standard 6.6). ASX Clear (Futures) regularly reviews and validates its margin models. An external expert was recently engaged for a three-year period to conduct a comprehensive review of all key risk models, including those that support margining (CCP Standard 6.7). The operating hours of ASX Clear (Futures)' margin systems are consistent with those of related payment and settlement systems in Australia (CCP Standard 6.8). Consistent with the Bank's supplementary interpretation of CCP Standard 6.3, ASX

Clear (Futures) applies a greater than 99.5 per cent confidence interval and a five day close-out period to its calibration of margin for OTC derivatives.

The Bank's assessment is that ASX Clear (Futures) has broadly observed the requirements of CCP Standard 6 during the 2013/14 Assessment period. In order to fully observe CCP Standard 6, ASX Clear (Futures) should:

- complete the full external validation of its SPAN and OTC IRS Historic VaR margin model by external experts.

ASX Clear (Futures) is encouraged to carry out plans to further enhance its margin backtesting and sensitivity analysis to test coverage of actual static participant portfolios on a daily and periodic basis. ASX Clear (Futures) is also encouraged to continually refine and enhance its margin backtesting and sensitivity analysis methodologies and their integration into existing risk management processes. The Bank will also discuss further with ASX Clear (Futures) how it measures and manages procyclicality in its margin models.

ASX Clear (Futures)' margin system is described in further detail under the following sub-standards.

6.1 A central counterparty should have a margin system that establishes margin levels commensurate with the risks and particular attributes of each product, portfolio and market it serves.

ASX Clear (Futures) applies initial and variation margin to all derivatives products. Initial margin provides protection to a CCP in the event that a participant defaults and an adverse price change occurs before the CCP can close out the defaulted participant's positions (potential future exposure). Variation margin is levied to reflect observed price movements (current exposure); it is collected from the participant with a mark-to-market loss and (typically) passed through to the participant with a mark-to-market gain.

Exchange-traded derivatives

ASX Clear (Futures) has adopted a variant of the internationally accepted SPAN methodology for calculation of initial margin. For exchange-traded derivatives products, initial margin is calibrated so as to cover the higher of three standard deviations of the 60-day and 252-day historical distribution of price movements, using the higher of one- or two-day movements. ASX Clear (Futures) also evaluates margin rates against multiple look-back periods, incorporating both short- and long-term periods (7 business days, 120 business days and 12 months). All margin rates are reviewed on a three-monthly cycle, supplemented with ad hoc reviews during especially volatile market conditions. ASX Clear (Futures) also levies variation margin on positions at least daily to reflect observed price movements.

OTC derivatives

ASX Clear (Futures) margins OTC derivatives portfolios (including interest rate futures that participants have allocated for cross-margining with OTC derivatives positions (see CCP Standard 6.5)), using a historical simulation of value at risk model within the Calypso margin system. The OTC IRS Historic VaR margin model is calibrated so as to cover three standard deviations (99.7 per cent) of the five-year historical distribution of five-day price movements. By calculating initial margin requirements on a portfolio basis using the historical distribution of price movements, this methodology adjusts for observed price volatility and correlation. The five-day close-out period reflects the lower liquidity in OTC derivatives products. This

approach is closely aligned with the methodology used at other OTC derivatives CCPs internationally.

6.2 A central counterparty should have a reliable source of timely price data for its margin system. A central counterparty should also have procedures and sound valuation models for addressing circumstances in which pricing data are not readily available or reliable.

ASX Clear (Futures) has access to timely price data for its exchange-traded products.

To value cleared OTC derivatives products, ASX Clear (Futures) uses a range of BBSW, ICAP and Reuters pricing points, as well as the official cash rate, pricing from 90-day bank bill futures contracts, and swap yields for contracts greater than three years. These sources provide sufficient pricing points to value the OTC derivatives products that ASX Clear (Futures) clears, even when some pricing data are not readily available or reliable.

Participants are given all information necessary to create the end-of-day yield curve and independently calculate the net present value of any contract. Although the OTC IRS margin system can accommodate hourly updated pricing, ASX Clear (Futures) is implementing a system of manually 'approved' prices, and will focus on end-of-day and midday updates to ensure that valuation is based on prices that accurately reflect market pricing. ASX Clear (Futures) will consider introducing more frequent price updates as the service develops.

6.3 A central counterparty should adopt initial margin models and parameters that are risk based and generate margin requirements sufficient to cover its potential future exposure to participants in the interval between the last margin collection and the close out of positions following a participant default. Initial margin should meet an established single-tailed confidence level of at least 99 per cent with respect to the estimated distribution of future exposure. For a central counterparty that calculates margin at the portfolio level, this requirement applies to each portfolio's distribution of future exposure. For a central counterparty that calculates margin at more granular levels, such as at the sub-portfolio level or by product, the requirement should be met for corresponding distributions of future exposure. The model should: use a conservative estimate of the time horizons for the effective hedging or close out of the particular types of products cleared by the central counterparty (including in stressed market conditions); have an appropriate method for measuring credit exposure that accounts for relevant product risk factors and portfolio effects across products; and to the extent practicable and prudent, limit the need for destabilising, procyclical changes.

Exchange-traded derivatives

ASX Clear (Futures) calculates initial margin requirements for each portfolio of positions using the SPAN methodology. House and omnibus client accounts are considered as separate portfolios. Further to the introduction in July 2014 of an account structure that supports individual client segregation, ASX Clear (Futures) positions held in these will also be considered as separate portfolios (see CCP Standard 13).

The key parameters in the SPAN methodology are the 'price scanning range' (PSR) and 'volatility scanning range' (VSR). These scanning ranges are individually calibrated to the distribution of price and volatility movements for a set of related contracts under normal market conditions. The scanning ranges inform a set of 16 hypothetical risk scenarios used to measure the loss from a portfolio under alternative combinations of changes in price and volatility. For example, in one risk scenario, price increases by one-third of the PSR and

volatility falls by the full VSR, while in another scenario price falls by the full PSR and volatility rises by the full VSR. The margin rate is then based on the highest estimated loss across the 16 scenarios.

ASX Clear (Futures) bases the scanning ranges on key volatility statistics; namely, the higher of three standard deviations (a confidence interval of 99.7 per cent) of a 60-day or 252-day sample distribution, using the higher of one- or two-day price movements. The sample period reflects a preference for incorporating recent market conditions. The inclusion of two-day price movements reflects a conservative assumption that a defaulter's positions may take up to two days to close out. ASX also evaluates margin rates against multiple look-back periods incorporating both short- and long-term periods (1 day, 1 week, 120 business days and 12 months).

ASX Clear (Futures) also applies a series of adjustments within SPAN to account for correlations and specific risks.

- *Intra-commodity spread charge*. This is an adjustment to the margin requirement for a given set of related contracts, to account for less-than-perfect correlation between contracts with different expiries. This adjustment is based on a participant's actual net position at each expiry month multiplied by an 'intra-commodity charge rate', which is itself based on observed price correlations between the different expiries. The default setting is to apply a single charge rate. However, for some contracts ASX utilises SPAN's charge-rate tiering functionality. This allows charge rates to vary depending on the temporal difference in the pair's expiries.

- *Inter-commodity spread concession*. ASX Clear (Futures) also applies offsets designed to account for reliable and economically robust correlations across different contract types (see CCP Standard 6.5). These offsets reflect that, while the scanning risk for each related contract – a 'combined commodity' in SPAN terminology – is set based on the worst-case risk scenario for that combined commodity, it may be highly unlikely that the set of worst-case scenarios occurs simultaneously. This is particularly the case if a participant holds net long and net short positions in different related contracts that have a robust positive correlation. The inter-commodity spread concession is calculated by applying (in a defined order) a spread ratio and concession rate to a participant's actual net positions in pairs of related contracts. The spread ratio determines the number of net positions in one related contract required to offset a position in another related contract. The concession rate is specified as a percentage of the scanning risk for both contracts in the pair. For example, at ASX Clear (Futures), for 10-year bond futures relative to 90-day bank bill futures, a spread ratio of 1:4 and a concession rate of 65 per cent would mean that one net position in the 10-year bond contract is offset against four net positions in the 90-day bank bill contract, and that the concession for that pairing will be 65 per cent of the scanning risk of the contracts subject to the offset. ASX calculates these parameters in the same manner as the price movement for the intra-commodity spread charge.

- *Other adjustments*. ASX Clear (Futures) applies an adjustment to cover its exposure on the day of contract expiry, since expiring positions are otherwise not included in that day's initial margin calculations. ASX also maintains a minimum margin requirement on short positions to ensure the collection of margin on deep out-of-the-money options that would otherwise return no scanning range.

Under ASX's internal Margin Standard, the Manager of Exposure Risk Management (part of CRM) can approve adjustments to margin rate settings jointly with the CRO, or with the General Manager of either CRM, Clearing Risk Strategy and Policy or CRQ. Such adjustments may be made if application of the standard statistical analysis would result in inappropriate outcomes; for example, if the backward-looking statistical analysis does not take appropriate account of expected future price movements. Other reasons for using management discretion include insufficient historical data (e.g. where a product is new), seasonality in some products, and isolated spikes in price movements that result in a distortion of statistical recommendations. The ASX Margin Standard also allows exceptions to the normal margin rate setting process based on a broader risk assessment – such exceptions require the approval of the General Manager of Clearing Risk Strategy and Policy and the General Manager of CRQ.

OTC derivatives

ASX Clear (Futures) uses a HSVaR model to calculate margin requirements for OTC derivatives, based on a minimum five-year sample period. Observations within the sample period are weighted according to an exponential decay factor (currently 0.97), placing greater weight on more recent observations and applying a volatility scaling floor. To ensure that the methodology remains conservative and to limit the need for procyclical changes, ASX Clear (Futures) continues to include the extreme observations from the quarter ending in December 2008 within its sample period, even though these fall outside the five-year window. ASX Clear (Futures) calibrates initial margin based on a 99.7 per cent confidence interval with an assumed close-out period of five days, consistent with the Bank's supplementary interpretation of this sub-standard. Under ASX Clear (Futures) client clearing arrangements for OTC derivatives, the close-out period for client positions is seven rather than five days in order to allow time to achieve a transfer of positions (see CCP Standard 13). However, ASX applies the same margin settings for client positions as it does for participants' house positions (i.e. a five-day holding period). ASX's modelling indicates that margin requirements are typically higher under a five-day holding period calibrated to a 99.7 per cent confidence level than they would be under a seven-day holding period calibrated to the minimum 99.5 per cent confidence level required under the Bank's supplementary interpretation of this sub-standard.

6.4 A central counterparty should mark participant positions to market and collect variation margin at least daily to limit the build-up of current exposures. A central counterparty should have the authority and operational capacity to make intraday margin calls and payments, both scheduled and unscheduled, to participants.

Margin requirements for both futures and OTC participants are calculated overnight, with variation margins based on closing prices each day, and notified to participants the next morning. All margin obligations are settled via Austraclear and regular calls must be met by 10.30 am.

ASX Clear (Futures) may make intraday calls where there is significant erosion in the margin cover provided by individual participants. Intraday margin calls reflect changes in participants' positions and price movements.

- For exchange-traded products, intraday margin calculations are carried out routinely at 8.30 am and 11.30 am each business day. ASX is considering whether to modify the timing of intraday calls to better align with overnight margin calls, and take into account

price movements and changes in position later in the day. ASX Clear (Futures) tracks the price movements of all contracts in real time through the day. An ad hoc calculation may be performed if the change in price of an individual contract exceeds 100 per cent of its margin rate (the PSR in SPAN). To determine if intraday margin is required, a nominal call amount is calculated for each portfolio of the participant (house and client) based on the combined initial and variation margin that would be due at the time of the intraday calculation. This is compared with the total margin posted by the participant. If available margin has eroded by more than 40 per cent, and if the nominal call amount is greater than $100 000 and the participant has not already lodged excess collateral sufficient to cover the nominal amount, an intraday call is made. Participants are notified of the call by phone and email, and must make the payment within two hours of notification.

- For OTC derivatives positions, including cross-margined futures, ASX Clear (Futures) recalculates its exposures to participants on an approximately hourly basis. In the event that ASX Clear (Futures)' exposure to any OTC participant has risen beyond a specified threshold, intraday margin is called (see CCP Standard 4.2).

Under ASX Clear (Futures)' AIM methodology (discussed above in relation to CCP Standard 4), a participant is required to post additional collateral should stress-test outcomes reveal potential losses that exceed a predetermined STEL or if participants have large portfolios relative to their capital (see CCP Standards 4.3 and 4.7).

If a margin payment is not made by the required time, ASX will contact the participant to determine the reasons for the delayed payment. Delayed payments are not common. When they do occur, they are typically the result of communication or technical issues involving the participant and/or its payment provider. Early communication by ASX aims to ensure that, in such cases, payment can still be made within a short period of the required time. In the event that the matter was more serious, ASX would investigate to decide whether a default event should be declared and, if so, how the default should be managed (see CCP Standard 12).

6.5 In calculating margin requirements, a central counterparty may allow offsets or reductions in required margin across products that it clears or between products that it and another central counterparty clear, if the risk of one product is significantly and reliably correlated with the risk of the other product. Where a central counterparty enters into a cross-margining arrangement with one or more other central counterparties, appropriate safeguards should be put in place and steps should be taken to harmonise overall risk management systems. Prior to entering into such an arrangement, a central counterparty should consult with the Reserve Bank.

In applying the SPAN methodology to futures transactions, ASX allows offsets in the form of 'inter-commodity spread concessions' (see CCP Standard 6.3). These offsets reduce margin requirements to account for reliable and economically robust correlations observed across related contracts. Inter-commodity spread concessions are only applied where measures of correlation between contracts exceed 30 per cent and the correlation is based on economic fundamentals. ASX uses sensitivity analysis to verify the reliability of assumed correlations between products used in calculating inter-commodity spread concessions. Changes to inter-commodity spread concessions must be approved by the RQG, which considers whether changes identified by SPAN appropriately reflect underlying economic relationships, including in periods of market stress.

ASX Clear (Futures) also offers OTC participants the ability to choose to cross-margin specific directly cleared interest rate futures by allocating these positions to their OTC derivatives portfolio. If participants choose to do so, the allocated interest rate futures are margined under the OTC IRS Historic VaR model, rather than using the SPAN methodology. While HSVaR margining can result in less conservative estimates of correlations, interest rate futures in the pool under the OTC IRS Historic VaR methodology will be subject to a five-day rather than a one to two day close-out assumption. As a result, ASX has indicated that, absent an offset, cross-margined interest rate futures would generally be subject to higher margin requirements under the OTC IRS Historic VaR methodology than under the SPAN methodology.

Cross-margining recognises the economic relationship between AUD IRS and AUD interest rate futures and, to the extent that positions are indeed offsetting, would be expected to result in a reduction in the amount of initial margin required relative to the case in which positions were margined independently. Notwithstanding the economic relationship between AUD IRS and AUD interest rate futures, analysis of historical data demonstrates that the basis does vary over time, particularly during times of stress. This observed change of basis is captured through the VaR margining process. The robustness of the empirical relationship between AUD IRS and AUD interest rate futures in stressed market conditions is addressed through the introduction of stress-test scenarios that capture basis risk, as discussed above under CCP Standard 4.6. In addition, margin sensitivity analysis that varies the length and composition of the historical simulation period is used to test the effect on margin coverage of variations in observed correlations across products over time. In particular, the inclusion of periods of stress in the historical simulation period tests whether changes in the relationship between products in times of stress affects margin coverage (see CCP Standard 6.6).

ASX Clear (Futures) does not currently have any cross-margining arrangements with any other CCPs.

6.6 A central counterparty should analyse and monitor its model performance and overall margin coverage by conducting rigorous daily backtesting and at least monthly, and more frequent where appropriate, sensitivity analysis. A central counterparty should regularly conduct an assessment of the theoretical and empirical properties of its margin model for all products it clears. In conducting sensitivity analysis of the model's coverage, a central counterparty should take into account a wide range of parameters and assumptions that reflect possible market conditions, including the most volatile periods that have been experienced by the markets it serves and extreme changes in the correlations between prices.

During the 2013/14 Assessment period, ASX made significant enhancements to its backtesting and sensitivity analysis of margin models, introducing improvements to daily backtesting procedures supplemented by more comprehensive periodic backtesting and sensitivity analysis of its margin models.

Under ASX's Model Validation Standard, daily backtesting of both the SPAN and the OTC IRS Historic VaR margin models is used to test, on an ongoing basis, whether the margin models reliably cover price movements to a 99.7 per cent confidence interval. Daily backtesting is performed against both dynamic and (for the OTC IRS Historic VaR model) static actual portfolios. Backtesting against actual dynamic portfolios involves the comparison of actual initial margin collected from each participant against actual variation margin collected over the following one or two days (for SPAN), depending on which is the larger amount, or the

following five days for the OTC IRS Historic VaR model. One limitation of using variation margin on dynamic portfolios to model changes in the value of a portfolio over the close-out period is that it is influenced not only by market movements but also by changes in the composition of the portfolio. To address the limitations of dynamic portfolio analysis, static portfolio backtests are used to hold the portfolio composition constant over time. For actual static portfolios, ASX calculates hypothetical variation margin obligations for each day of the validation period based on historical price movements, and compares these to initial margin calculated on the actual portfolio on the day of the backtest. Under both types of backtest, when variation margin is greater than initial margin an 'exception' is recorded. CRM compares the number of exceptions to the expected number of exceptions, based on a 99.7 per cent confidence interval.

A report summarising the results of backtesting is automatically generated and circulated to relevant staff in the Risk division. Further analysis is undertaken when an exception is recorded, both to investigate model performance and to investigate the potential financial implications of the exception given the particular participant and portfolio affected. Further investigation also takes place if the actual number of exceptions exceeds the expected number. By investigating further, ASX determines whether any follow-up actions are required, such as the calling of additional margin or the managing down of positions.

Daily backtesting reports are aggregated into a monthly backtesting report which compares the number of observed exceptions to expected exceptions for the previous month, quarter and year. This report, which also includes the results of sensitivity analysis (see below) is reviewed by the RQG and used to identify the need for further investigation of margin model performance. RQG will take into account the frequency and magnitude of any breaches in determining whether to commission additional analysis from CRQ.

On a periodic basis, approximately every four months, ASX performs a more comprehensive backtesting analysis of each of its margin models. The periodic reviews allow ASX to examine the model in more detail and provide a basis for recommending changes to the model or further analysis. Hypothetical portfolios extend the analysis, allowing ASX to test the performance of margin models when applied to portfolios with certain characteristics (e.g. mix of contracts, concentrations, directionality) that may be particularly adversely affected by market conditions during the validation period.

ASX applies sensitivity analysis to its margin models as part of its quarterly margin rate reviews for SPAN, and alongside periodic margin backtesting for the OTC IRS Historic VaR model. Sensitivity analysis allows ASX to test the performance of a model beyond the boundaries of its existing assumptions, potentially also examining the implications of assumptions that would not reasonably be expected to hold. ASX has developed internal guidance setting out its approach to sensitivity analysis for margin models, which highlights three main assumptions that it varies when conducting sensitivity analysis: the confidence interval, close-out period and look-back period. In addition, ASX investigates the impact of varying the historical simulation period for the OTC IRS Historic VaR model and the application of floors to model parameters in SPAN. If varying particular inputs reveals weaknesses in the model, as evidenced by a larger number of exceptions than expected, ASX considers whether to make adjustments to the model. Where sensitivity analysis identifies potential weaknesses in margin models, the RQG will consider recommended changes to address these.

ASX's approach to backtesting and sensitivity analysis of its margin models is described in more detail in section 4.

6.7 A central counterparty should regularly review and validate its margin system.

ASX Clear (Futures)' margin methodologies are also be subject to a comprehensive annual validation and ongoing review under ASX's Model Validation Standard (see CCP Standard 4.5). The RQG is responsible for performing regular reviews of models, while Internal Audit coordinates the independent validation process with CRQ input. ASX's Model Validation Standard requires that all models that are critical to ASX (as measured against a series of risk factors) undergo a full annual validation (see CCP Standard 2.6). Under this framework the SPAN model must be externally validated annually, while the OTC IRS Historic VaR model must be externally validated once every two years. ASX has engaged external experts for a three-year period to conduct annual validations of ASX's key risk models, including both the SPAN and OTC IRS Historic VaR margin models. The first validations of these models will occur during the second half of 2014. The Bank will monitor the outcome of these validations.

At ASX, the margining process is governed by an internal Margin Standard, which is reviewed annually, with material changes approved by the Clearing Boards. The authorisation and documentation process for margin parameter changes and guidelines for the application of management discretion are also reviewed annually. ASX publishes detailed margining information on its website, including descriptions of the margining methodology, schedules of margin rates, and daily SPAN margin parameter files. These files allow participants to perform margin calculations on hypothetical or actual portfolios.

6.8 In designing its margin system, a central counterparty should consider the operating hours of payment and settlement systems in the markets in which it operates.

ASX Clear (Futures) primarily provides clearing services for the Australian-based ASX 24 market and, from July 2013 the AUD-denominated OTC interest rate swap market. ASX Clear (Futures)' timetables for margin calculation and collection are consistent with the operating hours of the relevant payment and settlement systems (Austraclear and RITS, as well as NZ Clear for NZD margin).

Standard 7: Liquidity risk

A central counterparty should effectively measure, monitor and manage its liquidity risk. A central counterparty should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the central counterparty in extreme but plausible market conditions.

Rating: Broadly observed

ASX Clear (Futures) maintains a robust framework for managing its liquidity risk (CCP Standard 7.1). Under this framework, ASX Clear (Futures) provides participants with information to assist them in managing their liquidity needs and risks, and employs an experienced Portfolio Risk Manager to monitor and manage ASX Clear (Futures)' own settlement and funding flows (CCP Standard 7.2). ASX Clear (Futures) holds sufficient liquid resources to meet its payment obligations on time in the event that the two participants with the largest aggregate payment obligation to the CCP were to default in the

extreme but plausible scenarios envisaged in its stress tests (CCP Standards 7.3, 7.8). This level of cover reflects the Bank's supplementary interpretation of CCP Standard 7.3, including the Bank's view that ASX Clear (Futures) is systemically important in multiple jurisdictions (see also Section 3.8). The liquid resources held to cover liquidity obligations under these stressed scenarios comprise a portfolio of high quality assets managed by ASXCC on ASX Clear (Futures)' behalf, supported by procedures to ensure timely and reliable access to liquidity from the portfolio as required (CCP Standards 7.4, 7.6). To enhance its management of liquidity risk, ASX Clear (Futures) has access, via ASXCC as an ESA holder, to Australian dollar liquidity from the Reserve Bank against eligible collateral (CCP Standard 7.7). ASX plans to consult on proposals to address uncovered liquidity shortfalls in ASX Clear (Futures) as part of broader enhancements to its recovery plan (CCP Standard 7.9).

The Bank's assessment is that ASX Clear (Futures) has broadly observed the requirements of CCP Standard 7 during the 2013/14 Assessment period. In order to fully observe CCP Standard 7, ASX Clear (Futures) should:

- implement mechanisms consistent with forthcoming CPSS-IOSCO guidance on recovery planning that would fully address any uncovered liquidity shortfall related to derivatives transactions following a participant default
- complete the full validation of its liquidity stress-test model by external experts.

ASX Clear (Futures) is also encouraged to continually refine and enhance its liquidity reverse stress-testing methodology and its integration into existing risk management processes.

ASX Clear (Futures)' arrangements to measure, monitor and manage its liquidity risk are described in further detail under the following sub-standards.

7.1 A central counterparty should have a robust framework to manage its liquidity risks from its participants, commercial bank money settlement agents, nostro agents, custodians, liquidity providers and other entities.

Sources of liquidity risk

The primary source of liquidity risk in ASX Clear (Futures) is the potential default of a participant with Australian dollar payment obligations to the CCP. To the extent that the CCP relies on such incoming payment flows to meet its obligations to other participants, it could face a liquidity shortfall. Payment obligations to and from participants typically take the form of initial and variation margin, although they may also relate to the cash settlement of contracts. ASX Clear (Futures) does not rely on commercial bank money settlement agents, nostro agents, custodians or liquidity providers in meeting its Australian dollar payment obligations.

Managing liquidity risk

ASX Clear (Futures) minimises the size of its liquidity obligations to participants through daily and intraday settlement of variation margin. This prevents the build-up of large (credit and) liquidity exposures. ASX Clear (Futures)' framework for managing its remaining liquidity risks involves the monitoring of liquidity exposures through daily stress testing (see CCP Standard 7.8) and the maintenance of sufficient liquid resources to be able to meet payment obligations in the event of a participant default (see CCP Standard 7.3).

ASX Clear (Futures) also provides participants with information to help them manage their liquidity needs and risks, which in turn protects the CCP. Participants are provided with sufficient information to understand their intraday margin call obligations, and replicate

stress test outcomes. ASX publishes a daily SPAN margin parameter file that allows participants to estimate payment obligations associated with margin requirements for actual or hypothetical portfolios. ASX provides advance warnings and communications in respect of calls for additional margin, and margin rate changes. For example, participants are notified if their stress-testing results approach their STELs. Additionally, ASX works closely with participants where new obligations are likely to affect their liquidity needs.

7.2 A central counterparty should have effective operational and analytical tools to identify, measure and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity.

Daily cash flows and investment of funds across the ASX CCPs are monitored and managed by an experienced Portfolio Risk Manager. In addition, the CRM department reviews a daily report of key risk indicators, related to liquidity demands. Any issues are escalated to the CRO. Funding arrangements, such as settlement flows and foreign currency lodgements, are also monitored in real time by the CRM and Treasury functions.

Portfolio Risk Management uses reports provided by CRM to monitor SPAN-calculated margin flows originating from ASX Clear (Futures)' Collateral Management System, which feed into ASX's Treasury Management System. Portfolio Risk Management enters trades required to manage daily cash flows into ASX's Treasury Management System. Clearing and Settlement Operations uses daily settlement reports produced by the Treasury Management System to generate settlement instructions in Austraclear. Resulting cash flow movements are monitored in RITS. Margin payments from participants must be matched in Austraclear by 10.30 am and settled by 11.00 am, while outward payments to participants are manually managed in the RITS queue and are only released once all incoming margin obligations have been settled (generally by 12.00 pm).

ASX Clear (Futures) mitigates potential liquidity risks in several ways. ASX Clear (Futures)' pooled financial resources are entirely prefunded (see CCP Standard 12). ASX Clear (Futures)' liquid assets are invested and managed on its behalf by ASXCC (see 'ASX Group Structure' in Appendix A). ASXCC's Investment Mandate establishes a clear definition of liquid assets: liquid assets must be available for use within two hours and held in the form of either a restricted set of highly liquid securities or securities eligible for repurchase with the Reserve Bank (see CCP Standard 7.4).

7.3 A central counterparty should maintain sufficient liquid resources in all relevant currencies to settle securities-related payments, make required variation margin payments and meet other payment obligations on time with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation to the central counterparty in extreme but plausible market conditions. In addition, a central counterparty that is involved in activities with a more complex risk profile or that is systemically important in multiple jurisdictions should consider maintaining additional liquidity resources sufficient to cover a wider range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would generate the largest aggregate payment obligation to the central counterparty in extreme but plausible market conditions.

ASX Clear (Futures)' liquid resources include margin and other collateral posted by participants, as well as its own holdings of liquid assets. ASX Clear (Futures)' holdings of liquid

assets and cash collateral posted by participants are invested on its behalf by ASXCC in accordance with its Investment Mandate. The ASXCC Investment Mandate requires that ASX hold liquid assets sufficient to cover:

- *The Default Liquidity Requirement (DLR) across the ASX CCPs*. The DLR is the amount required to cover the estimated cash requirement of the largest participant (and its affiliates, as measured by payment obligations to the CCP) on ASX Clear and the two largest participants on ASX Clear (Futures) in the event of their joint default under stressed market conditions used in each CCP's liquidity stress test.
- *An 'ordinary liquidity requirement'*. This is intended to cover day-to-day liquidity requirements, such as the return of margin to participants, and is specified as a percentage of the ASXCC portfolio. This is calibrated to the maximum margin outflow in normal market conditions over the last 12 months and is reviewed quarterly.

The requirement that ASXCC cover the DLR across both CCPs takes a conservative approach in that it provides for the simultaneous default, under extreme but plausible market conditions, of the largest participant and its affiliates in ASX Clear and the two largest participants (and their affiliates) in ASX Clear (Futures). Consistent with the Bank's supplementary interpretation of this sub-standard that, among other things, clarifies when a CCP is systemically important in multiple jurisdictions, ASX Clear (Futures) is held to the higher standard that it have sufficient liquid resources to cover obligations arising in the event of the default of its two largest participants and their affiliates.

7.4 For the purpose of meeting its minimum liquid resource requirement, a central counterparty's qualifying liquid resources in each currency include cash at the central bank of issue and at creditworthy commercial banks, committed lines of credit, committed foreign exchange swaps and committed repos, as well as highly marketable collateral held in custody and investments that are readily available and convertible into cash with prearranged and highly reliable funding arrangements, even in extreme but plausible market conditions. If a central counterparty has access to routine credit at the central bank of issue, the central counterparty may count such access as part of the minimum requirement to the extent it has collateral that is eligible for pledging to (or for conducting other appropriate forms of transactions with) the relevant central bank. All such resources should be available when needed.

ASXCC holds an ESA at the Bank to facilitate money settlements on behalf of ASX Clear (Futures) (and ASX Clear) (see CCP Standard 7.7). As an ESA holder, ASXCC is eligible for access to Australian dollar liquidity under the Bank's overnight and intraday liquidity facilities (against eligible collateral specified by the Bank that is held within its investment portfolio), including in times of market stress.

The ASXCC Investment Mandate requires the Portfolio Risk Manager to maintain high-quality liquid assets to meet ASX Clear (Futures)' minimum liquidity requirements, consistent with the definition of qualifying liquid assets under this standard. Liquid assets must be available for use within two hours and held in either a restricted set of highly liquid securities or securities eligible for repurchase transactions with the Bank. Investments held in the form of bank bills, negotiable certificates of deposit and floating rate notes issued by approved counterparties or obligors are required to be tradable on a robust secondary market. At 30 June 2014, term deposits accounted for 36.4 per cent of the ASXCC investment portfolio, at-

call deposits 16.4 per cent, with holdings of other approved securities making up the balance. Eligible investment counterparties are discussed under CCP Standard 15.

7.5 A central counterparty may supplement its qualifying liquid resources with other forms of liquid resources. If the central counterparty does so, these liquid resources should be in the form of assets that are likely to be saleable or acceptable as collateral for lines of credit, swaps or repos on an ad hoc basis following a default, even if this cannot be reliably prearranged or guaranteed in extreme market conditions. Even if a central counterparty does not have access to routine central bank credit, it should still take account of what collateral is typically accepted by the relevant central bank, as such assets may be more likely to be liquid in stressed circumstances. A central counterparty should not assume the availability of emergency central bank credit as part of its liquidity plan.

ASX Clear (Futures) does not supplement its qualifying liquid resources with other forms of liquid resources.

7.6 A central counterparty should obtain a high degree of confidence, through rigorous due diligence, that each provider of its minimum required qualifying liquid resources, whether a participant of the central counterparty or an external party, has sufficient information to understand and to manage its associated liquidity risks, and that it has the capacity to perform as required under its commitment. Where relevant to assessing a liquidity provider's performance reliability with respect to a particular currency, a liquidity provider's potential access to credit from the central bank of issue may be taken into account. A central counterparty should regularly test its procedures for accessing its liquid resources at a liquidity provider.

The Portfolio Risk Manager, in consultation with the CRO, is responsible for the provision of timely liquidity to fund margin and settlement obligations to non-defaulting participants. The DMF (see CCP Standard 12.1) covers liquidation of participant non-cash collateral, as well as the liquidation of treasury investments representing participant cash collateral and other prefunded financial resources. While the order of use of particular collateral types will depend on the particular circumstances, a typical order of use may be AUD cash first, followed by non-cash and foreign currency collateral. The order of liquidation of non-cash and foreign currency collateral to meet funding requirements will depend on factors such as prevailing market conditions, liquidity needs and the amount of funds required relative to the size of each collateral lodgement. Procedures for dealing with liquid assets in the treasury investment portfolio are documented, and are available for Portfolio Risk Management staff at both primary and backup sites. Non-cash collateral is limited to highly liquid government securities (see CCP Standard 5.1).

7.7 A central counterparty with access to central bank accounts, payment services or securities services should use these services, where practical, to enhance its management of liquidity risk. A central counterparty that the Reserve Bank determines to be systemically important in Australia and has obligations in Australian dollars should operate its own Exchange Settlement Account, in its own name or that of a related body corporate acceptable to the Reserve Bank, to enhance its management of Australian dollar liquidity risk.

ASXCC holds an ESA. Accordingly, ASX Clear (Futures) may, via ASXCC, access Australian dollar liquidity under the Bank's overnight and intraday liquidity facilities (against eligible collateral specified by the Bank). ASXCC's Investment Mandate clarifies its ability to make use of these services, by specifying the list of securities (from the Bank's approved list) available for

repurchase, including the securities of the Commonwealth, certain states and major banks (CCP Standard 15).

ASX Clear (Futures) uses ASXCC's ESA to settle its AUD margin and cash settlement obligations in RITS (see also CCP Standard 9).

7.8 A central counterparty should determine the amount and regularly test the sufficiency of its liquid resources through rigorous stress testing. A central counterparty should have clear procedures to report the results of its stress tests to appropriate decision-makers at the central counterparty and to use these results to evaluate the adequacy of, and adjust, its liquidity risk management framework. In conducting stress testing, a central counterparty should consider a wide range of relevant scenarios. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions. Scenarios should also take into account the design and operation of the central counterparty, include all entities that might pose material liquidity risks to the central counterparty (such as commercial bank money settlement agents, nostro agents, custodians, liquidity providers and linked FMIs) and, where appropriate, cover a multiday period. In all cases, a central counterparty should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount and form of total liquid resources it maintains.

ASX Clear (Futures) uses a daily liquidity stress-testing model to assess the adequacy of its liquidity arrangements. Until August 2013, the model, which is based on ASX Clear (Futures)' capital stress tests (described under CCP Standard 4), calculated the maximum liquid funds that ASX Clear (Futures) would need to access in order to meet obligations arising in the event of the joint default of a clearing participant and its affiliates. Since there were no affiliated participants in ASX Clear (Futures) during the Assessment period, liquidity stress tests addressed scenarios involving an individual default. However, further to the introduction of the OTC derivatives clearing service, ASX Clear (Futures) adjusted its liquidity stress tests in August 2013 to take into account potential affiliations between participants involved in OTC and futures clearing. At the same time, the liquidity stress tests formally adopted the more stringent requirement of testing the sufficiency of liquid resources against the joint default of the two participants (plus affiliates) that would create the largest liquidity exposure for ASX Clear (Futures). The liquidity stress tests assume that a default occurs just prior to receipt of the previous day's variation margin payments, if owed by the defaulter, or just after any variation margin payments have been paid, if owed to the defaulter. The stress tests thereby calculate the worst-case liquidity requirement under each stress-test scenario.

All stress-test scenarios are based on historical moves and have been set so that they replicate extreme market moves that have a probability of occurrence of once in 30 years for single-asset scenarios and once in 100 years for multi-asset scenarios (see CCP Standard 4.6). There are 30 scenarios involving movements of price and volatility across the four major contracts (SPI 200 futures, 90-day bank accepted bill futures, 3-year bond futures and 10-year bond futures). Twenty multi-asset scenarios model balanced movements of each of the four major contracts and corresponding movements on OTC interest rate contracts, as well as a range of tilts, twists and bends of the yield curve. Eight 'single contract' scenarios model extreme movements in the four contracts individually. In addition, 12 scenarios analyse various forms of basis risk arising from changes in the spread between IRS and futures, and between AONIA

and BBSW rates at various tenors. Two 'internal' scenarios that model large movements in the exchange-traded interest rate contracts with little impact on equities and 14 'internal' scenarios for OTC used to further analyse the effects of basis risk between contracts of different tenor, are used for internal risk analysis only.

The results of the liquidity stress tests generate the DLR, which is compared with ASX Clear (Futures)' AFR (set to $650 million from January 2014, see CCP Standard 4.4). A stress-test result above the AFR for three consecutive trading days is considered a breach of the AFR and triggers a detailed investigation into the breach. When assessing the materiality of a liquidity stress-test breach, the CCPs will consider contributing and mitigating factors, such as changes in the ICR of the participant, atypical trading activity, and any AIM that is being held. Given that liquidity resources are maintained on an aggregate basis (in ASXCC), in order to test the sufficiency of ASX's overall liquid resources the results of liquidity stress testing for each CCP are aggregated to calculate the total DLR.

The results of liquidity stress testing are regularly reported to ASX senior management, the Clearing Boards and the Bank. All liquidity stress-test breaches are reported to the CRO, the General Manager of Clearing Risk Strategy and Policy, and the Portfolio Risk Manager. A sustained or widely distributed breach may lead to a review of the adequacy of the AFR.

Validation

Since stress scenarios are common across both capital and liquidity stress tests for ASX Clear (Futures), the same reverse stress testing approach is used in sensitivity analysis of both models (see CCP Standard 4.6).

ASX's Model Validation Standard requires that all models that are critical to ASX (as measured against a series of risk factors) undergo a full annual validation (see CCP Standard 2.6). Under this framework the liquidity stress-test model must be externally validated annually. ASX has engaged external experts to conduct a validation of the liquidity stress-test model by the end of 2014. The Bank will monitor the outcome of this validation.

7.9 A central counterparty should establish explicit rules and procedures that enable the central counterparty to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially uncovered liquidity shortfalls and should aim to avoid unwinding, revoking or delaying the same-day settlement of payment obligations. These rules and procedures should also indicate the central counterparty's process to replenish any liquidity resources it may employ during a stress event, so that it can continue to operate in a safe and sound manner.

In March 2014, ASX finalised a basic recovery plan that relies on existing tools and powers within the CS facilities' Operating Rules. In preparing the plan for ASX Clear (Futures), ASX identified that the existing Operating Rules do not provide the CCP with sufficient tools to be able to fully address any uncovered liquidity shortfalls following a participant default (see CCP Standard 3.5). While ASX's recovery plan identifies measures that could be used to mitigate this in part (such as the collection of additional margin or seeking to realise non-liquid assets such as term deposits), additional measures will be required to comprehensively address a liquidity shortfall.

ASX has commenced work to develop a more comprehensive recovery plan supported by tools to fully address uncovered liquidity shortfalls. It intends to base these tools on forthcoming CPSS-IOSCO guidance on recovery planning, expected to be published in late 2014 (see Section 3.6.1, Box B). ASX intends to consult on its proposed recovery approach in the second half of 2014.

Standard 8: Settlement finality

A central counterparty should ensure clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, a central counterparty should facilitate final settlement intraday or in real time.

Rating: Observed

The vast majority of ASX Clear (Futures) settlements involve AUD cash payments between participants and the CCP for the purposes of margin payments and the settlement of cash-settled derivatives contracts. Each day, ASX Clear (Futures) calculates the net obligations of each of its participants. Those participants with a net obligation to the CCP are required to make payments to ASX Clear (Futures) by 11.00 am, for both AUD- and NZD-denominated contracts. Once these payments have been received, ASX Clear (Futures) makes payments to those participants with a net obligation from the CCP. AUD cash settlements occur via Austraclear, with interbank obligations settled on a real-time gross settlement (RTGS) basis across ESAs at the Reserve Bank of Australia, via RITS.

In some cases, the settlement of derivatives contracts cleared by ASX Clear (Futures) involves the transfer of a security or physical asset, with a corresponding transfer of cash. For each type of security or asset, ASX Clear (Futures)' arrangements ensure that delivery occurs if, and only if, payment occurs. For 90-day bank bill futures, ASX Clear (Futures) utilises the standard settlement process in Austraclear. For grain and wool contracts, delivery is via commodity warehouses, with ASX Clear (Futures) retaining title documentation until payment has been made.

ASX Clear (Futures) also accepts as collateral for initial margin certain highly liquid debt securities, such as Australian Government securities, and cash collateral in NZD and a small number of other foreign currencies. ASX Clear (Futures) has accounts at Austraclear and NZClear, a securities settlement facility (SSF) owned and operated by the Reserve Bank of New Zealand, for settling AUD- and NZD-denominated collateral, respectively. Collateral denominated in other currencies is settled indirectly via relationships with private banks.

ASX Clear (Futures) defines the point at which settlement is final through contract specifications set out in its Operating Rules and Procedures, and those of ASX 24. The finality of its money settlements is further defined in the Austraclear and NZClear rules, supported by finality legislation in the relevant jurisdictions (CCP Standard 8.1). Contract specifications set out in ASX Clear (Futures)' and ASX 24's Operating Rules and Procedures also specify procedures and timetables for final settlement (CCP Standard 8.2). ASX Clear (Futures) does not allow settlement instructions that may be revoked (CCP Standard 8.3).

The Bank's assessment is that ASX Clear (Futures) has observed the requirements of CCP Standard 8 during the 2013/14 Assessment period. ASX Clear (Futures)' arrangements for ensuring finality of these settlements are described in further detail under the following sub-standards.

8.1 A central counterparty's rules and procedures should clearly define the point at which settlement is final.

The settlement of obligations in ASX Clear (Futures) is final according to the terms of ASX Clear (Futures)' and, for exchange-traded derivatives, ASX 24's Operating Rules and Procedures, which set out the means of settlement. For payments and securities obligations settled in Austraclear, settlement is final according to Austraclear's Regulations and Procedures and its approval under Part 2 of the PSNA. This approval protects the finality of payments made through Austraclear in the event of a participant entering external administration (see Appendix A2.2, SSF Standard 7.1). Any interbank transactions arising from these settlements are settled in real time across ESAs held with the Bank. Payments within this system are also final and irrevocable; this is again supported by the approval of RITS under Part 2 of the PSNA. With this approval, a payment executed in RITS at any time on the day on which a RITS participant enters external administration has the same standing as if the participant had gone into external administration on the next day. Accordingly, in the event of insolvency all transactions settled on the day of the insolvency are irrevocable and cannot be unwound.

NZD obligations that are settled through NZClear are deemed final in accordance with its System Rules. In particular, NZClear System Rule 11.8 provides that final and irrevocable settlement occurs when the requirements of a trade have been matched and the trade is recorded in the relevant accounts of the respective members. The NZClear settlement system has been declared a 'designated settlement system' for the purposes of Part 5C of the *Reserve Bank of New Zealand Act 1989* (NZ), which establishes the validity and enforceability of the rules of a designated settlement system and the irrevocability of transactions settled through the system.

8.2 A central counterparty should ensure final settlement no later than the end of the value date, and preferably intraday or in real time, to reduce settlement risk.

The settlement of obligations in ASX Clear (Futures) is governed by ASX Clear (Futures)' and, for exchange-traded derivatives, ASX 24's Operating Rules and Procedures. These set out settlement arrangements, with procedures and timetables.

Margin payments and settlement of cash-settled derivatives

The majority of settlements in ASX Clear (Futures) are cash settlements made on a net basis (as described above) for the purposes of regular margin payments and settlement of cash-settled derivatives. During the Assessment period, the majority of settlements of margin were in cash (AUD or foreign denominated). Initial and variation margin requirements are calculated overnight based on each day's closing contract prices supplemented by additional pricing data for OTC derivatives (see CCP Standard 6.2), and are notified to participants by 6.00 am the next day for payment on that day. Should ASX Clear (Futures)' exposures change significantly during the day, initial and variation margin can be called intraday (see CCP Standard 6.1). Intraday margin payments must be paid in cash within two hours of the participant being notified. End-of-day and intraday margin is settled via Austraclear for AUD payments, and NZClear for NZD payments.

Settlement values for cash-settled derivatives are calculated according to contract specifications, generally on the last trading day, or within one or two days of the last trading day.[5] For example, for ASX SPI 200 Index Futures, ASX Clear (Futures) publishes the final settlement price of the contract on the first business day after expiry, with cash flows arising

[5] Three days for electricity contracts.

settled on the second business day after expiry (the value date for this contract). These cash flows in Austraclear or NZClear are settled with finality in real time, as are margin-related payments (see CCP Standard 8.1).

Physical delivery

With regard to deliverable contracts, ASX Clear (Futures)' arrangements for physical delivery are described under CCP Standard 10. It has procedures in place to ensure that margin of matched participants is not released until ASX can confirm that both participants have fulfilled their obligations. ASX Clear (Futures) also monitors and enforces compliance with delivery procedures.

The details of final settlement of deliverable contracts vary according to the contract specifications. For example, trading in the contract for 90-day bank accepted bills ceases on noon of the last trading day. This is followed by the exchange of reconciliation and advice notices between participants and the CCP, with final settlement of securities occurring in real time in Austraclear by 3 pm on the day after the last trading day (the value date for this contract).[6] The delivery period for wool contracts commences on the Friday before the last trading day, with real-time final cash settlement scheduled to occur on the day after delivery.

Options delivery

All options on futures that are cleared by ASX Clear (Futures) either automatically exercise or are abandoned on expiry. In-the-money options automatically exercise unless the holder requests otherwise, and the holder and writer of the options receive their respective positions in the underlying futures contract. All cash flows related to the exercise of options contracts are included in daily settlement flows (along with initial and variation margin payments). There are no up-front premium payments associated with the options over futures contracts that are cleared by ASX Clear (Futures).

8.3 A central counterparty should clearly define the point after which unsettled payments, transfer instructions or other obligations may not be revoked by a participant.

Participants are not able to revoke a payment or transfer instruction once it has been submitted to ASX Clear (Futures).

Standard 9: Money settlements

A central counterparty should conduct its money settlements in central bank money where practical and available. If central bank money is not used, a central counterparty should minimise and strictly control the credit and liquidity risk arising from the use of commercial bank money.

Rating: Observed

ASX Clear (Futures) conducts its AUD money settlements, which constitute over 98 per cent of its settlement flows, via Austraclear instructions that settle across ESAs at the Bank, via RITS. NZD money settlements are also conducted in central bank money via the NZClear system (CCP Standard 9.1). Other foreign currency settlements take place in commercial bank money (CCP Standard 9.2). Commercial banks involved in the settlement of foreign currency transactions must be highly rated

[6] The seller is required to enter the 90-day bank bill into Austraclear by 10 am. This must be matched by the buyer by 11 am and settled by 3 pm.

and subject to prudential regulation to ensure that credit, liquidity and operational risks are minimised (CCP Standard 9.3). Arrangements with commercial banks are also governed by standard legal agreements that include general information regarding the timing and availability of funds (CCP Standard 9.5).

The Bank's assessment is that ASX Clear (Futures) has observed the requirements of CCP Standard 9 during the 2013/14 Assessment period. ASX Clear (Futures)' money settlement arrangements are described in further detail under the following sub-standards.

9.1 A central counterparty should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks. A central counterparty that the Reserve Bank determines to be systemically important in Australia and has Australian dollar obligations should settle its Australian dollar obligations across an Exchange Settlement Account held at the Reserve Bank, in its own name or that of a related body corporate acceptable to the Reserve Bank.

AUD and NZD money settlements in ASX Clear (Futures) are settled in central bank money, but collateral in other currencies (including EUR, JPY, USD and GBP) is lodged via arrangements with commercial banks.

AUD settlements, which represent the majority of money settlement in ASX Clear (Futures), are initiated via the submission of standard settlement instructions to Austraclear. Settlement occurs on an RTGS basis across ESAs at the Bank, via RITS. ASX Clear (Futures) uses ASXCC's ESA to settle its obligations in RITS.

NZD settlements are undertaken in NZClear, which operates on a similar basis to Austraclear in Australia. ASXCC is a non-bank participant in NZClear. Non-bank participant interbank obligations are settled on an RTGS basis across accounts at the Reserve Bank of New Zealand (RBNZ), via the Exchange Settlement Account System (ESAS) of a commercial settlement bank (known as a 'Participating ES Accountholder'). Transfers are made in ESAS between the RBNZ Exchange Settlement account of ASXCC's Participating ES Accountholder and the Exchange Settlement accounts of ASX Clear (Futures) participants or their Participating ES Accountholders. Settlement occurs in central bank money in real time; ASX Clear (Futures) manages credit and liquidity exposures in respect of post-settlement balances held with its Participating ES Accountholder in accordance with the ASXCC investment mandate (see CCP Standard 15).

9.2 If central bank money is not used, a central counterparty should conduct its money settlements using a settlement asset with little or no credit or liquidity risk.

Cash payments in foreign currencies other than NZD (e.g. EUR, JPY, USD and GBP) are settled in commercial bank money via arrangements with commercial banks. Commercial bank money settlement agents and commercial settlement banks used for settlement of foreign currency transactions must be highly rated and subject to appropriate prudential regulation in order to limit any credit or liquidity risk associated with settlement in commercial bank money (see CCP Standard 9.3).

9.3 If a central counterparty settles in commercial bank money or its participants effect settlements using commercial settlement banks, it should monitor, manage and limit credit and liquidity risks arising from the commercial bank money settlement agents and commercial settlement banks. In particular, a central counterparty should establish and monitor adherence to strict criteria for commercial banks appropriate to their role in the

settlement process, taking account of matters such as their regulation and supervision, creditworthiness, capitalisation, access to liquidity and operational reliability. A central counterparty should also monitor and manage the concentration of its and its participants' credit and liquidity exposures to commercial bank money settlement agents and settlement banks.

A commercial bank must meet certain criteria before it can be used by ASX Clear (Futures) as either its money settlement agent for foreign currency payments other than NZD, or its commercial settlement bank for NZD settlements in the ESAS system. Commercial banks must be rated A1+ and offer a banking platform and connectivity that are in line with ASX systems. Commercial banks used by ASX Clear (Futures) are APRA-regulated ADIs, and therefore are subject to prudential standards encompassing, for example, capital adequacy, liquidity, credit quality, business continuity management and public disclosure. ASX Clear (Futures)' commercial settlement bank in NZClear must also meet operational requirements set by the Reserve Bank of New Zealand. Arrangements for settlement of other foreign currencies make use of standard web interfaces for banking, with instructions via phone available as a contingency.

All foreign currency lodgements are monitored by ASX Clear (Futures)' risk management and treasury functions, and ASX Clear (Futures) is in regular contact with the participant until funds are received. ASX Clear (Futures) limits the amount of collateral held that is denominated in foreign currency. Participants must lodge a request to post foreign currency, which is reviewed and then approved or denied by the Portfolio Risk Management team. In determining whether the foreign currency cover request is approved or denied, the Portfolio Risk Manager will take into account the limits on foreign currency, as well as the concentration risk in accepting the request.

It is standard practice for participants that lodge foreign currencies other than NZD to lodge excess funds with ASX Clear (Futures). This avoids having to make daily (or frequent) margin settlements. ASXCC also maintains funds in foreign currencies to cover its exposure to liquidity risk if it needed to repay a participant in a foreign currency. During the Assessment period, foreign currency holdings peaked at around $499 million – around 15 per cent of average total collateral levels at ASX Clear (Futures) during the year. The aggregate level of foreign currency payments at ASX Clear (Futures) is low, comprising around 2 per cent of total money settlements.

9.4 If a central counterparty conducts money settlements on its own books, it should minimise and strictly control its credit and liquidity risks.

ASX Clear (Futures) does not conduct money settlements on its own books.

9.5 A central counterparty's legal agreements with any commercial bank money settlement agents should state clearly when transfers on the books of the relevant commercial bank are expected to occur, that transfers are to be final when effected, and that funds received should be transferable as soon as possible, at a minimum by the end of the day and ideally intraday, in order to enable the central counterparty and its participants to manage credit and liquidity risks.

Payments in foreign currencies made via commercial banks are generally covered by standard terms and conditions for commercial accounts at those banks, including general information about timing of transactions and availability of funds. ASX maintains close contact with its

commercial banks in order to monitor and manage the risk of its foreign currency payments. As noted, standard practice is for participants to lodge excess foreign currency margin, thereby reducing credit and liquidity risk to the CCP and liquidity risk to the participant.

Standard 10: Physical deliveries

A central counterparty should clearly state its obligations with respect to the delivery of physical instruments or commodities and should identify, monitor and manage the risks associated with such physical deliveries.

Rating: Observed

ASX Clear (Futures)' Operating Rules and Procedures clearly state its and participants' obligations with respect to the delivery of physical instruments or commodities (CCP Standard 10.1). In accordance with these rules and procedures, ASX Clear (Futures) monitors and enforces compliance with delivery procedures (CCP Standard 10.2).

The Bank's assessment is that ASX Clear (Futures) has observed the requirements of CCP Standard 10 during the 2013/14 Assessment period. ASX Clear (Futures)' arrangements for physical deliveries are described in further detail under the following sub-standards.

10.1 A central counterparty's rules should clearly state its obligations with respect to the delivery of physical instruments or commodities.

In some cases, the settlement of derivatives contracts cleared by ASX Clear (Futures) involves the transfer of a security or physical asset. Examples of contracts that require delivery are 90-day bank accepted bills futures, wool, wheat and other grain futures, and renewable energy certificates. ASX Clear (Futures)' Operating Rules and Procedures clearly state its obligations with respect to physical delivery.

10.2 A central counterparty should identify, monitor and manage the risks and costs associated with the storage and delivery of physical instruments or commodities.

ASX Clear (Futures) Operating Rules and Procedures define detailed mandatory arrangements for delivery of a security or physical asset. Securities delivered for the 90-day bank accepted bill contract must meet ASX Clear (Futures)' specifications, which include the acceptable types of paper, maturity dates, parcel sizes and approved banks. Deliveries of commodities must follow a maturity calendar, approved warehouses and locations, guides for buyers and sellers, and rules for delivery documentation (including appropriate certification).

ASX Clear (Futures) mitigates the risks associated with physical delivery by minimising its involvement in the storage and delivery process. Participants that have delivery obligations are matched with those due to receive the commodities or documents, and any legal recourse of the receiving participant in respect of the delivered goods is to the delivering participant. Participants may cash settle contracts in the event of a default by the delivering party.

ASX Clear (Futures) nevertheless monitors and enforces compliance with delivery procedures. In particular, there is regular monitoring of deliveries by Clearing and Settlement Operations in the lead up to expiry, including a daily review and reconciliation of contracts versus holdings via a physical position reconciliation report. Overnight reporting to participants occurs on current commodity holdings. ASX Clear (Futures) communicates directly with

participants to confirm their intentions on delivery and lodgement of physical assets. In addition, compliance reviews are undertaken on targeted topics, as well as ad hoc compliance investigations arising from referrals from ASX's operations areas. These compliance checks aim to ensure that participants have the necessary systems and resources to be able to fulfil their physical delivery obligations.

Standard 11: Exchange-of-value settlements

If a central counterparty is involved in the settlement of transactions that comprise two linked obligations (for example, securities or foreign exchange transactions), it should eliminate principal risk by ensuring that the final settlement of one obligation is conditional upon the final settlement of the other.

Rating: Observed

ASX Clear (Futures) eliminates principal risk in the settlement of derivatives contracts involving the transfer of a security or physical asset in exchange for cash by ensuring that delivery occurs only if payment occurs (CCP Standard 11.1). For transactions involving securities transfers, ASX Clear (Futures) employs the delivery-versus-payment (DvP) Model 1 settlement mechanism in Austraclear (CCP Standard 11.2).

The Bank's assessment is that ASX Clear (Futures) has observed the requirements of CCP Standard 11 during the 2013/14 Assessment period. ASX Clear (Futures)' arrangements for DvP settlement of linked obligations are discussed in further detail under the following sub-standards.

11.1 A central counterparty should eliminate principal risk associated with the settlement of any obligations involving two linked obligations by ensuring that the payment system or securities settlement facility employed operates in such a way that the final settlement of one obligation occurs if and only if the final settlement of the linked obligation also occurs, regardless of whether the securities settlement facility settles on a gross or net basis and when finality occurs.

In those cases where settlement of derivatives contracts involves the transfer of a security or physical asset, with a corresponding transfer of cash, ASX Clear (Futures)' arrangements ensure that delivery occurs only if payment occurs. For 90-day bank bill futures, ASX Clear (Futures) utilises the standard DvP settlement process in Austraclear; that is, sellers deliver and receive payment for their bills, and buyers pay for and take delivery of the bills as a single exchange of value (see Appendix A2.2, SSF Standard 10). For grain and wool contracts, delivery is via commodity warehouses, with ASX Clear (Futures) retaining title documentation until payment has been made.

11.2 A central counterparty should eliminate principal risk associated with the settlement of linked obligations by ensuring that it employs an appropriate delivery versus payment (DvP), delivery versus delivery (DvD) or payment versus payment (PvP) settlement mechanism.

Settlement of securities transactions in Austraclear arising from the settlement of futures contracts in ASX Clear (Futures) occurs on a DvP Model 1 basis. This involves the simultaneous transfer of cash and securities obligations between the buyer and seller on an item-by-item basis through the settlement cycle.

Standard 12: Participant default rules and procedures

A central counterparty should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the central counterparty can take timely action to contain losses and liquidity pressures and continue to meet its obligations.

Rating: Observed

ASX Clear (Futures) has sufficient powers under its Operating Rules and Procedures to manage a participant default, and has documented an internal framework setting out its default management approach (CCP Standard 12.1). Powers available to ASX Clear (Futures) include powers to suspend a defaulted participant, apply margin and pooled financial resources to meet losses, and a range of close-out and hedging tools, including the auction of open OTC derivatives positions to surviving participants (CCP Standards 12.1, 12.2). During the Assessment period, ASX introduced a mechanism to encourage participants to participate competitively in the auction of a defaulted participants' portfolio. Participants are also required to report default events or an expected default to the CCP. ASX Clear (Futures) has published its Operating Rules that set out its default management powers, and a high-level overview of its approach to default management (CCP Standard 12.3). Default management procedures are tested and reviewed on at least an annual basis. Participants clearing OTC derivatives are represented on a Default Management Group that participates in annual tests of OTC default management arrangements, including the auction process (CCP Standard 12.4). ASX Clear (Futures)' default management arrangements are designed for the particular characteristics of its primarily Australian-based activities, and take into account potential impacts on relevant markets.

The Bank will continue to monitor the testing and review of OTC default management procedures by ASX Clear (Futures) and the Default Management Group for OTC interest rate derivatives.

The Bank's assessment is that ASX Clear (Futures) has observed the requirements of CCP Standard 12 during the 2013/14 Assessment period. ASX Clear (Futures)' default management arrangements are described in further detail under the following sub-standards.

12.1 A central counterparty should have default rules and procedures that enable the central counterparty to continue to meet its obligations in the event of a participant default and that address the replenishment of resources following a default. A central counterparty should ensure that financial and other obligations created for non-defaulting participants in the event of a participant default are proportional to the scale and nature of individual participants' activities.

Rules and procedures

The Operating Rules and Procedures provide ASX Clear (Futures) with the authority and flexibility to deal with a participant default using a variety of methods to manage its exposure. ASX Clear (Futures) has the ability to close out any open contracts, to exercise or terminate open contracts, or to seek to transfer (port) client positions. The specific close-out method will depend on market conditions and the products in question.

The formal Rules and Procedures are supplemented by an internal DMF, applicable to both ASX Clear and ASX Clear (Futures), to assist in the management of a clearing participant default. The DMF is based on high-level principles regarding the management of a default that have been approved by the CS Boards. In particular, these principles specify that the key aim in handling a default is to minimise the impact of the event on the CCP, clearing

participants and the market. The DMSG provides oversight and review of the DMF, including discussion of proposed changes prior to submission to the CS Boards.

The DMF covers each stage of a default, from the identification of a default event, to the management of the defaulter's position, real-time monitoring of financial solvency, and financial offset and reconciliation. It is intended to be flexible, rather than prescriptive, and may be developed and adapted as appropriate.

The DMF outlines the key roles and responsibilities in managing a clearing participant default. The ASX Group has established a Default Management Committee (DMC), comprising senior management from relevant policy and operational areas, to be the primary decision-making forum for the management of a default. The DMC's responsibilities range from recommending declarations of default and suspensions, to devising a risk neutralisation plan and overseeing its implementation.

In July 2013, ASX Clear (Futures) amended its default management arrangements for the introduction of its OTC derivatives clearing service. In the event of the default of an OTC participant, ASX Clear (Futures) would convene the relevant DMG, which comprises non-defaulting clearing participants, seconded on a rotating basis. Currently there is only one DMG, since ASX Clear (Futures) clears only one category of OTC derivatives – AUD interest rate derivatives. The DMG would advise and be consulted by ASX Clear (Futures) on each stage of the management of a default. ASX Clear (Futures) is not obliged to follow the recommendations of the DMG, but would provide reasoning where it did not accept the DMG's advice.

Use and sequencing of financial resources

Following a declaration of default, ASX Clear (Futures) would suspend the defaulted participant's authority to clear. Suspension, rather than termination, ensures that the participant remains bound by the central counterparty's rules. There would be no further payments or collateral movements to the clearing participant following declaration of a default. This enables the central counterparty to 'crystallise' the defaulted participant's position and generate detailed account and position data (including collateral held). This establishes the basis for the close out of exposure to the defaulted participant.

In the first instance, ASX Clear (Futures) would meet obligations arising from a participant default using collateral lodged by that participant. Collateral may be in the form of cash or eligible securities (see CCP Standard 5.1). In the event that the defaulted participant's contributions were insufficient, ASX Clear (Futures) could draw upon pooled financial resources (see CCP Standard 4). Under the amended default arrangements introduced in July 2013, these resources are commingled across futures and OTC products. While not essential, the commingled default fund adopted by ASX Clear (Futures) simplifies the default management process when the defaulter's portfolio contains both OTC derivatives and cross-margined futures positions. ASX regards the commingling of financial resources as appropriate in light of the homogeneity of both the products to be cleared and the clearing participants. The order in which survivors' contributions to pooled financial resources would be used (i.e. the default waterfall) would, however, be proportional to the scope of the defaulter's activities. The proportion of futures and OTC participant contributions that would be used after each tranche of ASX capital will be based on the defaulter's share of initial margin for exchange-traded compared with OTC derivatives products (including cross-margined futures) over the previous 90 days. ASX conducted an initial review of commingling

arrangements in the first half of 2014, which was presented to the Risk Committee and CS Boards. The review concluded that the arrangements remained appropriate, particularly in light of the currently small size of exposures generated by OTC derivatives relative to futures. ASX Clear (Futures) will conduct another review of default fund arrangements in late 2014; the Bank will continue to monitor the outcomes of this and subsequent reviews.

ASX has documented, in an internal paper provided to the ASX Limited Board, a process for making decisions regarding replenishment of ASX Clear (Futures)' financial resources following any draw down arising from a participant default. Responsibility for determining whether to replenish financial resources and how this might best be achieved ultimately lies with the ASX Limited Board. The decision would be taken in consultation with the ASX Clear (Futures) Board. ASX's documented replenishment intentions canvass several options, including the injection of additional funds from within the ASX Group, from participants or from third-party institutions. The particular approach taken would depend on the specific circumstances, including the severity of the loss and the market environment (see also CCP Standard 4.8). ASX Limited has also committed to maintaining a certain level of equity capital in ASX Clear (Futures) (including via ASXCC) provided certain conditions are met, including that ASX Clear (Futures)' is solvent. For its part, the Bank would require that any potential new composition of financial resources continued to meet the CCP Standards. ASX plans to consult on enhancements to its replenishment arrangements as part of its broader consultation on enhancements to its recovery plans (see CCP Standards 3.5 and 4.8).

Default management – futures

The DMF and the Operating Rules and Procedures allow ASX Clear (Futures) to employ a variety of methods to close out or otherwise manage the positions of a defaulted participant. These include transfer, on- or off-market liquidation, expiry, exercise, compulsory settlement (generally considered to be a last-resort method of closing out, and not available in respect of OTC products) and hedging (see CCP Standard 12.2(b) for more information on close-out arrangements).

Default management – OTC derivatives

In the event of default of an OTC participant, ASX Clear (Futures) would first suspend the defaulting participant and terminate its open positions, then look to hedge its exposure to non-defaulting participants. ASX Clear (Futures) may engage one or more participating members of the relevant DMG to assist in this process. ASX Clear (Futures) would then conduct one or more auctions to establish new open contracts equivalent to those terminated (including hedges). ASX Clear (Futures) may set a reserve price on the default auction(s).

All OTC participants that have positions in the relevant products are required to bid in the auction of a defaulter's portfolio. In early 2014 ASX implemented a 'juniorisation' mechanism designed to ensure that non-defaulting participants bid competitively in the auction of a defaulter's portfolio. For the participants obliged to take part in the auction, the juniorisation mechanism determines the order in which their contributions to the ASX Clear (Futures) default fund are applied to losses on the default in the event that the auction crystallises losses beyond the defaulter's margin and the first tranche of ASX capital. The order of application is related to the size of participants' bids in the auction, so that the winner of the auction has its contribution applied last and the participant with the lowest bid has its contribution applied first, subject to bids exceeding a minimum threshold determined by ASX. Participants that are not required to take part in an auction (for example participants that

lack the capacity to manage particular product types within an auction pool) would have their contributions applied at the same point as the winner of the auction. ASX Clear (Futures), in consultation with the DMG, could conduct the auction in one of the following forms:

- The defaulted participant's portfolio could be auctioned in a single pool to the single highest bidder, or split into multiple identical units auctioned off to several bidders. In the latter case, the order of application of participant contributions to losses would be based on the lowest bid for any unit within the pool.
- Alternatively, the defaulted participant's portfolio could be broken up into separate pools with shared characteristics (for example currency, product, tenor, carry or trade volume), with separate auctions in respect of each pool. Each of these pools could be auctioned off in a single unit or multiple identical units. The application of bidding participants' contributions to losses would be based on the ranking of bids in each of these pools, weighted according to the relative risk of each pool.

As an alternative to an auction, ASX Clear (Futures) could agree the transfer of equivalent contracts with a non-defaulting participant if this would not result in losses requiring the application of non-defaulting participants' commitments.

12.2 A central counterparty should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules. This requires that the central counterparty should:

(a) require its participants to inform it immediately if they:

(i) become subject to, or aware of the likelihood of external administration, or have reasonable grounds for suspecting that they will become subject to external administration; or

(ii) have breached, or are likely to breach, a risk-control requirement of the central counterparty; and

(b) have the ability to close out, hedge or transfer, a participant's open contracts in order to appropriately control risk of a participant that:

(i) becomes subject to external administration; or

(ii) breaches a risk-control requirement of the central counterparty.

To facilitate early identification of a default event, the ASX Clear (Futures)' Operating Rules and Procedures require that a participant inform ASX Clear (Futures) immediately in the event of a default, or if there is a reasonable expectation of such an event. This requirement is legally binding and would continue to apply even in the event that an external administrator was appointed to the clearing participant. The Operating Rules and Procedures envisage a number of possible events of default. These include: becoming subject to external administration; being unable to meet obligations relating to open contracts; default of the clearing participant at another CCP or exchange; and being in breach of the CCP's risk-control requirements, such as failing to fulfil margin or other payment obligations to the CCP.

Although the ASX Clear (Futures) Operating Rules set out specific events of default, declaration of a default would never be automatic. Instead, ASX Clear (Futures) maintains the right to investigate a potential default fully, taking into account any extenuating circumstances. The process of investigating, and the subsequent handling of, a potential default would depend on

its nature. Specifically, the rules distinguish between 'operational', 'compliance' and 'financial' defaults. This differentiation appropriately reflects the gravity and potential ramifications of a declaration of default. Ultimately, the declaration of any default is the responsibility of the Managing Director and Chief Executive Officer of ASX, under delegated responsibility from the CS Boards.

The DMF and the Operating Rules and Procedures allow ASX Clear (Futures) to employ a variety of methods to close out or otherwise manage the positions of a defaulted participant. These include hedging, transfer, on- or off-market liquidation, expiry, exercise and compulsory settlement (generally considered to be a last-resort method of closing out). For the OTC derivatives clearing service, ASX Clear (Futures) may conduct an auction of the defaulted participant's OTC derivatives positions.

There are advantages and disadvantages to each close-out method and therefore the specific method used in practice would depend on market conditions and the products in question. For example, subject to other legal and practical impediments, the account structure used by the CCP would be a relevant factor in determining whether client positions could be transferred following a default event. ASX Clear (Futures) has introduced individual client accounts for both OTC derivatives (in April) and exchange-traded derivatives (in July), which are more likely to be able to support the transfer of client positions following a default (see CCP Standard 13). However, both OTC and exchange-traded derivatives clients can opt to clear via an omnibus account with net margining, which may make the transfer of individual client positions in a default event difficult due to possible under collateralisation of individual positions. As described in CCP Standard 12.1, ASX policy establishes a preference for controlling the risk associated with a defaulted participant's OTC derivatives positions through a process of hedging then auction. While ASX Clear (Futures) provides a window of 24 or 48 hours for futures or OTC clients of a defaulted participant with individually segregated accounts to transfer their positions to another participant, it retains the flexibility to shorten this window if circumstances require a more rapid close-out process.

12.3 A central counterparty should publicly disclose key aspects of its default rules and procedures.

ASX Clear (Futures)' Operating Rules and the OTC Rules and OTC Handbook are available on the ASX public website. These rules outline when ASX Clear (Futures) may take action against a participant and the powers of ASX Clear (Futures) in the event of a default, including the ability of ASX to transfer clients' positions to other participants. ASX Clear (Futures)' Operating Rules set out the treatment of proprietary and customer positions. In addition, ASX has published a high-level overview of its approach to managing a participant default on its website. The OTC Handbook provides a description of the default management auction process for OTC derivatives, including numerical examples of the juniorisation process.

12.4 A central counterparty should involve its participants and other stakeholders in the testing and review of the central counterparty's default procedures, including any close out procedures. Such testing and review should be conducted at least annually and following material changes to the rules and procedures to ensure that they are practical and effective.

The DMF is reviewed on an annual basis, or more frequently as needed, and is regularly tested by in-house default management 'fire drills'. These tests ensure that relevant ASX personnel are familiar with the default management process and identify areas where

the DMF should be updated. Findings, including any recommended enhancements to the DMF, are reported to the DMSG after each fire drill. The Bank observed the ASX fire drill exercise conducted in early 2014 and will continue to observe future fire drills. In recent years, the DMF has been updated on several occasions: during the 2011/12 Assessment period, to incorporate lessons learned from the default of MF Global; in the 2012/13 Assessment period in anticipation of the launch of the OTC derivatives clearing service; and again in May 2014, to account for the use of offsetting transaction arrangements in ASX Clear.

Currently, participants are not directly involved in default management fire drills that test general default management procedures in ASX Clear (Futures). This allows ASX to more freely incorporate scenarios based on actual participants and portfolios into its fire drills, involving the use of confidential information that cannot be shared with other participants. Nevertheless, after each fire drill a sample order file is sent to each of the default brokers that would be used by ASX to execute close-out trades, in order to test the compatibility of the file with their systems.

With the introduction of the OTC clearing service, separate fire drills are conducted by the DMG, the first of which took place in June 2014. The DMG comprises representatives of all OTC clearing participants, who are tasked with periodically convening to review the default management process and recommend amendments. Each OTC derivatives clearing member is involved directly in default simulations, including testing of the auction process.

In addition to the default management information provided on its website, ASX provides detailed responses to any targeted requests for information by clearing participants. Clearing participants have the ability to provide feedback and seek further information on default processes through this mechanism.

The default arrangements in ASX Clear (Futures) take into account, as far as possible, the implementation of any resolution regime that governs the CCP's participants. ASX has undertaken analysis on the impact of ADI resolution proceedings on a CCP's default management processes. While acknowledging that ADI resolution authorities may have broad powers to intervene in the arrangements of an insolvent ADI participant, the analysis suggests that, in general, resolution proceedings should not impede a CCP's default management processes. ASX will be conducting further analysis on the interaction between ADI and FMI resolution once international work on FMI resolution and the proposed domestic framework for FMI resolution have been finalised.

12.5 A central counterparty should demonstrate that its default management procedures take appropriate account of interests in relevant jurisdictions and, in particular, any implications for pricing, liquidity and stability in relevant financial markets.

The DMF identifies that the key aim in handling a default is to minimise the impact of the event on ASX Clear (Futures), its participants and the market. Since close-out decisions by the DMC are complex and involve careful consideration of the specific circumstances surrounding the default, documented default management procedures are not prescriptive. Rather, ASX Clear (Futures) would consider a range of high level factors in a default situation, including: any systemic risk implications; potential contagion and implications for wider market liquidity; interdependencies with other entities; the impact on the CCP's risk profile and financial standing; additional risks that could be incurred by participants; and market conditions and default portfolio complexity.

Futures participants are predominantly large foreign banks or subsidiaries of these banks that have a significant domestic presence. All OTC participants are Australian banks, Australian branches of foreign banks or Australian incorporated subsidiaries of foreign banks. In addition, products cleared by ASX Clear (Futures) are AUD-denominated, with the exception of NZD contracts (which make up around 2 per cent of initial margin requirements). Accordingly, default management actions would be taken during the local time zone for all participants (taking into consideration the extended trading hours of the ASX 24 market).

Standard 13: Segregation and portability

A central counterparty should have rules and procedures that enable the segregation of positions of a participant's customers and the collateral provided to the central counterparty with respect to those positions.

Rating: Broadly observed

ASX Clear (Futures) offers individual and omnibus segregation to customers (or 'clients') of its OTC clearing participants and in July 2014 added an individual segregation offering to the existing omnibus segregation for exchange-traded derivatives (CCP Standard 13.2). Individual segregation provides protection to clients not only in the event of the default of their clearing participant, but also the concurrent default of a fellow client (CCP Standard 13.1). The availability of individually segregated client accounts, margined on a gross basis, also increases the likelihood that client positions could be transferred in the event of a clearing participant default (CCP Standard 13.3). A planned extension to support the posting of excess client collateral would be consistent with the Bank's supplementary interpretation of CCP Standards 13.2 and 13.3. ASX Clear (Futures) has produced a fact sheet on its segregation and portability arrangements, which it requires that participants make available to their clients. This is published on ASX's website (CCP Standard 13.4).

The Bank's assessment is that ASX Clear (Futures) has broadly observed the requirements of CCP Standard 13 during the 2013/14 Assessment period. In order to fully observe CCP Standard 13, ASX Clear (Futures) should:

- carry out plans to implement enhanced client segregation arrangements that support the lodgement of excess client collateral.

ASX Clear (Futures)' segregation and portability arrangements are described in further detail under the following sub-standards.

13.1 A central counterparty should, at a minimum, have segregation and portability arrangements that effectively protect a participant's customers' positions and related collateral from the default or insolvency of that participant. If the central counterparty additionally offers protection of such customer positions and collateral against the concurrent default of the participant and a fellow customer, the central counterparty should take steps to ensure that such protection is effective.

During the Assessment period, ASX Clear (Futures) introduced client-clearing arrangements for OTC derivatives, with clients of OTC participants offered the choice of holding their positions in either an individually segregated account or a client omnibus account. From July 2014, an individually segregated account structure has also been introduced for exchange-traded derivatives alongside the pre-existing client omnibus account structure.

While in the individually segregated structure client positions are held in individual accounts, the collateral posted to support these positions is held in a single commingled account. ASX nevertheless maintains a record of the value of initial margin attributable to each segregated client account and guarantees each client the transfer or return of this value (net of any close-out costs), even if the return of the specific securities posted is not possible under the current segregation model (see CCP Standard 13.2). ASX Clear (Futures) has commenced a consultation on enhancing its segregation arrangements for client collateral, including to allow lodgement of excess collateral with ASX Clear (Futures).

ASX Clear (Futures) has the capacity to transfer (port) participants' clients' positions and collateral under its Operating Rules (see CCP Standard 13.3). Part 5 of the PSNA supports the transfer of client collateral in the event of the default of a clearing participant as provided for in its Operating Rules without the need to seek approval from the defaulted participant's external administrator.

13.2 A central counterparty should employ an account structure that enables it readily to identify positions of a participant's customers and to segregate related collateral. A central counterparty should maintain customer positions and collateral in individual customer accounts or in omnibus customer accounts, or equivalent.

With effect from July 2014, ASX Clear (Futures) offers clients of both OTC and exchange-traded futures participants the choice of holding their positions in either an individually segregated account or a client omnibus account. ASX Clear (Futures) launched its OTC client clearing service in April 2014, and in July began offering an individually segregated client account for exchange-traded derivatives in addition to the pre-existing omnibus client account structure for these products. Initial margin is calculated separately for positions held in each individual or omnibus client account. Cross-margining of interest rate futures against OTC positions is only permitted for clients that have individual client accounts for both types of products with the same participant.

Under the individually segregated account structure, only positions are segregated at the individual client account level. Collateral is not segregated; operationally, gross collateral requirements are aggregated across all client accounts and managed by the participant within a single commingled client collateral account. In the event of a default, the value of the initial margin applied to the client's position in an individual client account would either be transferred to another participant or returned to the client (net of any close-out costs). Any excess collateral would be returned to the administrator of the defaulted participant. That is, ASX Clear (Futures) guarantees only the transfer or return of the value of each client's collateral, not the individual collateral securities that may have been posted.

This approach is similar to the internationally used 'Legally Segregated Operationally Commingled' segregation model. However, under such a structure variation margin payments (and other cash flows) to and from clearing participants are netted. Accordingly, there is a risk that a participant could default before passing on to each client the gross flows underlying the net payment. ASX is currently consulting on extending its segregation model to allow excess collateral to be protected and also on options to make client collateral 'bankruptcy remote' from a default by ASX Clear (Futures) itself.

Since under either an individually segregated or an omnibus structure, the positions and collateral of clients are separate and identifiable from those of clearing participants, clients are not directly exposed to losses related to their participant's proprietary (house) activity in

the event of that participant's default. Where a client opts to use an individually segregated account, its positions are also separately identifiable from those of other clients, as is the value of its margin obligations.

Clearing participants are not obliged to offer both individually segregated and omnibus client accounts, but must provide their clients with a client fact sheet, developed by ASX, which explains the types of accounts that are available, and the advantages and disadvantages of each option (see CCP Standard 13.4).

13.3 To the extent reasonably practicable under prevailing law, a central counterparty should structure its portability arrangements in a way that makes it highly likely that the positions and collateral of a defaulting participant's customers will be transferred to one or more other participants.

ASX Clear (Futures) has the power under its Operating Rules to transfer client positions and collateral following a participant default. The availability of individually segregated client accounts for both OTC and exchange-traded derivatives increase the likelihood that client positions and collateral could be transferred to another participant in the event of a clearing participant default. Under individual client segregation, margin requirements are calculated on a gross basis for the positions held by each client. This supports portability by making it more likely that clients would have sufficient initial margin transferred with their positions to ensure that their full margin requirements could be met after transfer. Portability is further supported by Part 5 of the PSNA (see CCP Standard 13.1). However, portability cannot be guaranteed since it relies on the willingness and capacity of another participant to take on the affected clients within a short period of time.

ASX Clear (Futures) has established a direct legal relationship with clients to underpin the acceptance of instructions in the event of a participant default. In the absence of a default, ASX Clear (Futures) does not interact directly with clients and the participant remains responsible as principal for its client's obligations to ASX Clear (Futures). However, if the participant were to default, the client would have the right to communicate with ASX and directly enforce the Operating Rules relating to segregation and portability of client positions and the associated value of initial margin held on its behalf.[7] To accommodate structures involving indirect clients – that is, clients of clients – ASX Clear (Futures) allows clients to hold multiple individually segregated accounts and to nominate, as appropriate, an end client for each account. In the event of the default of the relevant clearing participant, the nominated end client would have the right to communicate directly with ASX in relation to the porting of positions in that individually segregated account (and associated value of initial margin).

In the event of a default, ASX allows a window of 24 hours for porting of exchange-traded derivatives client positions and 48 hours for OTC derivatives client positions. Clients may nominate in advance an alternative ('back-up') clearing participant to which it would seek to port its positions (and associated collateral value) in the event of its clearing participant default. Advance nomination of a back-up clearing participant is optional, and even if nominated a 'back-up' clearing participant may in the event be unwilling or unable to take on the positions. However, given the short timeframe for decisions in the event of a default, pre-nomination should increase the likelihood that a successful transfer could be achieved.

[7] This right is limited to clients that maintain individual client accounts and are not themselves in default.

In the event that a transfer could not be achieved, ASX Clear (Futures) would hedge, close out and/or auction client positions as it would those of the defaulted clearing participant (see CCP Standard 12). The Operating Rules give ASX Clear (Futures) some flexibility to close the porting window if it quickly became clear that a transfer could not be achieved, or if market conditions dictated that it would be beneficial to proceed with other default management processes to reduce ASX Clear (Futures)' exposure.

13.4 A central counterparty should disclose its rules, policies and procedures relating to the segregation of a participant's customers' positions and related collateral. In particular, the central counterparty should disclose whether customer collateral is segregated on an individual or omnibus basis. In addition, a central counterparty should disclose any constraints, such as legal or operational constraints, that may impair its ability to segregate or port a participant's customers' positions and related collateral.

Current arrangements for segregation and portability are described in the ASX Clear (Futures) Operating Rules and Procedures (including the OTC Rulebook and Handbook). ASX has also published an overview of clearing participant default arrangements, which outlines the implications of different account structures and discloses the current operational constraints to portability. ASX will be updating the overview to reflect default management implications of both the OTC derivatives clearing service and the new client clearing arrangements, and to incorporate learnings from the DMG's OTC derivatives default management fire drill.

ASX has published a client fact sheet outlining segregation and portability arrangements in ASX Clear (Futures) and the rights of clients in the event of a default. Participants are required make this fact sheet available to all of their direct clients. The fact sheet is also available on ASX's public website.[8] In addition, during 2013 and 2014, ASX has publicly consulted stakeholders on segregation and portability arrangements for both OTC and exchange-traded derivatives. These consultations have outlined the implications of different account structures used by ASX Clear (Futures) and identified operational constraints to portability.

Standard 14: General business risk

A central counterparty should identify, monitor and manage its general business risk and hold, or demonstrate that it has legally certain access to, sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialise. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.

Rating: Broadly observed

ASX Clear (Futures) identifies, monitors and manages its general business risks in the context of its overall Enterprise Risk Management Policy (CCP Standard 14.1). It has access to sufficient funds held at group level to support continued operations as a going concern if it incurs general business losses. These funds are backed by equity and invested in liquid assets. The legal basis of ASX Clear (Futures)' access to funds held at group level has been enhanced through a new clause in the ASX Group Support Agreement (CCP Standards 14.2, 14.3, 14.4). ASX Clear (Futures) has developed a basic

[8] The client fact sheet is available at <http://www.asx.com.au/documents/about/ASX_client_clearing_client_fact_sheet.PDF>. A related fact sheet describing the legal model used in ASX Clear (Futures)' client clearing arrangements is available at <http://www.asx.com.au/documents/clearing/client-protection-model-fact-sheet.pdf>.

recovery plan and has commenced work towards enhancing this plan in line with forthcoming CPSS-IOSCO guidance on recovery planning (CCP Standard 14.3). ASX maintains viable arrangements to raise additional equity for its CS facilities, as required (CCP Standard 14.5).

The Bank's assessment is that ASX Clear (Futures) has broadly observed the requirements of CCP Standard 14 during the 2013/14 Assessment period. In order to fully observe CCP Standard 14, ASX Clear (Futures) should:

- carry out plans to enhance its recovery plan in line with forthcoming CPSS-IOSCO guidance, and ensure that the capital it holds under CCP Standard 14.2 continues to be sufficient to fund the enhanced plan. As ASX Clear (Futures) further develops its recovery plan, it should also review and integrate its recapitalisation processes with its broader recovery planning arrangements.

ASX Clear (Futures)' management of general business risk is described in further detail under the following sub-standards.

14.1 A central counterparty should have robust management and control systems to identify, monitor and manage general business risks, including losses from poor execution of business strategy, negative cash flows or unexpected and excessively large operating expenses.

ASX's approach to business risk is consistent with its overall Enterprise Risk Management Policy and Framework (see CCP Standard 3). Under the framework, formal policies are in place for individual risk categories such as accounting, authorisations, business continuity, technology, fraud control and procurement.

ASX monitors a variety of financial business risks, including market risk, credit risk, liquidity risk and capital risk.

- Group funds (as distinct from collateral lodged by participants) may be exposed to market risk due to changes in market variables such as interest rates, foreign exchange rates and equity prices. Mitigants for market risk include hedging of foreign exchange risk and monitoring of equity price risk, with appropriate capital allocation.
- Credit risk for the Group's general business activities arises in the collection of receivables, which principally comprise fees from market participants, issuers, users of market data and other customers. Mitigants include active collection procedures on trade receivables and 'ageing' of receivable amounts.
- Liquidity risk arises from the Group's time-critical payables, and is mitigated by prudent liquidity management, with forward planning and forecasting of liquidity requirements.
- ASX may be exposed to capital risk if equity in group entities falls below prudent or regulatory minimum levels. ASX manages its capital at a group level, in accordance with an objective of maintaining a prudent level of surplus net tangible equity. Ongoing monitoring of cash flows and capital adequacy is conducted via quarterly meetings of CALCO.

ASX undertakes periodic strategic risk assessments in the context of its overall business plans. Through this process, ASX identifies new strategic business initiatives, such as the projects that delivered the ASX Collateral and OTC derivatives clearing services. These are subject to financial analysis, which includes high, low and base case revenue assumptions and forecasts. Impacts on capital are also determined and analysed.

ASX undertakes risk assessments when undertaking any expansion of its activities or in the event of material changes to its business. Risk assessments are built into ASX's project management framework (see CCP Standard 16.4). Under this framework, an initial high-level risk indication is defined at the project concept stage. This is followed by a formal project risk assessment covering both project delivery risks and impacts to business activities. The assessment of the OTC derivatives clearing service, for example, identified: risks associated with impact on CCP liquidity; changes required to the default waterfall; potential legal issues with regulatory requirements; and a significant dependence on outsourced software services. ASX typically conducts a series of workshops involving project staff to discuss risks associated with any planned new service. Prior to the approval of a project for launch/production, ASX prepares an operational readiness summary and conducts a final workshop to discuss possible risks associated with initial launch. This includes consideration of potential failure scenarios and workarounds, procedures for escalation of issues, and help desk and key staff availability.

Following launch, the risks of a new activity are captured in risk profiles that are prepared by department management every six months. CALCO also monitors actual and forecast capital and liquidity requirements on a quarterly basis, including requirements related to new projects.

14.2 A central counterparty should hold, or demonstrate that it has legally certain access to, liquid net assets funded by equity (such as common stock, disclosed reserves or other retained earnings) so that it can continue operations and services as a going concern if it incurs general business losses. The amount of liquid net assets funded by equity a central counterparty should hold, or have access to, should be determined by its general business risk profile and the length of time required to achieve a recovery or orderly wind-down, as appropriate, of its critical operations and services if such action is taken.

ASX has set aside $232 million for operational and business risk across the four ASX Group CS facilities, $60 million of which has been attributed specifically to ASX Clear (Futures)' operational and business risks. Since ASX has identified constraints to making business risk capital bankruptcy remote within the CCP, this capital is held at the ASX Group level to ensure that it cannot be applied to meet losses caused by a participant default. Each CS facility has a separate allocation for business risk capital that is explicitly recognised within group-wide capital holdings. These holdings include an additional buffer against potential losses sustained elsewhere in the group. During the Assessment period, ASX made amendments to the ASX Group Support Agreement, placing an obligation on ASX to maintain sufficient capital to support ASX Clear (Futures)' continued operations in the event of general business losses. These amendments support the legal certainty of ASX Clear (Futures)' access to business risk capital as required.

In determining the sufficiency of the $60 million in operational and business risk capital set aside for ASX Clear (Futures), ASX has estimated the capital required to cover six months of current operating expenses (see CCP Standard 14.3), plus that required to cover operational and legal risk, non-covered credit and counterparty credit risk, non-covered market risk, business risk and an additional capital buffer. It has calculated these components consistent

with the methodology used by CCPs in the EU, under the *European Regulation on OTC derivatives, central counterparties and trade repositories* (EMIR).[9]

14.3 A central counterparty should maintain a viable recovery or orderly wind-down plan and should hold, or have legally certain access to, sufficient liquid net assets funded by equity to implement this plan. At a minimum, a central counterparty should hold, or have legally certain access to, liquid net assets funded by equity equal to at least six months of current operating expenses. These assets are in addition to resources held to cover participant defaults or other risks covered under CCP Standard 4 on credit risk and CCP Standard 7 on liquidity risk. However, equity held under international risk-based capital standards can be included where relevant and appropriate to avoid duplicate capital requirements.

ASX Clear (Futures) has developed a plan setting out options for its recovery or wind-down based on its existing Operating Rules, and has commenced work towards enhancing this plan in line with forthcoming CPSS-IOSCO guidance on recovery planning (see CCP Standard 3.5). In calculating the quantum of business risk capital described under CCP Standard 14.2, ASX has sought to ensure access to sufficient liquid net assets to fund operations during the execution of ASX Clear (Futures)' recovery plan, or to cover a minimum of six months of current operating expenses.

The Bank will continue to monitor ASX Clear (Futures)' development of an enhanced recovery plan, including steps by ASX to ensure that business risk capital continues to be sufficient once the plan is finalised.

14.4 Assets held to cover general business risk should be of high quality and sufficiently liquid in order to allow the central counterparty to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions.

The risk capital for ASX's CS facilities is invested in accordance with the ASX Limited and ASX Operations Pty Limited Investment Mandate. The Investment Mandate specifies investment objectives, responsibilities, approved products and counterparties, and audit and maintenance of the mandate. Approved products are generally highly rated and liquid products such as: cash deposits; bank bills, negotiable certificates of deposit and floating rate notes issued by APRA-approved ADIs; foreign exchange in specified currencies; Commonwealth Government securities; and selected semi-government securities. Limits are applied against counterparty, liquidity and market risks. Liquidity limits are specified for maximum instrument maturity and weighted average maturity.

14.5 A central counterparty should maintain a viable plan for raising additional equity should its equity fall close to or below the amount needed. This plan should be approved by the board of directors and updated regularly.

As noted, ASX Limited manages its operational and business risk capital at the group level. The ASX Limited Board monitors the ongoing capital adequacy of the ASX Group as part of its

[9] The EMIR methodology requires, for example, that ASX Clear (Futures) set aside funds for: winding down or restructuring the business based on monthly gross operating expenses multiplied by the time span required to wind down or recover; operational and legal risk based on a basic indicator approach (e.g. a percentage of average income over several years) or advanced measurement approach; non-covered credit and counterparty credit risk based on a percentage of risk-weighted exposure amounts; non-covered market risk based on own capital requirements; and business risk based on the higher of the CCP's own estimate or one quarter of annual gross operating expenditures.

regular capital planning activities. The Board determines the most appropriate means of raising additional capital when needed, giving due consideration to prevailing market conditions and available alternative financing mechanisms. For example, in June 2013, ASX Limited conducted a capital raising by way of a $553 million share entitlement offer, with the bulk of the funds being used to increase the business risk capital of the CS facilities and their pooled financial resources to deal with participant default. Recapitalisation processes will be reviewed and integrated with broader recovery planning arrangements as ASX Clear (Futures) further develops its recovery plan in line with forthcoming CPSS-IOSCO guidance.

Standard 15: Custody and investment risks

A central counterparty should safeguard its own and its participants' assets and minimise the risk of loss on and delay in access to these assets. A central counterparty's investments should be in instruments with minimal credit, market and liquidity risks.

Rating: Broadly observed

The assets of ASX Clear (Futures) and its participants are administered and held within the ASX Group in accordance with robust group-wide controls (CCP Standard 15.1). A portion of these assets is held in liquid form to ensure prompt access as required (CCP Standard 15.2). ASXCC invests the assets of ASX Clear (Futures) and its participants according to its Investment Mandate in instruments with low credit, market and liquidity risk. Following changes during the Assessment period, ASX Clear (Futures)' treasury investments place less reliance on unsecured investments concentrated in the large domestic banks (CCP Standard 15.4). ASXCC does not use custodian banks for its investments (CCP Standard 15.3). ASX Clear (Futures)' investment strategy does not allow related entity investments and is designed to allow timely liquidation in periods of market stress, consistent with the Bank's supplementary interpretation of CCP Standard 15.4 (see Introduction to Appendix A).

The Bank's assessment is that ASX Clear (Futures) has broadly observed the requirements of CCP Standard 15 during the 2013/14 Assessment period. In order to fully observe CCP Standard 15, ASX Clear (Futures) should:

- implement plans to further reduce the concentration of unsecured exposures to the large domestic banks under its treasury investment policy. The Bank has opened a dialogue with ASX on the detail of its expectations for the credit and liquidity risk profile of ASXCC's investment portfolio, as well as the time frame over which these expectations should be met.

ASX Clear (Futures)' management of custody and investment risks is described in further detail under the following sub-standards.

15.1 A central counterparty should hold its own and its participants' assets at supervised and regulated entities that have robust accounting practices, safekeeping procedures and internal controls that fully protect these assets.

The assets of ASX Clear (Futures) and its participants are administered and held within the ASX Group. Intragroup arrangements allow ASX Clear (Futures) to fully understand the nature of its risk exposure to ASXCC and other group entities such as Austraclear (for safekeeping of AUD-denominated debt securities). This exposure is managed within the context of ASX's overall Clearing Risk Policy Framework. ASX has robust accounting practices, safekeeping procedures and internal controls to protect its own and its participants' assets (as described under CCP Standard 2.7).

Non-cash collateral is held in ASX Clear (Futures)' account in Austraclear. ASX Clear (Futures)' Operating Rules and Procedures define how collateral is used. ASX Clear (Futures) does not re-use non-cash collateral posted by participants.

Cash investments, including cash collateral, clearing participant contributions and shareholder funds, are controlled by ASXCC, of which ASX Clear (Futures) is a subsidiary (see 'ASX Group Structure' in Appendix A). ASXCC makes its investments in accordance with its Investment Mandate and ASX's Investment Policy, which together define investment objectives, investment specifications, and audit and maintenance of the policy (see CCP Standard 15.4).

15.2 A central counterparty should have prompt access to its assets and the assets provided by participants, when required.

ASXCC's Investment Mandate requires that a portion of its portfolio be held in liquid asset form to cover liquidity risks from both general business risks and risks related to ASX Clear (Futures)' clearing activities. Only investments in instruments that can be liquidated or repurchased for cash within two hours are treated as 'liquid' products (see also CCP Standard 7.4).

15.3 A central counterparty should evaluate and understand its exposures to its custodians, taking into account the full scope of its relationships with each.

ASXCC does not use custodians to hold assets invested on behalf of ASX Clear (Futures).

15.4 A central counterparty's investment strategy should be consistent with its overall risk management strategy and fully disclosed to its participants, and investments should be secured by, or be claims on, high-quality obligors. These investments should allow for quick liquidation with little, if any, adverse price effect.

ASXCC is the controlling entity for the investments of both CCPs. In respect of both cash margin collected and pooled risk resources, ASXCC invests funds in accordance with a defined treasury investment policy, endorsed by the Clearing Boards and itself governed by the ASX Enterprise Risk Management Policy. The treasury investment policy, set out in a high-level policy document and the more detailed ASXCC Investment Mandate, articulates the basis for ASX Clear (Futures)' mitigation of investment-related credit, market and liquidity risks (CCP Standard 7). The performance of the investment portfolio within the parameters of this policy is closely monitored by ASXCC, with trigger points to automatically escalate potential issues to the CRO before actual limits are reached. Trigger points are defined for weighted average maturity and percentage of total liquid assets held in non-AUD denominated securities.

The ASXCC Investment Mandate defines investment counterparty eligibility criteria and sets investment limits in order to control counterparty investment risk.

- *Counterparty eligibility criteria*. Counterparties must be Commonwealth or State Government entities (including the Bank), APRA-approved ADIs that are licensed banks in Australia under the *Banking Act 1959*, or (from July 2014) supranational agencies that issue in the Australian bond market. ADIs must also have a Standard & Poor's short-term credit rating of A1 or above, while supranational agencies must have a rating of AAA. The Investment Mandate does not permit investments in securities of ASX Group entities, consistent with the Bank's supplementary interpretation of CCP Standard 15.4 (see Introduction to Appendix A). Nor is ASXCC permitted to create unsecured exposures to any other investment counterparty that is a participant or affiliated with a participant, other than the four major banks.

- *Counterparty investment limits*. Counterparty investment limits are determined according to factors such as the credit quality of the counterparty or obligor, the size of available financial resources, and whether eligible investment counterparties and their affiliates are also clearing participants. Limits are set on both the proportion of the portfolio and the absolute amount that can be invested with a single counterparty.

The Investment Mandate aims for quick liquidation of investments with little, if any, price effect. Only investments in instruments that can be liquidated or repurchased for cash within two hours are treated as 'liquid' products. These are defined based on the depth of market liquidity and the terms of investment, including whether the instruments are eligible for repurchase transactions with the Bank (see CCP Standard 7.4). Investment specifications under the ASXCC Investment Mandate include approved products, approved counterparties and obligors, limits against credit, market and liquidity risk, and other investment restrictions. The policy restricts investments to high-quality liquid assets, such as Commonwealth Government securities, bank bills and certificates of deposit. The policy also sets a 'value-at-risk' limit.

ASXCC's Investment Mandate recognises the primacy of maintaining liquidity and credit quality against achieving investment return, given that funds under management are a critical source of liquidity in the event of a market disruption or clearing participant default. The investment policy and limits are reviewed and approved annually by the ASXCC Board with input from the Risk Committee. The broad approach to investment and investment holdings are disclosed publicly in the ASX Annual Report.

The Bank's 2011/12 Assessment encouraged ASX to carry out a review of its treasury investment policy. The Bank had expressed concerns that the policy left open the potential for large and concentrated credit exposures to the four largest domestic banks. Further, where an entity related to the issuer counterparty was also a clearing participant, the performance of investments in the portfolio could be correlated with the very default event against which the CCP's risk resources sought to provide cover. ASX carried out this review during the 2012/13 Assessment period, concluding that a gradual move towards lower concentration of investments in the major banks and a greater reliance on secured investments would be appropriate. ASX has since modified the ASXCC Investment Mandate to twice reduce the unsecured limit on exposures to the large domestic banks in absolute terms.

Consistent with the revisions to its Investment Mandate, during the 2013/14 Assessment period ASX reduced the limits applicable to the large domestic banks in recognition of their participation in the new OTC derivatives clearing service, and applied a further reduction in limits as part of the annual review of the ASXCC Investment Mandate. In addition, ASX has taken steps to diversify its unsecured exposures to a broader range of highly rated investment counterparties and has introduced arrangements allowing it to invest cash with selected counterparties on a secured basis. ASX plans to review concentration limits to investment counterparties again in 2015 and is working to further strengthen its capacity to invest on a secured basis. The Bank has opened a dialogue with ASX on the detail of its expectations for the credit and liquidity risk profile of ASXCC's investment portfolio, as well as the time frame over which these expectations should be met.

special resolution regime for FMIs in Australia. In particular, ASX Clear (Futures) will need to ensure that its operations are organised in such a way as to facilitate effective crisis management actions under that regime once finalised. The Bank will also discuss further with ASX Clear (Futures) its approach to cyber security, and in particular its governance arrangements, mechanisms for prevention and detection, and plans to recover from a cyber-related incident.

ASX Clear (Futures)' arrangements for managing operational risks are described in further detail under the following sub-standards.

Identifying and managing operational risk

16.1 A central counterparty should establish a robust operational risk management framework with appropriate systems, policies, procedures and controls to identify, monitor and manage operational risks.

ASX's operational risk policies and controls have been developed in accordance with ASX's group-wide Enterprise Risk Management Framework (see CCP Standard 3.1). Under this framework, the ASX Limited Board is responsible for reviewing and overseeing the group's risk management systems (see CCP Standard 2.6). The Board delegates review of the Enterprise Risk Management Framework to its Audit and Risk Committee. An Enterprise Risk Management Committee, comprising executives from across ASX's departments, is responsible for approving enterprise risk policies and reviewing controls, processes and procedures to identify and manage risks, as well as the formal approval of significant operational risk policies prepared by individual departments. Under the Enterprise Risk Management Framework, individual departments are also responsible for: identifying business-specific risks; applying controls; maintaining risk management systems; reporting on the effectiveness of risk controls; and implementing enhancements and taking remedial action. A dedicated security team has responsibility for assessing both physical and cyber security risks, and is overseen by a Security Steering Committee comprising the Chief Information Officer, head of Internal Audit and other senior executives. The Bank will discuss further with ASX Clear (Futures) its governance arrangements for cyber security in the coming Assessment period.

16.2 A central counterparty's board of directors should clearly define the roles and responsibilities for addressing operational risk and should endorse the central counterparty's operational risk management framework. Systems, operational policies, procedures and controls should be reviewed, audited and tested periodically and after significant changes.

The roles and responsibilities for addressing operational risk are defined in the CS Boards' Charter, the Audit and Risk Committee Charter, and the Enterprise Risk Management Framework. As described above, risk responsibilities are shared between the ASX Limited Board, the CS Boards, the Audit and Risk Committee, the Enterprise Risk Management Committee and individual departments.

Policies and procedures are the subject of internal and external review. ASX's Internal Audit department routinely monitors compliance with operational policy, reporting to the Audit and Risk Committee on a quarterly basis. Audit findings may prompt a review of policy, which would be conducted in consultation with key stakeholders. Technology-related security policy is considered by external auditors annually.

ASX benchmarks its operational risk policy against relevant international standards. For example:

- ISO 31000 – Risk Management Principles and Guidelines is used to benchmark ASX's overarching framework for operational risk management.
- The business continuity framework is benchmarked against the Business Continuity Institute's Good Practice Guidelines 2013, the international standard ISO 22301:2012 Business Continuity Management Systems, and the British standard BS 25999 1:2006.
- The technology risk management framework is benchmarked against the ISO 27001:2005 Information Security Management Systems standard. Cyber security strategies are further benchmarked against the Australian Signals Directorate's Strategies to Mitigate Targeted Cyber Intrusions.
- The compliance framework is benchmarked to the AS 3806-2006: Compliance Programs.
- The ASX Fraud Control Policy is benchmarked against AS 8001-2008: Fraud and Corruption Control.

The risk framework defines a variety of control procedures to support the core operational systems. These include audit logs, dual input checks, management sign-off and processing checklists as the primary preventative controls, supported by reconciliations and management reviews of activity. ASX Clear (Futures) operates a separate test environment for its core systems (Genium and Calypso) and has a formal, documented change management process. There are also defined procedures for communicating with participants and vendors details of technology upgrade releases, which include regular notices to participants of upcoming changes.

16.3 A central counterparty should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives. These policies include, but are not limited to, having: exacting targets for system availability; scalable capacity adequate to handle increasing stress volumes; and comprehensive physical and information security policies that address all potential vulnerabilities and threats.

Availability targets are documented and defined formally for critical services. Genium/SECUR and Calypso are required to meet a minimum availability target of 99.8 per cent; during the 2013/14 Assessment period, SECUR was available 100 per cent of the time, Genium was available 100 per cent of the time and Calypso was available 100 per cent of the time.

System capacity is monitored on an ongoing basis, with monthly reviews of current and projected capacity requirements. The results are reviewed against established guidance for capacity headroom over peak recorded values for all critical systems; that is, to maintain capacity 50 per cent over peak recorded daily volumes, with the ability to increase to 100 per cent over peak within six months. Capacity data are reported monthly to the CEO. The aggregated average capacity utilisation of SECUR/Genium during the Assessment period was 9 per cent, while peak utilisation was 15 per cent;[10] average capacity utilisation of Calypso was 1 per cent, while peak capacity utilisation was 3 per cent. ASX Clear (Futures) considers that it has sufficient technical and human resources to operate Genium and Calypso during peak periods, including in the event of operational incidents or system failure.

[10] Genium will provide additional capacity headroom in future Assessment periods.

Information security policy is implemented using a risk-based decision process, based on ISO 31000, relevant federal and state legislation, and other best-practice standards. The goal of ASX's information strategy is to create a strong and reliable security environment that meets business and functional requirements for customers and employees while balancing risk to the organisation, the cost of controls, and the richness and flexibility of services. ASX's information security policy applies to all employees, consultants, vendors and contractors of ASX. It also applies to all facilities, equipment and services managed by or on behalf of ASX, including off-site data storage, computing and telecommunications equipment. The policy is reviewed annually or when material or organisational changes are made. The last review was in March 2014.

Information security policy is tested at a number of levels. This includes penetration testing against the ASX perimeter and vulnerability testing within the perimeter. ASX Clear (Futures) performs SECUR security testing on a quarterly basis. ASX operates a suite of controls designed to prevent and detect cyber attacks on its systems, such as denial of service or malware threats. These include steps to monitor suspicious internet traffic, and the maintenance of spare capacity to manage legitimate or malicious surges in internet traffic, as well as steps to regulate access to ASX systems (described below). The Bank will discuss further with ASX Clear (Futures) its approach to prevention and detection of cyber attacks during the coming Assessment period.

Physical access is controlled at both an enterprise and departmental level. The key systems supporting ASX's clearing and settlement processes are operated within a secure building. Clearing operations are separated from general office areas with permitted access determined at a senior manager level and records of access maintained. Physical security arrangements for the primary and backup data centres are broadly equivalent.

User access for the key systems is restricted to prevent inappropriate or unauthorised access to application software, operating systems and underlying data. User activities are uniquely identifiable and can be tracked via audit trail reports. The level of access is authorised by the system owner with users granted the minimum level of access to systems necessary to perform their roles effectively. External access to ASX systems must pass through multiple layers of firewalls and intrusion prevention, and individual networks are segregated.

Application testing is carried out in test environments. Testing reports are documented, with identified problems escalated to management and tracked through to remediation. Similarly, any technology-based operational incidents are reported to senior management and issues are tracked through to resolution via regular updates to management.

16.4 A central counterparty should ensure that it can reliably access and utilise well-trained and competent personnel, as well as technical and other resources. These arrangements should be designed to ensure that all key systems are operated securely and reliably in all circumstances, including where a related body becomes subject to external administration.

Access to resources

ASX Clear (Futures) has arrangements in place to ensure that it has well-trained and competent personnel operating Genium and Calypso. Staff are provided with relevant policies and guidelines from commencement of employment, with weekly communications thereafter. Staff are evaluated with reference to each defined operational process and broader skills matrices, with training provided for identified areas of weakness. ASX Clear (Futures) has a formal succession planning and management process in place for key staff.

ASX has sought to automate routine operational processes and reporting over recent years, freeing up additional staff resources that would otherwise be devoted to these tasks.

To facilitate rapid recovery in the event of an operational disruption, ASX intends to increase the proportion of operational staff based at its secondary operations site (which is also the primary data centre), to around 30 per cent from the current 20 per cent. In case of a disruption to staffing arrangements at the primary site for staff, the secondary operations site has capacity to house 65 per cent of all operational staff.[11]

Resources shared with a related body

Within the ASX group structure, most operational resources are provided by ASX Operations Limited, a subsidiary of ASX Limited (see 'ASX Group Structure' in Appendix A), under a contractual Support Agreement. In the event that ASX Operations Limited became subject to external administration, to the extent permissible by law, provisions within the Support Agreement provide for ASX Clear (Futures) and the other clearing and settlement corporate entities to retain the use of operational resources.

Major projects

Major projects are overseen by the Enterprise Portfolio Steering Committee (EPSC), which is comprised of representatives of the Group Executive. The EPSC is responsible for determining project priorities across the ASX Group and overseeing the quality of project execution. The EPSC is also tasked with ensuring that ASX has sufficient well-qualified personnel to cope with periods in which it is simultaneously undertaking a number of projects, including those resulting in significant changes to business. Project management of major projects is undertaken by the Project Management Office (PMO). For projects affecting core systems, such as the move from SECUR to Genium, the PMO rates projects to ensure that they receive appropriate access to resources. Projects incorporate testing processes, which verify that systems or services meet benchmarks set prior to implementation. Testing addresses both technical and operational aspects of projects. The project management process includes engagement with customers and third-party vendors of supporting systems where appropriate, particularly in customer testing. Project plans also include formal checkpoints to ensure all appropriate risk management controls are in place prior to live use of a new or updated system or service.

Over recent years, ASX has undertaken work on close to 60 projects, including major projects such as the OTC derivatives clearing service and enhanced client clearing arrangements in ASX Clear (Futures) and the ASX Collateral service. Work on these projects, often to challenging time frames, in addition to work required by ASX to ensure compliance with the new FSS, has tested the capacity of ASX's existing resources. Targeted deadlines for key projects have nevertheless largely been met. In order to meet increased demand for resources associated with these projects and ongoing business requirements, ASX has taken on new staff, employed consultants and utilised partnerships with service providers, including in respect of the OTC derivatives clearing service. ASX's resource management is discussed further in Section 3.5.5 of the Assessment report.

[11] ASX currently maintains three main sites for its operations and data processing: a primary operations site (where the majority of staff are located); a secondary operations site that also operates as the primary data centre; and a backup data centre.

16.5 A central counterparty should identify, monitor and manage the risks that key participants, other FMIs and service and utility providers might pose to its operations. A central counterparty should inform the Reserve Bank of any critical dependencies on utilities or service providers. In addition, a central counterparty should identify, monitor and manage the risks its operations might pose to its participants and other FMIs. Where a central counterparty operates in multiple jurisdictions, managing these risks may require it to provide adequate operational support to participants during the market hours of each relevant jurisdiction.

Dependencies on participants and other FMIs

ASX identifies and monitors potential dependencies on participants in a number of ways: by holding regular discussions with participants on risk management processes (see CCP Standard 3.1); as part of its assessments of project-related risks (see CCP Standard 14.1); and through its general monitoring of risks under its risk management framework (see CCP Standard 3.1).

For ASX Clear (Futures), ASX has identified risks relating to its operational activities arising from participants' increased usage of third-party vendors for back-office systems, and participants outsourcing their back-office processing offshore.

- If participants use the system of a vendor that experiences difficulties, these participants may have difficulty connecting to ASX's clearing and settlement infrastructure. If a vendor issue requires significant system changes, ASX Clear (Futures)' operations may be affected for an extended period. This risk is managed in part through technical and business continuity requirements placed on participants, but there are limitations to this approach. As a result, and notwithstanding that there are no contractual relationships between ASX and vendors, ASX has implemented a program to develop stronger direct relationships with key participant vendors. This formalises steps taken by ASX to engage with participant vendors, for example to align margin calculations following the introduction of SPAN in ASX Clear in late 2012. The program supports vendors' knowledge of ASX technical updates through early engagement before system changes are rolled out, as well as ASX's knowledge of vendor systems and business continuity arrangements.
- Participants' outsourcing of back-office processes and technology to overseas domiciled hubs or third-party vendors may complicate incident management due to differences in time zones and languages, and in some cases a lack of familiarity with local market practices and conventions. Such factors, if inadequately mitigated, could increase operational risk. ASX is examining options to mitigate these risks. As part of this, ASX Compliance has carried out a spot review on participants' outsourcing arrangements, benchmarking participants against a number of standards, including APRA's outsourcing prudential standard CPS 231. As a follow-up to the review, ASX is developing new guidance on participant outsourcing and has conducted site visits to selected overseas outsourcing providers.

ASX Clear (Futures) has an operational interdependence with Austraclear, which is used to settle margin payments (CCP Standard 19). Operational risk associated with this interdependence is managed within the context of the ASX Group's operational risk management framework. ASX Clear (Futures) does not have significant operational interdependencies with other FMIs.

Dependencies on service providers

ASX has a formal policy that sets out the process for entering into, maintaining and exiting key outsourcing arrangements. If a key service is to be provided by an external service provider, ASX first conducts a tender process in which proposals from potential vendors are assessed against relevant criteria. Arrangements have been implemented under which ASX would consult with the Bank before entering into new agreements with third parties for critical services. ASX also provides the Bank with a list of critical outsourcing arrangements on an annual basis. Issues relating to outsourcing or service provision are escalated as appropriate to executive management via the ASX Technology Vendor Management Group and the relevant operational support area.

ASX assesses the operational performance of its service providers on an ongoing basis against its own operational policies, to ensure that service providers meet the resilience, security and operational performance requirements of the FSS. ASX maintains current information on its service providers' operations and processes through ongoing liaison, and in turn provides relevant updates to service providers regarding ASX operations. Service providers are also assessed through software regression testing when there is a major system upgrade.[12] Contractual arrangements with critical service providers require the approval of ASX Clear (Futures) before the service provider can itself outsource material elements of its service.

In May 2014, ASX Clear (Futures) upgraded its core exchange-traded derivatives clearing system from SECUR to the Genium clearing system, which is a more recent system offered by the same vendor. ASX Clear (Futures) has responsibility for business continuity arrangements and computer-system support. The vendor provides support where changes to the system components or underlying source code are involved, under an agreement which extends beyond 2014. ASX Clear (Futures) has an escrow arrangement in place that would allow it to access source code for Genium. These arrangements mirror the support agreements in place for SECUR prior to May 2014.

All other ASX Clear (Futures) operational functions are performed within ASX. However, external suppliers are used for utilities, hardware maintenance, operating system and product maintenance, and certain security-related specialist independent services.

ASX has put in place a number of mitigants to address the risks associated with dependencies on utilities and service providers.

- Primary and backup data centres are connected to different electricity grids and telecommunication exchanges.
- Each data centre has backup power generators with capacity to run the site at full load for 72 hours.
- All external communications links to data centres are via dual geographically separated links.
- ASX conducts regular testing of backup arrangements. Major systems are tested on a two-year cycle. Participants are notified of business continuity tests in advance through ASX notices.

[12] When a component of software is updated, 'regression testing' aims to perform checks on the full software to verify that the operation of other software components has not been inadvertently affected by the update.

- ASX also performs a periodic assessment of suppliers, including consideration of contingency arrangements should externally provided services not be available (such as the use of alternative suppliers), as well as incident escalation procedures and contacts.

Disclosure

The nature and scope of ASX Clear (Futures)' dependencies on critical service providers are disclosed to participants through: Operating Rules; Guidance Notes; Notices and Bulletins; technical documentation available on the ASX participant website; more general information available on the ASX public website; and in one-on-one meetings with participants, both during the induction process for new participants and on an ongoing basis.

Operational Support

ASX Clear (Futures) provides telephone and email support to participants via a helpdesk, which operates from 8 am to 7.30 pm.

16.6 A participant of a central counterparty should have complementary operational and business continuity arrangements that are appropriate to the nature and size of the business undertaken by that participant. The central counterparty's rules and procedures should clearly specify operational requirements for participants.

Business continuity requirements for participants are set out in the ASX Clear (Futures) Operating Rules and Procedures, supplemented by additional guidance issued by ASX on 1 July 2014. These require large participants to maintain adequate business continuity arrangements (see CCP Standard 16.8) to allow the recovery of usual operations within two hours, and no more than four hours, following a contingency event. The targeted recovery time for smaller participants is four hours (and no more than six). If a participant fails to maintain business continuity arrangements consistent with these recovery targets, it may become subject to sanctions or restrictions on its activities. Spot checks of participants' business continuity management are conducted if risk factors are identified, such as where a participant has experienced operational problems. These spot checks examine the participant's governance and processes for resilience and business continuity.

The Operating Rules and Procedures also require more broadly that participants have facilities, procedures and personnel that are adequate to meet technical and performance requirements. ASX's preferred approach to dealing with operational issues is to work collaboratively with the participant to educate them on their obligations. If the matter is serious, ASX may require that the participant remediate the weakness as a matter of priority. ASX may impose conditions on participation, or require that the participant appoint an independent expert to assist with the remediation task.

Business continuity arrangements

16.7 A central counterparty should have a business continuity plan that addresses events posing a significant risk of disrupting operations, including events that could cause a wide-scale or major disruption. The plan should incorporate the use of a secondary site and should be designed to ensure that critical information technology systems can resume operations within two hours following disruptive events. Business continuity arrangements should provide appropriate redundancy of critical systems and appropriate mitigants for data loss. The business continuity plan should be designed to enable the central counterparty to

facilitate settlement by the end of the day of the disruption, even in case of extreme circumstances. The central counterparty should regularly test these arrangements.

ASX Clear (Futures) maintains extensive contingency plans detailing the appropriate operational response to a CS facility disruption, including coverage of the various lines of authority, means of communication, and failover procedures. These plans are updated periodically. ASX Clear (Futures) policy requires that failover to the backup data centre should occur within two hours for all systems. Plans for recovery of key systems apply to both physical and cyber threats to business continuity; the Bank will discuss further with ASX its plans for recovery of key systems in the event of a cyber-related incident.

ASX Clear (Futures) employs a variety of technologies to ensure a high degree of redundancy in its systems – both across sites and within a single site. ASX maintains both primary and backup data centres, with broadly equivalent operational requirements. Key plant and equipment at the primary site are designed to the Uptime Institute Tier 3 standard of concurrent maintainability.[13] The main computer network is connected via point-to-point optical fibre, which ASX operates with its own technology, thereby reducing the potential for outages due to operational errors by the telecommunications provider. All core systems employ multiple servers with spare capacity. Front-end servers handling communications with participants are configured to provide automatic failover across sites. Failover of the more critical data servers is targeted to take place within two hours, but would generally be expected to occur within an hour, under the control of management.

Disruption to participants in such circumstances would be mitigated by the high degree of redundancy in the front-end system components. In most circumstances, these would be expected to maintain communications with participants' systems and queue transactions until the data servers were reactivated. The integrity of transactions would be supported by: queuing messages until they could be processed; storing all transactions in the database with unique identifiers, thereby preventing the loss or duplication of transactions; and synchronised replication of database records across both the primary and backup data centres. Furthermore, in the event that a significant part of a system or an operational site failed, ASX Clear (Futures) has contingency arrangements to activate an additional tier of 'cold' redundancy arrangements (either by converting test systems into production systems or rebuilding systems from readily available hardware) within 24 hours to meet the contingency of any further service interruption.

ASX Clear (Futures) has clearly defined procedures for crisis and event management. These procedures cover incident notification, emergency response (including building evacuation), incident response (including overall incident assessment and monitoring), and incident management testing. Since May 2014 these include the use of Twitter to advise stakeholders of market-wide operational or technical incidents. ASX maintains a major incident management team that includes senior representatives of the core business activities, as well as facilities management, business continuity, and media and communications. The procedures identify responsibilities, including for internal communication and external communication to emergency services, the market, industry and media.

[13] The Uptime Institute is an IT consulting organisation that has developed a widely adopted classification system for the level of redundancy arrangements in data centres. 'Tier 3' is the second highest standard of redundancy, indicating that a data centre has redundant components, multiple independent power and cooling systems, and a high degree of availability.

ASX Clear (Futures) regularly tests its business continuity arrangements. Dual site operational teams across the primary and secondary operations sites effectively test backup operational processes on a continuous basis. For those teams not located across both sites, connectivity and procedural testing of the secondary site are performed monthly by representatives from ASX Clear (Futures). Live technology tests, where clearing services are provided in real time from the backup data centre, are conducted on a two-year cycle. Test results are formally documented and reported to ASX senior management and are also made available to internal and external auditors. The use of live tests ensures that participant connectivity to the backup data centre is also tested. ASX's business continuity framework is audited externally every three to five years; the most recent audit, conducted in late 2012, found that ASX's business continuity standards were broadly consistent with widely recognised global standards and did not identify any major areas of concern.

16.8 A central counterparty should consider making contingency testing compulsory for the largest participants to ensure they are operationally reliable and have in place tested contingency arrangements to deal with a range of operational stress scenarios that may include impaired access to the central counterparty.

The ASX Clear (Futures) Operating Rules and Procedures require participants to maintain adequate business continuity arrangements that are appropriate to the nature and size of their business as a participant. The Operating Rules specify that participants must have arrangements that allow for the recovery of usual operations. It is ASX Clear (Futures)' expectation (set out in guidance) that this would be within two hours following a contingency event for large participants. These arrangements are reviewed as part of the participant admissions process. Participants are also subject to spot checks of their ongoing compliance with operational requirements. Spot checks may be based on topical themes, in some cases arising from observations of general business developments, and in other cases motivated by a participant that has been experiencing operational problems. If a participant fails to implement any recommendations arising from a check, ASX may impose sanctions.

Participants are involved in the contingency testing of ASX Clear (Futures)' systems, as this testing is conducted in a live environment. ASX conducts comprehensive business continuity testing of key systems at least every two years, with participants being notified of the start and completion of testing. Participants are also involved in testing of major system changes or in advance of the introduction of a new system. ASX Clear (Futures) conducts regular connectivity tests and maintains an external testing environment for system changes.

Outsourcing and other dependencies

16.9 A central counterparty that relies upon, outsources some of its operations to, or has other dependencies with a related body, another FMI or a third-party service provider (for example, data processing and information systems management) should ensure that those operations meet the resilience, security and operational performance requirements of these CCP Standards and equivalent requirements of any other jurisdictions in which it operates.

ASX has developed a set of standard clauses for inclusion in contracts with third-party service providers of critical services to ASX Clear (Futures). Similar clauses are also included in the Support Agreement between ASX Clear (Futures) and ASX Operations Pty Ltd, which provides all internal operational services for the facilities. The clauses seek to ensure that the

agreements meet the resilience, security and operational performance requirements of the FSS. The clauses also allow the Bank to gather information from the service provider about the operation of critical functions (see CCP Standard 16.10). In the event that the Bank concluded that the terms of the service provider agreement did not meet FSS requirements, the clauses also require the service provider to negotiate acceptable new terms with ASX in good faith. Furthermore, if ASX Clear (Futures) were to become insolvent, the clauses provide for the Bank to negotiate with the service provider to continue service provision (see CCP Standard 16.11). ASX applies these clauses to all new agreements with service providers, and has incorporated them into all of its key existing service agreements. This includes ASX Clear (Futures)' agreements with a third-party vendor for support of Genium, which also incorporates EXIGO software support, and another third-party vendor for support of Calypso.

CPSS and IOSCO have developed a draft Assessment Methodology for the oversight expectations applicable to critical service providers.[14] Once finalised, this Assessment Methodology will provide a framework for considering how to apply the oversight expectations for critical service providers set out in Annex F of the Principles and paragraph 16.9.2 of the Bank's guidance to this standard.

16.10 All of a central counterparty's outsourcing or critical service provision arrangements should provide rights of access to the Reserve Bank to obtain sufficient information regarding the service provider's operation of any critical functions provided. A central counterparty should consult with the Reserve Bank prior to entering into an outsourcing or service provision arrangement for critical functions.

ASX's standard clauses for service providers require the provider to grant reasonable access to the Bank in respect of information relating to its operation of a critical function provided to ASX Clear (Futures). ASX applies these clauses to all new agreements with service providers, and has incorporated them into all of its key existing service agreements, including its agreements with the vendors mentioned in CCP Standard 16.9.

16.11 A central counterparty should organise its operations, including any outsourcing or critical service provision arrangements, in such a way as to ensure continuity of service in a crisis and to facilitate effective crisis management actions by the Reserve Bank or other relevant authorities. These arrangements should be commensurate with the nature and scale of the central counterparty's operations.

Standard clauses in ASX Clear (Futures)' agreements with service providers (described in CCP Standards 16.9 and 16.10) require that providers give the Bank notice of any intention to terminate the agreement as a consequence of ASX Clear (Futures)' failure to pay fees, or in the event of the insolvency of ASX Clear (Futures) or any other relevant ASX entity. This is intended to give the Bank an opportunity to take action to remedy the breach or otherwise ensure continued service provision.

ASX Clear (Futures)' arrangements to ensure continuity of operations in the event of a crisis will be shaped by the proposed introduction into Australian law of a special resolution regime for FMIs. This was foreshadowed in consultations undertaken by the Council of Financial Regulators and Treasury in 2011 and 2012. ASX Clear (Futures) will need to ensure that its

[14] The draft Assessment Methodology is available at <http://www.bis.org/publ/cpss115.htm>.

arrangements to support continuity of operations in a crisis are appropriately adapted to the proposed FMI resolution regime once finalised.

Standard 17: Access and participation requirements

A central counterparty should have objective, risk-based and publicly disclosed criteria for participation, which permit fair and open access.

Rating: Observed

ASX Clear (Futures) has objective and transparent participation requirements set out in its Operating Rules and Procedures (CCP Standard 17.1). These include minimum capital and other financial requirements, as well as operational and risk management arrangements tailored to the specific activities of ASX Clear (Futures). Additional requirements apply for OTC derivatives clearing participants (CCP Standard 17.2). ASX Clear (Futures) monitors participants' compliance with requirements on an ongoing basis and has the authority to suspend or terminate participation or take other disciplinary or remedial action in the event of a breach of these requirements (CCP Standard 17.3).

The Bank's assessment is that ASX Clear (Futures) has observed the requirements of CCP Standard 17 during the 2013/14 Assessment period. ASX Clear (Futures)' access and participation requirements are described in further detail under the following sub-standards.

17.1 A central counterparty should allow for fair and open access to its services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk-related participation requirements.

ASX Clear (Futures) has objective and transparent participation requirements, which are publicly available and form part of its Operating Rules and Procedures. During the Assessment period, ASX developed an internal policy and supporting standards that summarise the financial and operational requirements placed on participants under the Operating Rules and Procedures, and document the responsibilities of the CS Boards, CRPC, CRO and relevant departments for ensuring these requirements are met and periodically reviewed. The Operating Rules and Procedures provide for an appeals process should an application for participation be rejected or a participant's access be terminated.

At the end of June 2013, ASX Clear (Futures) had 19 participants, predominantly large domestic and foreign banks and their subsidiaries. Eight participants are OTC derivatives clearing participants, of which 4 clear OTC derivatives only.

17.2 A central counterparty's participation requirements should be justified in terms of the safety of the central counterparty and the markets it serves, be tailored to and commensurate with the central counterparty's specific risks, and be publicly disclosed. Subject to maintaining acceptable risk control standards, a central counterparty should endeavour to set requirements that have the least restrictive impact on access that circumstances permit.

ASX Clear (Futures)' participation requirements are designed to promote the safety and integrity of the CCP. They cover minimum capital and financial obligations; requirements related to legal structure, governance and regulatory status; business and managerial requirements; operational resources and capabilities; business continuity arrangements; and risk and liquidity management arrangements.

Participants that clear futures only are subject to a minimum net tangible asset (NTA) requirement of $5 million. ASX management has discretion to impose a higher requirement.

Participation requirements for participants that clear OTC derivatives are set out in the publicly available OTC Rules and OTC Handbook. The capital requirement of $50 million for these participants is significantly higher than that for futures to reflect the increased complexity of OTC derivatives markets, and the potential for a default event to require the closing out of less liquid products than those in the futures market. In particular, it is likely that OTC derivatives participants would be called upon to contribute to the close-out process, including by bidding in an auction of a defaulted participant's positions.

Under the Operating Rules and Procedures, the ASX Clear (Futures) Board must be satisfied that a potential participant has (or will have) the relevant managerial, operational and financial capacity and appropriate complementary business continuity arrangements in place to be able to meet its ongoing obligations. A participant must also demonstrate that it has the capacity to make an immediate transfer of funds, on demand, should this be required to meet its obligations.

ASX Clear (Futures) is considering allowing the admission of participants that are incorporated and base their operations offshore, provided that they can demonstrate the capacity to meet all of the financial and operational requirements described above and that no conflicts of law would arise as a result of their participation. ASX intends to run a pilot scheme prior to allowing such arrangements more broadly.

17.3 A central counterparty should monitor compliance with its participation requirements on an ongoing basis and have clearly defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements.

The CRM department, which covers both CCPs and reports to the CRO, is responsible for the risk management of exposures to clearing participants. CRM monitors day-to-day developments regarding, among other things, financial requirements, risk profiles, open positions and settlement obligations to the CCPs. Within CRM, the Counterparty Risk Assessment team is responsible for monitoring, assessing and investigating matters relating to financial requirements, including monitoring participants' monthly financial statements for any matters of concern.

CRM also carries out a range of participant monitoring spot checks and other initiatives designed to validate the accuracy of the financial and operational information that participants submit to ASX Clear (Futures). Participants are required to inform ASX if at any stage their capital falls below the minimum requirement. CRM is also responsible for determining and reviewing participants' ICRs, drawing in part on information provided by participants in their regular financial returns to ASX, and coordinating a 'watch list' of participants deemed to warrant more intensive monitoring (see CCP Standard 4.1). In addition, Operations and ASX Compliance perform regular and ad hoc compliance monitoring activities.

ASX Clear (Futures) has wide-ranging powers to sanction its participants in order to preserve the integrity of the CCP. ASX Clear (Futures) may restrict, suspend or terminate a participant's authority to clear all market transactions in the event of a default, or in the event of a breach of the Operating Rules and Procedures that may have an adverse effect on the CCP. The

action taken will depend on a number of factors, including the materiality of the incident, the participant's financial and operational capacity as well as the participant's history. Where a breach has been identified and the participant has taken appropriate steps to rectify it, ASX Clear (Futures) will typically continue to monitor the participant closely for a period of time. Significant breaches are also referred to ASIC and, depending on the nature of the breach, may be investigated by ASX Compliance for formal disciplinary action.

Standard 18: Tiered participation arrangements

A central counterparty should identify, monitor and manage the material risks to the central counterparty arising from tiered participation arrangements.

Rating: Observed

ASX Clear (Futures) applies a risk-based approach to its monitoring of tiered participation arrangements. To date, the focus of this monitoring has been on client activity in exchange-traded derivatives, since an account structure that permits client clearing of OTC derivatives transactions has only relatively recently been introduced. ASX Clear (Futures) has a formal standard that governs its risk-based approach to monitoring of concentration in tiered participation arrangements and documents mitigating steps (CCP Standard 18.4).

During 2013/14, clients of ASX Clear (Futures)' participants represented 69 per cent of initial margin held by ASX Clear (Futures) to cover its credit exposures to both participants and (indirectly) their clients. In managing the risks associated with tiered arrangements, ASX Clear (Futures) is able to gather information on indirect participation, although with some limitations. ASX Clear (Futures) will obtain better data to support its monitoring as participants and their clients make use of the newly introduced individually segregated account structure for both OTC and exchange-traded derivatives. Where data limitations remain, ASX can also seek more detailed information from participants on an ad hoc basis (CCP Standards 18.1, 18.2). ASX Clear (Futures) does not maintain formal thresholds at which large indirect participants are encouraged to seek direct participation, but does actively manage risks posed by indirect participant activity through its relationship with the direct participant (CCP Standard 18.3). ASX Clear (Futures) conducts daily monitoring of its client-level data, with the use of predefined triggers for further action.

The Bank will monitor the operation of ASX Clear (Futures)' risk-based approach to monitoring concentration risks in tiered participation, particularly as participants and their customers transition to the new individually segregated client account structure.

The Bank's assessment is that ASX Clear (Futures) has observed the requirements of CCP Standard 18 during the 2013/14 Assessment period. ASX Clear (Futures)' approach to tiered participation arrangements is described in further detail under the following sub-standards.

18.1 A central counterparty should ensure that its rules, procedures and agreements allow it to gather basic information about indirect participation in order to identify, monitor and manage any material risks to the central counterparty arising from such tiered participation arrangements.

ASX Clear (Futures) gathers basic information on indirect participation in the form of a Daily Beneficial Owner Report (DBOR) from participants. This report provides details of client positions. These data are aggregated and reviewed to identify positions that may be unusual, result in a concentration of risk, or breach position limits set by the facility for the expiry period. There are, however, practical limitations to the use of these data for the analysis of

tiering; in particular, the account codes of an entity or related entities may vary from participant to participant.

In April 2014, ASX Clear (Futures) launched client clearing for OTC derivatives, with the option for individually segregated client accounts. In July 2014, this account structure was extended to exchange-traded derivatives. If clients opt to use individually segregated accounts, ASX will be able to gather better information on client positions to support its monitoring of tiered participation risks (see Standard 18.4).

Under current arrangements, if required, ASX Clear (Futures) may request more detailed information on any indirect client from that client's clearing participant. This information may include further details about the indirect participant's profile or activities, including, but not limited to, its intentions as to open positions or physical delivery. In addition, ASX Clear (Futures) also has an ongoing program of 'thematic' participant reviews, covering risk topics of interest or concern. These could potentially examine tiering risks if ASX Clear (Futures) were to perceive an increased risk from indirect relationships. ASX Clear (Futures) currently considers the risks from concentration of indirect participants to be low.

18.2 A central counterparty should identify material dependencies between direct and indirect participants that might affect the central counterparty.

As noted under CCP Standard 18.1, ASX Clear (Futures) monitors dependencies arising from tiered participation indirectly through a variety of means. These include regular discussions with participants on developments in their business and risk management activities, participants' own risk assessments, discussions with new participants as part of the induction process, expiry monitoring activities, monitoring of delivery risk (e.g. futures options expiries), and ASX Clear (Futures)' broader array of risk management data collection (including the DBOR, described under CCP Standard 18.1) and monitoring activities. Based on this information, ASX Clear (Futures) has not identified any material dependencies between direct and indirect participants.

As discussed under CCP Standard 18.4, the introduction of individually segregated accounts will permit ASX Clear (Futures) to monitor the proportion of a participant's business attributable to a particular client and set triggers for further action based on the proportion of initial margin attributable to that client.

18.3 A central counterparty should identify indirect participants responsible for a significant proportion of transactions processed by the central counterparty and indirect participants whose transaction volumes or values are large relative to the capacity of the direct participants through which they access the central counterparty in order to manage the risks arising from these transactions.

ASX encourages participants to develop appropriate risk control measures in managing their relationships with indirect participants. ASX does not set thresholds, either formal or informal, at which it would encourage direct participation by an indirect participant. ASX's general approach to managing risks associated with participants' business activities is based on a framework that can flexibly detect and respond to new risks as they arise, rather than setting firm *ex ante* activity limits. This approach has worked well in managing risk events in recent Assessment periods, notably in managing the default of MF Global in late 2011.

18.4 A central counterparty should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.

During the Assessment period, ASX conducted a broad review of its concentration risk policy. This included further consideration of its approach to the risks arising from tiered participation. As a result of this review, ASX developed a formal Concentration Risk Standard, setting out a risk-based approach to monitoring tiered participation risks.

Exposures arising from OTC derivatives clearing remain low relative to exchange-traded derivatives exposures. Furthermore, client clearing arrangements for OTC derivatives were introduced only towards the end of the Assessment period. Accordingly, ASX has to date focused on the risks from tiered participation arrangements in its exchange-traded derivatives clearing activities.

ASX Clear (Futures) reviews risks arising from tiered participation in exchange-traded derivatives on a daily basis using the DBOR client-level data. A number of predefined triggers are applied to these data to identify positions that may be unusual, result in a concentration of risk, or breach position limits set by the facility for the expiry period. The triggers are defined at the contract level, taking into account factors such as the nature of the contract, the market liquidity, whether the contract has position limits for expiry, and whether it is deliverable. Monitoring of the DBOR data, including the DBOR triggers, is conducted by ASX Participant Compliance as part of its daily monitoring of credit risk (see CCP Standard 4.2) and ASX's broader framework for management of risks (CCP Standard 3).

Once clients commence use of individually segregated client accounts (see CCP Standard 13), ASX Clear (Futures) intends to enhance its monitoring of indirect participation in the exchange-traded derivatives market. In particular, on a daily basis, ASX Clear (Futures) will monitor concentration indicators based on initial margin. If a client's initial margin accounts for over 25 per cent of the clearing participant's total initial margin, further investigation would be triggered. The Concentration Risk Standard notes that indicators may return a number of false positives and escalation of any breaches of triggers will be based on a number of factors, including the materiality of the breach and the credit standing and activity profile of the relevant participant. Clients that continue to clear via an omnibus client account will continue to be monitored using the DBOR data.

Standard 19: FMI links

A central counterparty that establishes a link with one or more FMIs should identify, monitor and manage link-related risks.

Rating: Observed

ASX Clear (Futures) maintains links to two other FMIs: Austraclear and NZClear. ASX Clear (Futures) assumes no direct financial risks from these links, but is exposed to operational risks. These are managed in the context of the operational risk management practices of both FMIs (CCP Standard 19.1). The legal basis of each link is supported by finality legislation, and link arrangements have been discussed with the Bank (CCP Standards 19.2, 19.3). ASX Clear (Futures) does not maintain links with any other CCPs (CCP Standards 19.4, 19.5).

The Bank's assessment is that ASX Clear (Futures) has observed the requirements of CCP Standard 19 during the 2013/14 Assessment period. ASX Clear (Futures)' management of link-related risks is described in further detail under the following sub-standards.

19.1 Before entering into a link arrangement, and on an ongoing basis once the link is established, a central counterparty should identify, monitor and manage all potential sources of risk arising from the link arrangement. Link arrangements should be designed such that the central counterparty is able to comply with these CCP Standards.

Identifying link-related risks

ASX Clear (Futures) maintains two links with other FMIs. A link for the purposes of this standard is any connection that is made to another FMI according to a set of contractual and operational arrangements, irrespective of the complexity or otherwise of the link and whether it is directly with the FMI or through an intermediary.

The first link is with Austraclear. This link supports AUD funds transfers and lodgement of AUD-denominated non-cash collateral. Cash transfers are entered into Austraclear by ASX Clear (Futures), and then matched in Austraclear against the respective clearing participants' cash settlement instructions. Regular margin collections, which make up the majority of cash transfers, are submitted to Austraclear by ASX Clear (Futures)' margin and collateral systems, while intraday margin collections are entered manually. AUD-denominated non-cash collateral is lodged via a collateral lodgement form, and cannot be applied to margin requirements until the day following lodgement of this form. Once ASX Clear (Futures) has received the form, the relevant securities are transferred to ASX Clear (Futures) via a 'free of payment' trade in Austraclear.

The second link is with NZClear. This link supports settlement of NZD payments. ASX Clear (Futures) maintains an account in NZClear to initiate and receive NZD margin payments, with settlement in central bank money via arrangements with a commercial settlement bank (see CCP Standard 9.1).

Managing operational risk

The link to Austraclear is subject to the same operational risk management framework that applies for all the ASX CS facilities. This addresses operational risks associated with software, infrastructure or network failures and manual processing errors. An incident report is required for any significant technical or operational incident, including an assessment of mitigating actions to reduce the risk of reoccurrence. In addition, six-monthly risk profile assessments are prepared and presented to the Audit and Risk Committee, and an independent system-controls audit is conducted annually. Austraclear operations are also covered by the Austraclear System Business Operations Plan, which includes a 'Step-in and Service' agreement with the Bank (see Appendix A2.2, SSF Standard 14).

The potential impact of risks associated with ASX Clear (Futures)' link to NZClear is limited by the small size of NZD margins in comparison with total margins held by ASX Clear (Futures). NZClear is owned, operated and overseen by the Reserve Bank of New Zealand. Any operational issues that arise in NZClear are notified to all members, including ASX Clear (Futures), via email notification. NZClear has the ability to perform transactions on behalf of a member in the event of an operational disruption to ASX Clear (Futures)' link arrangements; in this case, ASX would advise NZClear to perform payment instructions via written instructions signed by ASX's authorised signatories. ASX Clear (Futures) has contingency arrangements that allow for late payment of margin on New Zealand futures products via Austraclear in AUD, with ASX Clear (Futures) applying a haircut to the NZD margin equivalent.

Managing financial risk

ASX Clear (Futures) does not assume any direct financial risks from its links to other FMIs.

19.2 A link should have a well-founded legal basis, in all relevant jurisdictions, that supports its design and provides adequate protection to the central counterparty and other FMIs involved in the link.

ASX Clear (Futures)' link to Austraclear has its legal basis in the Austraclear Operating Rules and Procedures. The finality of settlements via this link is supported by the approval of Austraclear under Part 2 of the PSNA (see CCP Standard 1.5).

The link to NZClear has its legal basis in the system rules of NZClear and Part 5C of the *Reserve Bank of New Zealand Act 1989* (NZ) (see CCP Standard 8.1).

19.3 Where relevant to its operations in Australia, a central counterparty should consult with the Reserve Bank prior to entering into a link arrangement with another FMI.

ASX Clear (Futures) has discussed its current link arrangements with the Bank. ASX Clear (Futures) did not enter into any new link arrangements during the Assessment period.

19.4 Before entering into a link with another central counterparty, a central counterparty should identify and manage the potential spillover effects from the default of the linked central counterparty. If a link has three or more central counterparties, a central counterparty should identify, assess and manage the risks of the collective link arrangement.

ASX Clear (Futures) has no links with other CCPs.

19.5 A central counterparty in a central counterparty link arrangement should be able to cover, at least on a daily basis, its current and potential future exposures to the linked central counterparty and its participants, if any, fully with a high degree of confidence without reducing the central counterparty's ability to fulfil its obligations to its own participants at any time.

ASX Clear (Futures) has no links with other CCPs.

Standard 20: Disclosure of rules, key policies and procedures, and market data

A central counterparty should have clear and comprehensive rules, policies and procedures and should provide sufficient information and data to enable participants to have an accurate understanding of the risks they incur by participating in the central counterparty. All relevant rules and key policies and procedures should be publicly disclosed.

Rating: Observed

ASX Clear (Futures) fully discloses its Operating Rules and Procedures (including the OTC Handbook) to participants and publicly discloses its rules and a range of additional relevant information on its risk management procedures (CCP Standard 20.1). This includes information regarding the process of novation, and general descriptions of system design and the roles and obligations of ASX Clear (Futures) and its participants (CCP Standards 20.2, 20.3). ASX Clear (Futures) provides new participants with comprehensive documentation, and verifies their understanding of their responsibilities as participants; existing participants are also provided with education on their obligations where required (CCP Standard 20.4). ASX has published its response to the CPSS-IOSCO

Disclosure Framework and plans to periodically update and enhance this document where appropriate (CCP Standard 20.5). During the Assessment period, ASX redesigned its website, providing links to information that is subject to disclosure requirements from a central location.

The Bank will continue to monitor steps by ASX Clear (Futures) to refine and enhance its disclosure, including in response to forthcoming CPSS-IOSCO quantitative disclosure standards for CCPs.

The Bank's assessment is that ASX Clear (Futures) has observed the requirements of CCP Standard 20 during the 2013/14 Assessment period. ASX Clear (Futures)' disclosure of rules, key policies and procedures, and market data is described in further detail under the following sub-standards.

20.1 A central counterparty should adopt clear and comprehensive rules, policies and procedures that are fully disclosed to participants. Relevant rules and key policies and procedures should also be publicly disclosed (including specific requirements relating to CCP Standards 1.4, 2.2, 12.3, 13.4, 15.4, 17.2 and 17.3).

ASX Clear (Futures)' Operating Rules and Procedures form the basis of all material aspects of the CCP's service to participants. The Operating Rules are disclosed on ASX's public website.[15] The Operating Rules are also posted on the ASX participant website, along with Procedures relevant to participants. The OTC Handbook is also available from the ASX public website.

To assist participants in their understanding of the risks of participating in ASX Clear (Futures), and for the information of other interested stakeholders, ASX publishes a range of additional material on its public website. Information specific to ASX Clear (Futures) includes information about risk management, default management, margins and capital-based position limits, and business continuity arrangements. More general information includes: the ASX Group's regulatory framework; requirements of the FSS; requirements of the Corporations Act for provision of services in a 'fair and effective' way; the ASX Group's other obligations under the Corporations Act; and ASX Group's compliance with the Principles. During the Assessment period, ASX redesigned its website, one element of which involved centralising links to information required to be disclosed under the FSS.

Specific disclosure requirements are dealt with under CCP Standards 1.4, 2.2, 12.3, 13.4, 15.4, 17.2 and 17.3.

20.2 A central counterparty's rules, policies and procedures should clearly identify the nature and scope of the risk exposure assumed by the central counterparty, such as by novation, open offer or other similar legal devices. A central counterparty's rules, policies and procedures should clearly identify the point in the clearing process at which the central counterparty assumes the risk exposure.

ASX maintains on its public website an overview of how the CCPs would manage a clearing participant default, which includes information about the purpose of novation, the point at which novation occurs, and the scope of contractual arrangements.[16] Part 3 of the ASX Clear (Futures) Operating Rules sets out the arrangements for registration of market contracts, including the point at which a contract is considered to be registered and at which ASX Clear (Futures) assumes the risk exposure of a trade (see CCP Standard 1.5). The conditions and

[15] Available at <http://www.asx.com.au/regulation/rules/asx-clear-futures-operating-rules.htm>.

[16] Available at <http://www.asx.com.au/documents/clearing/131001_Default_Management_-_Public_Information_Document_v1.pdf>.

timing for the novation of an OTC derivatives trade are outlined in the OTC Rules and the OTC Handbook.

20.3 A central counterparty should disclose clear descriptions of the system's design and operations, as well as the central counterparty's and participants' rights and obligations, so that participants can assess the risks they would incur by participating in the central counterparty (see CCP Standards 2.8 and 9.5).

General descriptions of ASX Clear (Futures)' system design and operations are available on the ASX public website, including as part of ASX's response to the CPSS-IOSCO Disclosure Framework (see CCP Standard 20.5).[17] The Disclosure Framework document describes the ASX group structure, provides a general description of the CS facilities and their roles, system design and operations, outlines the legal and regulatory framework for clearing and settlement, and provides a description of steps taken by ASX to ensure compliance with the Principles and the corresponding FSS. The ASX public website provides additional information on system design and operations, including descriptions of the exchange-traded and OTC derivatives clearing processes and margining approaches.

20.4 A central counterparty should provide all necessary and appropriate documentation and training to facilitate participants' understanding of the central counterparty's rules, policies and procedures and the risks they face from participating in the central counterparty.

All applicants for participation in ASX Clear (Futures) are provided with a comprehensive application pack, which includes information regarding key requirements of the facilities. Applicants are provided with access to the Operating Rules, Procedures and Guidance Notes via the ASX website, as well as publicly available information about the facilities, services and participation requirements. When ASX Clear (Futures) has completed an initial assessment of an application, the applicant is also invited to attend formal 'on boarding' meetings with the Compliance, CRM and Operations departments to discuss key areas of importance for participants.

As part of the formal admission process, the applicant must provide supporting evidence of its capacity to comply with the rules. This is reviewed and discussed with the applicant prior to approving admission. For example, participants are required to have a management plan which outlines the governance, risk and compliance arrangements of the participant. When reviewing the submissions, ASX will make enquiries of participants about their risk assessments, the design of the controls to mitigate those risks, and details of participants' arrangements to ensure compliance with the Operating Rules and Procedures.

Where ASX becomes aware or suspects that a participant lacks a satisfactory understanding of the Operating Rules and Procedures, or the risks of participation, ASX will generally work collaboratively with the participant to educate them on their obligations. ASX may become aware of issues through its routine risk monitoring activities or through its regular discussions with participants. Examples of matters that might raise concerns are if a participant was slow in making required payments, or had a high frequency of intraday margin calls arising from delays in the intraday allocation of client positions. Steps available to ASX to address serious matters may include: ASX Clear (Futures) calling for AIM or additional cover from the participant; requiring the participant to hold additional capital; requiring the participant to

[17] Available at <http://www.asx.com.au/documents/regulation/pfmi_disclosure_framework.pdf>.

remediate the weakness; imposing conditions on participation; or requiring that the participant appoint an independent expert to assist with the remediation task (see also CCP Standard 16.5).

20.5 A central counterparty should complete regularly and disclose publicly responses to the CPSS-IOSCO *Disclosure Framework for Financial Market Infrastructures*. A central counterparty also should, at a minimum, disclose basic risk and activity data, as directed by the Reserve Bank from time to time.

ASX has published its response to the CPSS-IOSCO Disclosure Framework, including information describing how its CS facilities observe the applicable Principles. This document was revised during the 2013/14 Assessment period, expanding on a previous version that summarised ASX's approach to observance of the Principles with greater detail as to how the CS facilities meet the Principles and corresponding FSS. ASX plans to update this document quarterly and further enhance its disclosure as necessary from time to time.

ASX currently reports basic risk and activity data for the CS facilities via a monthly activity report, as well as through additional data published on its website. In December 2013, CPSS and IOSCO published a draft set of quantitative disclosure standards for CCPs that are intended to complement descriptive disclosures under the Disclosure Framework. Once a finalised version of these standards comes into effect, ASX Clear (Futures) will be expected to expand the range of quantitative risk and activity data that it publicly discloses. The Bank will continue to monitor steps by ASX Clear (Futures) to refine and enhance its disclosure, including in response to the forthcoming CPSS-IOSCO quantitative disclosure standards for CCPs.

Standard 21: Regulatory reporting

A central counterparty should inform the Reserve Bank in a timely manner of any events or changes to its operations or circumstances that may materially impact its management of risks or ability to continue operations. A central counterparty should also regularly provide information to the Reserve Bank regarding its financial position and risk controls on a timely basis.

Rating: Observed

The Bank meets regularly with ASX Clear (Futures) to discuss matters relevant to its compliance with the FSS, and related aspects of its risk management and operational arrangements. The Bank has been kept informed of relevant developments during the Assessment period (CCP Standard 21.1). ASX Clear (Futures) provides the Bank with financial, activity, risk and operational data and reports on a regular and timely basis (CCP Standard 21.2).

The Bank's assessment is that ASX Clear (Futures) has observed the requirements of CCP Standard 21 during the 2013/14 Assessment period. ASX Clear (Futures)' regulatory reporting arrangements with the Bank are described in further detail under the following sub-standards.

21.1 A central counterparty should inform the Reserve Bank as soon as reasonably practicable if:

(a) it breaches, or has reason to believe that it will breach:

(i) a CCP Standard; or

(ii) its broader legislative obligation to do, to the extent that it is reasonably practicable to do so, all things necessary to reduce systemic risk;

(b) it becomes subject to external administration, or has reasonable grounds for suspecting that it will become subject to external administration;

(c) a related body to the central counterparty becomes subject to external administration, or if the central counterparty has reasonable grounds for suspecting that a related body will become subject to external administration;

(d) a participant becomes subject to external administration, or if the central counterparty has reasonable grounds for suspecting that a participant will become subject to external administration;

(e) a participant fails to meet its obligations under the central counterparty's risk control requirements or has its participation suspended or cancelled because of a failure to meet the central counterparty's risk control requirements;

(f) it fails to enforce any of its own risk control requirements;

(g) it plans to make significant changes to its risk control requirements or its rules, policies and procedures;

(h) it or a service it relies on from a third party or outsourced provider experiences a significant operational disruption, including providing the conclusions of its post-incident review;

(i) any internal audits or independent external expert reviews are undertaken of its operations, risk management processes or internal control mechanisms, including providing the conclusions of such audits or reviews;

(j) its operations or risk controls are affected, or are likely to be affected, by distress in financial markets;

(k) it has critical dependencies on utilities or service providers, including providing a description of the dependency and an update if the nature of this relationship changes;

(l) it proposes to grant a security interest over its assets (other than a lien, right of retention or statutory charge that arises in the ordinary course of business);

(m) it proposes to incur or permit to subsist any loans from participants or members unless such loans are subordinated to the claims of all other creditors of the central counterparty; or

(n) any other matter arises which has or is likely to have a significant impact on its risk control arrangements (see also CCP Standards 1.6, 16.10 and 19.3).

Three routine meetings are held between the Bank and ASX each quarter:

- executive-level meetings to discuss developments relevant to compliance with the FSS, involving the Chief Risk Officer and other relevant members of ASX's management team; representatives from ASIC attend these meetings to discuss matters of common interest
- risk management meetings, involving general managers and other staff responsible for clearing risk policy and the implementation of risk management arrangements

- operations meetings, involving the Group Executive, Operations, and other members of the management team responsible for implementation of operational strategy, management of operational risk and business continuity planning.

These meetings provide a forum for the discussion of material developments, such as issues regarding participant compliance, changes to risk management controls, and the results of internal audits. Matters discussed in the formal scheduled meetings are followed up, as appropriate, in more focused targeted sessions.

The Bank expects to be notified immediately of any significant developments in ASX Clear (Futures)' risk exposure; for example, if ASX Clear (Futures) has reason to believe that a participant default may be imminent or there is evidence of distress in markets cleared by ASX Clear (Futures). Notification to the Bank of significant developments is specified in many of ASX's key internal risk management policies. The Bank and ASX hold ad hoc meetings to discuss relevant matters as required.

During the 2013/14 Assessment period, ASX kept the Bank up to date with several minor operational incidents and the status of important project milestones, such as the launch of the dealer-to-dealer OTC derivatives clearing service, the introduction of client clearing services for OTC and exchange-traded derivatives, and the replacement of SECUR with Genium Clearing. The Bank is satisfied with its level of communication with ASX over this period.

21.2 A central counterparty should also provide to the Reserve Bank, on a timely basis:

(a) audited annual accounts;

(b) management accounts on a regular basis, and at least quarterly;

(c) risk management reports, including detailed information on margining and stress testing, on a regular basis, and at least quarterly;

(d) periodic activity, risk and operational data, as agreed with the Reserve Bank; and

(e) any other information as specified by the Reserve Bank from time to time.

Audited annual reports are published on the ASX public website, while ASX provides the Bank with quarterly statements of balance sheet, income, and collateral held for each CS facility.

ASX provides a quarterly risk management report, as well as detailed activity, risk and operational data. The risk management report includes information on stress-test results, adequacy of financial resources, and developments in risk management policy. Data provided quarterly to the Bank include changes to participants' ICRs, daily margin collections (including intraday margin calls), stress-test results, collateral holdings and any late payments. The quarterly risk management review meetings between the Bank and ASX provide a forum for discussion of developments observed in the data.

From time to time the Bank will request additional information from ASX Clear (Futures) on topics of interest, particularly in regard to any operational incidents or the status of projects with significant risk implications.

During 2013/14, the Bank conducted a review of the data that it collects from ASX in order to better support its assessment of the CS facilities against the requirements of the FSS. As a result

of this review, ASX will implement enhancements to the data it reports to the Bank over coming months.

DOCUMENT 10
ASX CLEAR (FUTURES) PTY LIMITED
PETITION FOR EXEMPTION

ASX

The information below has been compiled by ASX management. Please note that the RBA and ASIC separately assess ASX Group's CS licensees' compliance with the PFMI and FSS.

Principles for Financial Market Infrastructures ("PFMI") Disclosure Framework

February 2015

↗ASX Group – Financial Market Infrastructures ("FMIs")

ASX Clearing Houses
- ASX Clear Pty Limited ("ASX Clear")
- ASX Clear (Futures) Pty Limited ("ASX Clear (Futures)")

ASX Securities Settlement Facility
- ASX Settlement Pty Limited ("ASX Settlement")

ASX Fixed Interest Depository
- Austraclear Limited ("Austraclear")

↗Australian Regulatory Authorities

Australian Securities and Investments Commission ("ASIC")
- regulator of securities and derivatives markets
- focus on market integrity

Reserve Bank of Australia ("RBA")
- Australia's central bank
- focus on financial and systemic stability
- determine the Financial Stability Standards ("FSS")

Australian Prudential Regulation Authority ("APRA")
- the prudential regulator of the Australian financial services industry
- focus on financial system stability

DOWNLOAD ASX's FMIs have been assessed by ASIC and the RBA as complying with all PFMIs.

Key facts about ASX's Financial Market Infrastructures

Credit Rating

- ASX Clear
  DOWNLOAD
- ASX Clear (Futures)
  DOWNLOAD

S&P 'AA-' LONG TERM STABLE

QCCP

- ASX Clear
- ASX Clear (Futures)

APRA

Qualifying CCP ("QCCP") Status confirmed

DOWNLOAD

Domestic Standards

- ASX Clear
- ASX Clear (Futures)
- ASX Settlement
- Austraclear

RBA

Financial Stability Standards compliance

International Standards

- ASX Clear
- ASX Clear (Futures)
- ASX Settlement
- Austraclear

CPMI-IOSCO

Principles for Financial Market Infrastructures [PFMIs] compliance

- ASX Clear
- ASX Clear (Futures)

EUROPEAN UNION: EMIR CCP RECOGNITION

Recognition applications lodged; recognition expected 2015

- ASX Clear (Futures)

UNITED STATES: CFTC REGISTRATION

"No action" relief in place

Principles for Financial Market Infrastructures ("PFMI") Disclosure Framework

ASX

I. Executive Summary:
Our Business & Customers

ASX Group ("ASX") is the brand name under which ASX Limited and its subsidiaries operate. ASX is one of the world's leading financial market exchanges, offering a full suite of services, including listings, trading, clearing and settlement, across a comprehensive range of asset classes.

As the first major financial market open every day, ASX is a world leader in raising capital, consistently ranking among the top five exchanges globally.

With a total market capitalisation of around $1.5 trillion, ASX is home to some of the world's leading resource, finance and technology companies. Our $47 trillion interest rate derivatives market is the largest in Asia and among the biggest in the world.

ASX's domestic and international customer base is diverse. It includes issuers (such as corporations and trusts) of a variety of listed securities and financial products, investment and trading banks, fund managers, hedge funds, commodity trading advisers, brokers and proprietary traders, market data vendors, other listing and trading vendors, and retail investors.

We operate in a world class regulatory environment, meeting the highest global standards. Our clearing houses are among the most secure and well capitalised in the world, and help underpin the stability of Australia's financial markets.

ASX Group is structured to provide fair and reliable systems, processes and services that instil confidence in the markets that depend on ASX's infrastructure.

Confidence in the operations of the companies within the ASX Group is reinforced by the whole-of-market regulation undertaken by ASIC across all trading venues and clearing and settlement facilities, as well as the financial system stability oversight by the RBA of ASX Group's Clearing and Settlement ("CS") facilities. ASIC also supervises ASX's own compliance with the ASX Listing Rules as a listed company.

The ASX Clearing and Settlement ("CS") subsidiary boards provide a focus on risk management and oversight of the operations of ASX's CS subsidiaries, including overseeing management of clearing and settlement risks. Further details regarding ASX's corporate governance arrangements are set out in Section III under "General Organisation of the FMI".

ASX's Risk operating division is responsible for ensuring ASX identifies, analyses and effectively manages the entire range of risks inherent in all the Group's activities while having direct responsibility to specifically manage clearing related risks.

Clearing risk management activities for ASX's central counterparty services are designed to ensure the integrity of the marketplace is maintained through the operation of the clearing houses irrespective of events such as the insolvency of a clearing participant and without impacting other clearing participants and their clients. These activities are primarily focused on credit risk (the likelihood of a clearing participant becoming insolvent) and market risk (the exposure of the clearing house to a clearing participant were it to become insolvent), and include minimum participant capital requirements, participant admission criteria, margins and position monitoring, and stress testing of the capital and liquidity of the clearing houses.

ASX's securities settlement facilities assist ASX participants to more effectively minimise their settlement and operational risk. ASX's two settlement facilities provide a 'delivery versus payment' settlement service, secure asset holding services, and a wide network that enables 'straight through processing'. ASX's Operations division has direct responsibility to specifically manage settlement related risks.

Recent Initiatives

Renminbi Settlement:

ASX and the Bank of China launched an RMB settlement service in July 2014. The service allows Australian companies to pay and receive RMB in near real-time and in the same way they transact in Australian dollars using Austraclear.

Client Segregation Enhancements – ASX Settlement:

ASX has and is making rule and process changes for the purpose of enhancing the protection of client stock and funds during the settlement process between Trade date (T) and Settlement date (T+3). The changes are being introduced in two phases. The first phase, completed in April 2014, introduced rule changes regarding the requirements to reconcile omnibus accounts used in preparation for settlement and to ensure funds being held in participant trust accounts can only be withdrawn once the underlying client has been allocated the respective stock to which the funds relate. Phase 2 includes changes to CHESS messaging flows to technically enforce Phase 1. Implementation of Phase 2 is scheduled for May 2015.

II. Summary of major changes

Two independent Australian government entities - the RBA and ASIC – are members of the Committee on Payments and Market Infrastructures ("CPMI", previously the Committee on Payment and Settlement Systems ("CPSS")) and the International Organisation of Securities Commissions ("IOSCO") respectively, and are responsible for implementing the CPMI-IOSCO Principles for Financial Market Infrastructures in Australia.

In December 2012, the RBA published new Financial Stability Standards ("FSS") which apply to central counterparties ("CCPs") and securities settlement facilities ("SSFs") in Australia. The FSS are aligned with the requirements in the CPMI-IOSCO Principles that address matters relevant to financial stability.

In the same month, ASIC published Regulatory Guide 211 - Clearing and Settlement facilities: Australian and overseas operators, which incorporates the CPMI-IOSCO Principles that are relevant to ASIC's regulatory remit.

The RBA's Payments System Board granted transitional relief from several FSS relating to recovery and resolution until 31 March 2014, given their dependence on the finalisation of policy work and legislative change. An implementation plan has been agreed with the RBA for compliance with these FSS given the expiration of the transitional relief.

The effective date for the new FSS in Australia was 29 March 2013. On 16 August 2013, the RBA advised ASX of supplementary interpretive guidance for the application of the FSS to ASX Clear (Futures) because it is a domestically licensed facility, which provides services to clearing participants established in the European Union. On 27 October 2014, the RBA extended this supplementary interpretive guidance to ASX Clear.

ASX responded to the RBA with details of the actions that the CCPs are taking to address the supplementary interpretive guidance for the standards.

On 30 October 2014, the European Commission announced it had adopted an 'equivalence' decision for the regulatory regime of CCPs in Australia that will enable the European Securities and Markets Authority (ESMA) to consider applications from ASX Clear and ASX Clear (Futures) to be recognised as qualifying CCPs across the European Union.

This document is ASX Group's response to the CPMI-IOSCO Principles for Financial Market Infrastructures.

III. General Background on the FMIs

General description of the FMIs and the markets they serve

ASX Group's CS subsidiaries comprise six entities. There are four companies that hold CS licences required to operate CS facilities and there are two intermediate holding companies – ASX Clearing Corporation Limited ("ASX Clearing Corporation") and ASX Settlement Corporation Limited ("ASX Settlement Corporation"). These facilities are all owned by ASX Limited, which is the listed holding company for these entities. Related bodies corporate within the ASX Group assist the CS subsidiaries in the performance of their licence obligations.

ASX's FMIs provide central counterparty risk transfer (via subsidiaries of ASX Clearing Corporation); and securities settlement (via subsidiaries of ASX Settlement Corporation) for the ASX market - including equities, warrants, interest rate securities and equity-related derivatives - for the Chi-X market, for the ASX24 market - including futures and options - and for over-the-counter interest rate derivative products. Securities settlement is also provided for cash equities traded on the NSX, SIM and APX markets and for the OTC market for fixed income securities and discount securities.

Clearing

ASX Clearing Corporation assists ASX participants to more effectively undertake their clearing activity by reducing systemic risk, minimising counterparty risk and by increasing capital efficiency and operating efficiency. This is achieved through ASX Clearing Corporation's wholly owned subsidiaries, ASX Clear Pty Limited ("ASX Clear") and ASX Clear (Futures) Pty Limited ("ASX Clear (Futures)"), which operate clearing facilities and provide central counterparty facilities.

ASX Clear

ASX Clear operates a clearing facility and provides CCP services for financial products traded on the ASX market, including equities, warrants, interest rate securities and equity related derivatives (comprising exchange traded options and futures) and for equities traded on the Chi-X market.

ASX Clear is authorised to clear transactions for certain customers located in a number of jurisdictions, including the EU and United States.

ASX Clear is currently the sole provider of clearing services for Australia's equity markets, and has made a number of commitments to customers of its cash equities clearing services which are set out in a Code of Practice.

ASX Clear operates the Derivatives Clearing System ("DCS") to register and clear equity related derivative products and the Clearing House Electronic Subregister System ("CHESS") to register and clear cash equities, interest rate securities and warrants.

ASX Clear participants and stakeholders can refer to www.asx.com.au/services/clearing/asx-clear.htm to obtain information regarding ASX Clear.

ASX Clear (Futures)

ASX Clear (Futures) operates a clearing facility and provides CCP services for derivative products traded on the ASX 24 market and for over-the-counter interest rate derivative products.

ASX Clear (Futures) is authorised to clear transactions for certain customers located in a number of jurisdictions, including the EU and United States.

ASX Clear (Futures) operates Genium INET to register and clear futures and options and Calypso for over-the-counter interest rate derivative products.

ASX Clear (Futures) is the clearing facility and CCP for all futures and options in interest rate, equity, energy and commodity products that are traded on the ASX Trade24 platform.

ASX Clear (Futures) participants and stakeholders can refer to www.asx.com.au/services/clearing/asx-clear-futures.htm to obtain information regarding ASX Clear (Futures) and its products.

ASX

Settlement

ASX Settlement Corporation assists ASX participants to more effectively minimise their settlement and operational risk. This is achieved through ASX Settlement Corporation's wholly owned subsidiaries, ASX Settlement Pty Limited ("ASX Settlement") and Austraclear Limited ("Austraclear").

These two settlement facilities provide a 'delivery versus payment' settlement service, secure asset holding services as well as a wide network that enables 'straight through processing'.

ASX Settlement

ASX Settlement operates the SSF for cash equities, interest rate securities and warrants traded on the ASX market, and for cash equities traded on the Chi-X, NSX, SIM and APX markets. The facility enables parties to transactions conducted on the ASX to meet obligations to each other and allows for the registration and transfer of holdings of securities traded on the ASX.

ASX Settlement is currently the sole provider of settlement services for Australia's equity markets, and has made a number of commitments to customers of its cash equities settlement services, which are set out in a Code of Practice.

ASX Settlement has announced that it will move from a T+3 to a T+2 settlement cycle in the first quarter of calendar year 2016. ASX Settlement's decision to shorten the settlement cycle by a business day was based on industry consultation and a recommendation provided by an industry advisory Forum established by ASX under the Code of Practice.

ASX Settlement operates CHESS to transfer and settle cash equities, interest rate securities and warrants.

ASX Settlement participants and stakeholders can refer to www.asx.com.au/services/settlement/asx-settlement.htm to obtain information regarding ASX Settlement, CHESS and its services.

Austraclear

Austraclear operates a settlement facility and central securities depository ("CSD") for trades executed in the OTC market for fixed income securities (including Government Bonds and Repos) and discount securities (including Bills, Electronic Certificates of Deposit, and Promissory Notes).

Austraclear operates Exigo as the technical platform that supports the settlement facility and CSD operational environment.

Austraclear participants and stakeholders can refer to www.asx.com.au/services/settlement/austraclear.htm to obtain further information.

Key statistics

Most key CS systems operate to a 99.80% minimum availability target, while Exigo operates to a 99.90% minimum availability target. Capacity utilisation is continually monitored to maintain capacity headroom of 50% above peak utilisation.

Please refer to the ASX Group Monthly Activity Reports for periodic summaries of the CS infrastructure's performance.

General Organisation of the FMIs (Governance)

The ASX Limited Board has responsibility to oversee the conduct of the ASX Group consistent with its licence obligations, as well as public policy objectives directed at financial market and payments system integrity. The ASX Limited Board Charter, available on the ASX website at: www.asx.com.au/about/corporate-governance.htm sets out in detail the functions of the ASX Limited Board.

The CS Boards provide a focus on risk management and oversight of the clearing and settlement operations of the CS subsidiaries, including overseeing management of clearing and settlement risk.

In particular, the ASX Limited Board relies on the CS Boards to review and provide oversight of risk management processes, internal controls and compliance systems in respect of:

- the management accounts of the CS subsidiaries which are prepared on a quarterly basis, and full year CS financial reports and statements;
- the management of clearing and settlement risks (being predominantly the clearing counterparty credit risk, the treasury investment risk and the liquidity risk of the CCP clearing subsidiaries and settlement risks within the SSFs); and
- compliance with the FSS determined by the RBA.

The CS licensees have arrangements in place with subsidiary companies to provide support services for compliance and enforcement services, approval and monitoring of conflicts handling arrangements and resourcing, which include intra-group agreements.

Further details about the CS Boards governance and ownership arrangements are contained in the CS Boards Charter, which is available at: www.asx.com.au/about/corporate-governance.htm

Other key governance documents relating to the ASX Group including the ASX Limited Board Charter, the Board and Committee Charters, the ASX Limited Board Policy and Guideline to Relationships Affecting Independent Status and ASX's Conflict Handling Arrangements are also available at: www.asx.com.au/about/corporate-governance.htm

Internal Audit

Internal Audit is an independent assurance function established by ASX management. The principal objective of Internal Audit is to provide independent, objective assurance and consulting services designed to add value and improve the operations of ASX. Internal Audit helps ASX accomplish its objective by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management and internal control and governance processes.

ASX

The Clearing and Settlement Boards are responsible for oversight of risk management (including internal controls and Internal Audit matters) relevant to the licensed clearing and settlement facilities and the Audit and Risk Committee (ARC) is responsible for oversight of ASX Group enterprise wide risk. The ARC reviews and concurs on the appointment, replacement, dismissal and remuneration of the General Manager, Internal Audit.

The ARC reviews the performance, objectivity, independence and effectiveness of the Internal Audit function, and also reviews and approves the overall annual risk based internal audit plan. The annual plan for the audits that relate to clearing and settlement are also reviewed by the CS Boards.

The General Manager, Internal Audit reports to the ARC and the Managing Director and CEO for functional audit processes and to the Chief Risk Officer for administrative purposes. The General Manager, Internal Audit also has a direct line of reporting access to the CS Boards and the ASX Compliance Board. Internal Audit personnel report to the General Manager, Internal Audit and have no line responsibility or authority over any of the activities or operations that they audit. The Internal Audit Charter provides a documented escalation process for audit reporting.

Internal Audit work is performed regularly throughout the financial year. All audit work is performed with reference to an Internal Audit Methodology that requires the auditor to obtain and document the underlying processes, risks and controls. The methodology has been quality reviewed by an external party and found to be consistent with good practice for an organisation of the size and nature of ASX.

External Audit

The ARC consider and review the scope of work, reports and activities of the external auditor including interaction with Internal Audit. The ARC also review the findings of the audit with the external auditor.

PricewaterhouseCoopers (PwC) was the auditor of ASX Limited and all subsidiaries for the financial year ended 30 June 2014.

The audit of the ASX Limited Financial Statements was recently completed for the financial year ended 30 June 2014. The ASX Limited Annual Report was released to the market on 21 August 2014, and contains the PwC audit opinion.

ASX Clear Operating Rule 1.22.1 requires an independent auditor to conduct an annual review of the clearing system(s) the CCP uses. ASX Clear uses the Derivatives Clearing System (DCS) to register and clear equity related derivative products and the Clearing House Electronic Subregister System (CHESS) to register and clear cash equities, interest rates securities and warrants. The PwC audits of DCS and CHESS, for the financial year ended 30 June 2014, are available on the ASX website.

Austraclear Regulation 18.3 requires the auditor to issue an annual report to Austraclear based on the auditor's latest audit of Austraclear's information technology control environment procedures in relation to the system. PwC's audit of Austraclear, for the financial year ended 30 June 2014 is available on the ASX website.

Legal and regulatory framework

Overview and key regulators

ASX operates in a highly regulated environment overseen by two independent government agencies –ASIC and the RBA. These government regulators have extensive powers to enforce the laws and regulations that govern financial markets in Australia.

The Assistant Treasurer ("the Minister") has primary responsibility for licensing CS facilities operating in Australia and for granting exemptions from the requirement to hold a CS facility licence. The Minister has the power to disallow amendments to the operating rules of the CS facilities, which must be submitted by the CS facilities for Ministerial review as soon as practicable after being made. ASIC is the principal regulatory authority advising the Minister in relation to the exercise of his functions and powers. ASIC assesses each CS facility licensee on its compliance with its licence obligations under the Corporations Act annually. The RBA determines FSS, annually assesses CS facility licensees on their compliance with them and advises the Minister in relation to certain matters. The Department of Treasury advises the Minister on clearing and settlement policy.

The FSS are determined by the RBA under the Corporations Act. A CS facility licensee that operates a CCP or SSF must comply with the applicable FSS. As of 28 February 2015, the FSS are consistent with the CPMI-IOSCO Principles for FMI.

The RBA has responsibility for assessing whether licensed clearing and settlement facilities, including those operated by ASX Group, have complied with the RBA's FSS and done all other things necessary to reduce systemic risk.

ASIC is responsible for the supervision of real-time trading on Australia's domestic markets, including those operated by ASX Group. ASIC is also responsible for enforcing the laws against misconduct on Australia's financial markets, as well as supervising Australian Financial Services Licence ("AFSL") holders.

The Council of Financial Regulators ("CFR") is the coordinating body for Australia's main financial regulatory agencies. Its members are the RBA (Chair), the Australian Prudential Regulation Authority ("APRA"), ASIC and Treasury. It aims to facilitate cooperation and collaboration between RBA, APRA, ASIC and Treasury.

ASX

Regulatory Assessments

ASX is subject to annual assessments of certain ASX Group licensees by both ASIC and the RBA.

ASIC

The scope of ASIC assessments can include any or all of the obligations of a market operator or CS facility licensee under s792A(c) and 821A(c) of the Corporations Act 2001 (Cth) to have adequate arrangements for operating a market or facility. The assessments also include ensuring that there are adequate arrangements for handling conflicts of interest and monitoring and enforcing operating rules, as well as having sufficient financial, technological and human resources to properly operate the facilities. At the conclusion of each assessment, ASIC releases a Market Assessment Report.

The latest ASIC Market Assessment Report of ASX Group licensees was released in July 2014 and covered the period 1 July 2012 to 30 June 2013. Overall, the assessment concluded that ASX Group licensees met their statutory obligations in the assessment period.

RBA

The RBA conducts an annual assessment of how well each of ASX's CS facilities are complying with the RBA's Financial Stability Standards and the more general obligation to do all other things necessary to reduce systemic risk. The RBA publishes its findings after having reported to the Minister with portfolio responsibility for Corporations Law.

In their most recent assessment of ASX's CS facilities against the FSS, the RBA found that all four CS facilities either observed or broadly observed all relevant requirements under the FSS during FY14. The RBA concluded that the facilities conducted their affairs in a way that causes or promotes overall stability in the Australian financial system.

PFMI – Joint assessment

ASIC and the RBA share joint responsibility for assessing how well ASX's CS facilities observe the requirements of the PFMI, though ASIC holds sole responsibility for certain PFMI that have not been incorporated into the FSS.

As part of their commitment to periodically carry out assessments of licensed domestic CS facilities against the PFMI, the RBA and ASIC released the findings of their first joint-assessment of ASX's CS facilities in September 2014.

The assessment deemed all four ASX licensed CS facilities to be systemically important to the Australian financial system and concluded that ASX's CS facilities either observe or broadly observe all relevant PFMI. Please refer to the joint assessment of ASX's CS facilities against the PFMI for further details.

The Corporations Act

The Corporations Act 2001 (Cth) ("the Act") is the principal Australian legislation for the regulation of post trade infrastructure (CS). In Part 7.3 the Act provides a licensing framework for domestic as well as overseas CS facilities that seek to operate in Australia.

Within ASX:

- ASX Clear and ASX Clear (Futures) are separately licensed to operate CCPs;
- ASX Settlement and Austraclear are separately licensed to operate SSFs.

The terms of these CS facility licences are publicly available.

Under the Act a CS facility licensee must (among other things):

- to the extent that it is reasonably practicable to do so:
  - comply with the FSS and do all other things necessary to reduce systemic risk; and
  - do all things necessary to ensure that the facility's services are provided in a fair and effective way;
- comply with the conditions on the licence;
- have adequate arrangements (whether they involve a self-regulatory structure or the appointment of an independent person or related entity) for supervising the facility, including arrangements for:
  - handling conflicts between the commercial interests of the licensee and the need for the licensee to ensure that the facility's services are provided in a fair and effective way; and
  - enforcing compliance with the facility's operating rules; and
- have sufficient resources (including financial, technological and human resources) to operate the facility properly and for the required supervisory arrangements to be provided.

Payment Systems and Netting Act

The Payment Systems and Netting Act 1998 ("PSNA") provides certain protections under Australian law, from reversal or invalidation under the laws of any jurisdiction, of termination, netting and settlement of obligations effected in accordance with the operating rules of ASX's CS facilities, where a participant in the CS facility goes into external administration, as follows:

- Part 2 protects real time gross settlements ("RTGS") effected through an approved RTGS system (each of Austraclear and ASX Settlement has this approval, although ASX Settlement does not routinely offer RTGS functionality);
- Part 3 protects net settlements effected through an approved netting arrangement (each of Austraclear Limited and ASX Settlement has this approval, although Austraclear does not routinely offer net settlement functionality); and

- Part 5 protects the termination, valuation and netting of obligations, and enforcement of security, by a CCP that operates an approved "netting market" (each of ASX Clear and ASX Clear (Futures) has this approval). Part 5 also protects the porting of client positions and collateral by the CCP in the event that a Clearing Participant defaults.

Other regulation

ASIC and the RBA have confirmed publicly that they apply domestic regulations that are consistent with the CPMI-IOSCO Principles for Financial Market Infrastructures to domestically licensed clearing and settlement facilities, including ASX Clear and ASX Clear (Futures). On the basis of that advice, the Australian Prudential Regulation Authority (APRA) has confirmed publicly that it considers each of ASX Clear and ASX Clear (Futures) to meet the criteria for a "Qualifying CCP" (or "QCCP") as defined under Prudential Standard APS 112 Capital Adequacy: Standardised Approach to Credit Risk (APS112). (The QCCP eligibility criteria prescribed by APS112 are consistent with those applicable under the Basel III regulatory framework for banks). This means that, where an Authorised Deposit-taking Institution (ADI) satisfies all applicable conditions under APS112, the ADI may apply concessional risk weightings for centrally cleared transactions, as prescribed by APS112, to eligible trade exposures that are cleared through ASX Clear or ASX Clear (Futures).

Each of ASX Clear and ASX Clear (Futures) has operating rules that give its Clearing Participants legal certainty that obligations under novated contracts may be terminated and netted in the event of the CCP's insolvency. These rules are intended to satisfy preconditions under APS112 (and corresponding conditions under the bank prudential rules of other jurisdictions, based on the Basel III framework) for ADIs that are Clearing Participants, or have subsidiaries that are Clearing Participants, to calculate their capital requirements based on net (instead of gross) trade exposures to the CCP. ASX has obtained and makes available to its Clearing Participants Australian law legal opinions that, subject to the assumptions and qualifications in the opinions, confirm that, if ASX Clear or ASX Clear (Futures) was subject to an insolvency proceeding, close-out netting of obligations under novated contracts in accordance with the operating rules would be validated under Australian law.

Operating rules

Each of the ASX Group's CS facility licensees maintains operating rules for its facility. The operating rules govern matters including participation, capital requirements (where applicable), record keeping, margining and payments, trade capture and maintenance, (daily) settlement and default management. The Act provides that the operating rules of a licensed CS facility have effect as a contract under seal:

- between the licensee and each issuer of financial products in respect of which the facility provides its services;
- between the licensee and each participant in the facility;
- between each issuer of financial products in respect of which the facility provides its services and each participant in the facility; and
- between a participant in the facility and each other participant in the facility,

under which each of those persons agrees to observe the operating rules to the extent that they apply to the person and to engage in conduct that the person is required by the operating rules to engage in.

A comprehensive set of ASX's Rules, Guidance Notes and Waivers can be found at the following link www.asx.com.au/regulation/rules-guidance-notes-and-waivers.htm

The operating rules and procedures which govern the operation of each CS facility and specifically the rights and obligations of Participants can be found at the following links:

- ASX Clear, outlining the rights and obligations of Participants at Schedule 4;
- ASX Clear (Futures), with Participant obligations generally covered under the various sections of Part 2 of the Operating Rules;
- ASX Settlement, outlining the rights and obligations of the FMI, Issuers and Participants at Schedules 3, 5 and 6, respectively; and,
- Austraclear, with the rights and obligations of Participants covered under Schedules 2, 3 and 4, and the rights and obligations of the FMI outlined at Schedule 6.

Further information regarding participant arrangements and requirements are included in A Guide to Becoming an ASX Participant.

Policies and procedures

ASX has implemented a number of policies and procedures to ensure it is able to achieve its commitment to conducting the company's business ethically and in a way that is open and accountable to shareholders and the marketplace. Some of these policies include:

ASX Fraud Control Policy

The ASX Fraud Control Policy outlines the principles and framework implemented to ensure ASX is able to minimise the risk of fraud occurring across the organisation and the framework was designed with reference to the Australian Standard AS 8000-2008: Fraud and Corruption Control.

Code of Conduct

ASX has implemented a Code of Conduct, which has at its core, the commitment to conducting business in an open and accountable way. ASX strives to maintain a high standard of integrity, investor confidence and good corporate governance. The Code places obligations on ASX employees and expects certain standards to be maintained.

Principles for Financial Market Infrastructures ("PFMI") Disclosure Framework

ASX

Anti-Money Laundering

ASX Group entities comply with the requirements of the Anti-Money Laundering and Counter-Terrorism Financing Act 2006 (Cth) to the extent that those requirements are applicable to group activities.

Privacy

ASX Limited and its related bodies corporate are bound by the Australian Privacy Principles as set out in the Privacy Act 1988 (Commonwealth). The ASX Privacy Policy covers how and when Personal Information is collected, stored and distributed by the ASX Group.

Other Policies

ASX has comprehensive polices in place to cover areas such as:

- Desktop Security
- Email Use
- Information Security
- Internet Usage
- Physical Security
- Workplace surveillance
- Whistleblower Protection
- ASX's conflict handling arrangements

These policies are reviewed regularly to ensure that they remain up to date and reflect current requirements.

Industry Consultation and Discussion

ASX advocates regulatory settings that support investors and growth and which put in place controls that ensure Australia maintains world class financial market infrastructures.

ASX is actively engaged in a range of industry discussions and consultations relating to changes to its Operating Rules as well as shaping the regulatory landscape. For a list of public consultations, please refer to the ASX website.

Specific examples of consultations include:

T+2 settlement cycle

- In June 2014, the advisory forum (the Forum) established by ASX under its Code of Practice for Clearing and Settlement of Cash Equities, recommended that ASX transition from a T+3 to a T+2 settlement cycle for cash equities. This will reduce risk for participants and improve certainty for investors. ASX is targeting implementation in 2016.

Recovery Powers of ASX's CCPs

- In early April 2015 ASX will issue for consultation an exposure draft of new rules for recovery. ASX is targeting implementation of new rules for recovery in mid-2015. The Australian Government has issued a consultation paper on proposals for a statutory resolution framework for FMIs. ASX supports early implementation of a resolution framework.

ASX has established a number of industry-represented fora which provide a platform for discussion of matters pertaining to industry interest and are aimed at facilitating service innovation and improving efficiency in ASX's markets and clearing and settlement facilities.

Specific examples of industry discussions include:

Code of Practice Advisory Forum

Under the Code of Practice for Clearing and Settlement of Cash Equities in Australia, ASX established an advisory forum comprising senior representatives from ASX's clearing and settlement participants, and a wide range of other industry stakeholders that are users of ASX's clearing and settlement services. The Forum provides a mechanism for ASX to engage with users of clearing and settlement services to ensure that the ongoing development of cash market clearing and settlement infrastructure and services meet the needs of users and are aligned with global standards.

ASX Clear (Futures) and ASX Clear Risk Consultative Committees

These Committees provide a forum for Clearing Participants to make certain proposals and recommendations to the Clearing Board, relating to various matters, including but not limited to the risk models of ASX Clear (Futures) and ASX Clear, changes to the CCPs' Operating Rules, introduction of new asset classes for clearing, changes to admission criteria and all other matters which may have an impact on the risk management of the CCPs and their Clearing Participants.

Derivative Product Committees

These Committees allow major users of ASX's Interest Rate and OTC equity option and energy derivative products and services to provide input to ASX on existing and future product and service design, and to raise any customer or market issues impacting ASX derivative products.

Austraclear Advisory Committee

This Committee was launched in March 2014 and meets quarterly. It enables major users of Austraclear to provide input into the design, operation and development of Austraclear and to the forward work program for Austraclear.

System design and operations

ASX Operations Pty Limited ("ASX Operations") provides service arrangements across the ASX Group.

ASX operates four clearing systems:

- CHESS (providing clearing, settlement, depository and registry services for ASX-listed securities);
- Derivatives Clearing System (used for clearing derivatives traded on ASX Trade),
- Genium INET (providing clearing processing for the derivatives traded on ASX Trade24); and,
- Calypso (providing clearing processes for over-the-counter interest rate derivative products).

Further information can be found in the Overview of CHESS brochure.

ASX employs two main settlement technologies:

- Exigo (providing settlement, depository and registry services for the Australian over-the-counter debt market, and facilitating the settlement of the Australian dollar leg of foreign exchange transactions); and,
- CHESS (providing clearing, settlement, depository and registry services for ASX-listed securities).

Further information can be found at How Settlement Works and in the Overview of CHESS brochure.

Technology Plans & Communication

ASX's business is highly reliant on the information technology platforms utilised to support its various activities. ASX's objective is to provide stable, reliable and innovative technology solutions that are quick to adapt to new and changing business requirements, while conforming to regulatory standards.

ASX makes significant technology investments by introducing new technology platforms and upgrading existing platforms. In the coming years, ASX plans to upgrade several core platforms for trading, clearing and settlement. This follows the recent investment in new post-trade infrastructure.

ASX has appropriate processes in place to release information technology system management plans to stakeholders (including issuers, investors, market participants, vendors, other market licensees and regulatory authorities). The plans clearly identify mandatory versus optional changes and allow sufficient time for stakeholders to adapt to the changes.

ASX has been publishing its rolling 12 month plan for technology releases since April 2012. The release schedule is proactively monitored and updated as necessary. The most recent versions of notices sent to participants are located on the ASX Online website under 'ASX Notices'.

As part of its commitment to stakeholders, ASX takes into account the commercial, technological, supervisory and regulatory impact of the proposed changes to the systems and controls on those stakeholders. ASX also assesses stakeholder readiness to deal with the impact of the changes.

In May 2014, ASX advised customers of the use of Twitter in the event of an incident occurring that impacts the production environment for any of ASX's key systems, or is significant enough that all of the market and its users should be aware; in such cases, ASX will send (in addition to its existing forms of communication) a message/"tweet" which will include a link to the system status page on asx.com.au where additional information, previous communications and a status of the incident can be viewed.

Fees

A comprehensive list of fees and charges associated with utilising ASX's CS facilities can be found at the following links:

- ASX Clear and ASX Settlement: Schedule of Fees, as well as details regarding ASX's Cash Market Clearing and Settlement Revenue Sharing Schemes in Participant Notice 2012/062 and Participant Bulletin P2012/609;
- ASX Clear (Futures): Schedule of Fees (noting information relating to Rebates at Schedule 4). From 1 October 2014, ASX lowered fees and increased growth incentives for certain clearing participants in its interest rate futures and OTC clearing business, as set out in the Market Notice dated 24 July 2014;
- Austraclear: See the various fee schedules under Schedule of Fees, noting the Fixed Income Securities Settlement Rebate details under Section 6; and,
- Connectivity costs for ASX technical services are set out in the Schedule of Fees.

FY15 Initiatives

In July 2014, ASX announced that it will reduce its fees and increase growth incentives for electricity futures, interest rate futures and OTC clearing. The new fees and growth incentives more closely align ASX with its customers and position the company to compete for global liquidity within an evolving market structure. These changes recognise that customers use exchange-traded and OTC interest rate products together, and signal the phase in the development of ASX's Derivative and OTC Markets business.

IV. CPMI-IOSCO PFMI Disclosure

ASX recognises the important role of its CS facilities in maintaining systemic stability in the Australian markets and supports the objectives of the PFMIs established by CPMI-IOSCO.

ASX has an open dialogue with the RBA and ASIC to ensure compliance with the Australian regulatory regime.

Details of the way in which each of ASX's CS facilities meet applicable Principles for FMIs and the Australian FSS are set out at Appendix I.

V. List of publicly available resources

A range of useful information regarding ASX Group's FMIs can be found at www.asx.com.au and via the links included above.

PFMI Disclosure Framework | Principle 1

ASX

PRINCIPLE 1 – LEGAL BASIS

An FMI should have a well-founded, clear, transparent and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
A CCP should be a legal entity which is separate from other entities that may expose it to risks unrelated to those arising from its function as a CCP *FSS 1.1*	**The ASX Group operates two CCPs** • ASX Clear Pty Limited ABN 48 001 314 503, which operates the CS facility known as "ASX Clear"; and, • ASX Clear (Futures) Pty Limited ABN 91 050 615 864, which operates the CS facility known as "ASX Clear (Futures)" **The CCPs are separate legal entities, incorporated in Australia** **Neither of the CCPs is exposed to the risks associated with the other's CCP activities, or the activities of any other ASX Group entity, for example** • The two CCPs operate distinct and separate default funds • There is no cross-guarantee arrangement in place between the CS facilities. In particular, none of the CS facilities is a party to the ASX Group's deed of cross-guarantee, which relates to ASIC's financial reporting requirements
PFMI 1 – KEY CONSIDERATION 1 The legal basis should provide a high degree of certainty for each material aspect of an FMI's activities in all relevant jurisdictions *FSS 1.2*	**The material aspects of the CCPs' activities, and their legal basis, are** • Licensing. The primary activity of the CCPs is the provision of clearing services to their participants. Each of the CCPs holds a CS facility licence (under Part 7.3 of the Corporations Act), which provides the legal basis for these services. The relevant licences can be found on ASIC's website • Legally binding nature of the CCPs' operating rules. Section 822B of the Corporations Act provides that the operating rules of each of the CCPs have effect as a contract under seal between: » the CCP and each issuer, » the CCP and each participant, » each issuer and each participant, and » each participant and each other participant The operating rules therefore comprise a statutory contract • Payment Systems and Netting Act (PSNA). In the event that a participant in the CS facility enters into external administration, the PSNA provides certain protections under Australian law, from reversal or invalidation under the laws of any jurisdiction, of termination, netting and settlement of obligations, and enforcement of security effected in accordance with the operating rules of ASX's CS facilities, as follows:

PFMI Disclosure Framework | Principle 1

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY

» Part 2 protects real time gross settlements effected through an approved RTGS system (each of Austraclear and ASX Settlement has this approval; the Reserve Bank Information and Transfer System (RITS), in relation to which Austraclear and ASX Settlement are "feeder systems", is also an approved RTGS system);

» Part 3 protects net settlements effected through an approved netting arrangement (each of Austraclear and ASX Settlement has this approval); and

» Part 5 protects the termination, valuation and netting of obligations, and enforcement of security, by a CCP that operates an approved "netting market" (each of ASX Clear and ASX Clear (Futures) has this approval). Part 5 also protects the porting of client positions and collateral by the CCP in the event that a Clearing Participant defaults

↗ **The legal bases outlined above apply irrespective of the jurisdiction in which a participant in the CCP may be incorporated**

PFMI 1 – KEY CONSIDERATION 2

An FMI should have rules, procedures and contracts that are clear, understandable and consistent with relevant laws and regulations

FSS 1.3

↗ **Rules, procedures and contracts in place**

- Rules and procedures. Each CCP has its own set of operating rules and procedures which govern the operation of its CS facility
- Contracts. Under an ASX Group intra-group services agreement, ASX Operations Pty Limited (a wholly owned subsidiary of ASX Limited) acts as the group's operating company, entering into contracts on behalf of the ASX Group and its subsidiaries, and then 'on-supplying' the services to the relevant ASX Group entity

↗ **Processes in place to ensure that the rules, procedures and contracts are clear and understandable**

- Quality control measures are in place for all amendments to the CCPs' operating rules and procedures. Such measures include those which are internal to ASX:
  - » management oversight of the drafting of the amendments,
  - » General Manager sign-off for all amendments,

  and those which are controlled by ASIC and RBA, namely the regulatory clearance process for amendments to the operating rules, under Part 7.3 of the Corporations Act (Division 2, Subdivision B)

↗ **Processes in place to ensure that the rules, procedures and contracts are consistent with relevant laws and regulations**

- ASX conducts a continuous internal review of amendments to (or introduction of) laws and regulations that affect the CCPs' operations, and works with ASIC and RBA as appropriate to amend its operating rules, procedures and contracts to ensure ongoing consistency with the law
- ASIC and RBA conduct annual assessments of ASX Group's compliance with licence obligations, which provides further oversight of the FMIs' consistency with the relevant laws and regulations

PFMI Disclosure Framework | Principle 1

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 1 – KEY CONSIDERATION 3 An FMI should be able to articulate the legal basis for its activities to relevant authorities, participants and, where relevant, participants' customers, in a clear and understandable way *FSS 1.4*	**How the CCPs articulate the legal basis for their activities to stakeholders** • The legal basis for the activities of the CCPs and the facilities' protection as approved "netting markets" under the PSNA are set out on ASX's public website in this Disclosure Framework document • ASX Limited (on behalf of each licensed entity within the ASX Group, including the CCPs) submits an 'Annual Group Licence Report' to ASIC. This report sets out the legal basis for the CCPs' activities (namely the licence obligations), and is used by ASIC in the preparation of ASIC's 'market assessment reports' which are published on ASIC's website • Where appropriate, ASX commissions and makes available to participants and/or clients of participants, on a confidential basis, external legal opinions to (1) confirm the legal efficacy of operating rules that are introduced to support new ASX services or meet regulatory requirements that apply to ASX or its participants, or (2) confirm the impact of new ASX services on participants' existing contractual arrangements
PFMI 1 – KEY CONSIDERATION 4 An FMI should have rules, procedures and contracts that are enforceable in all jurisdictions. There should be a high degree of certainty that actions taken by the FMI under such rules and procedures will not be voided, reversed or subject to stays *FSS 1.5*	**Rules and Procedures. Section 822B of the Corporations Act provides that the operating rules of each CCP have effect as a contract under seal between the CCP, participants and issuers. The operating rules are enforceable as a statutory contract** **Contracts. The contracts entered into by the CCPs and third parties are enforceable under Australian contract law** **Actions taken by a CCP under its operating rules** • The status of actions taken by a CCP which has entered into external administration is expected to be addressed by the introduction into Australian law of a statutory management regime for financial market infrastructure, as foreshadowed in consultations undertaken by the Council of Financial Regulators and Treasury in 2011, 2012 and 2015 • The status of actions taken by a CCP under Australian law where one of its participants defaults and enters into administration is addressed by the PSNA, which, as noted above, provides certain protections under Australian law from reversal or invalidation under the laws of any jurisdiction, of termination, netting and settlement of obligations, and enforcement of security effected in accordance with an FMI's operating rules
PFMI 1 – KEY CONSIDERATION 5 An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflicts of law across jurisdictions *FSS 1.6*	**The operating rules of the CCPs are governed by Australian law and participants submit to the jurisdiction of the courts of New South Wales. Accordingly, Australia is the relevant jurisdiction for enforcement of the rules** **The legal bases outlined above apply irrespective of the jurisdiction in which a participant in the CCP may be incorporated** **Neither of the CCPs is licensed to provide clearing services in any jurisdiction outside of Australia. Recognitions have been sought in other jurisdictions, for the purpose of enabling overseas participants to participate in ASX's markets, or in the clearing facilities operated by the CCPs, as necessary**

PFMI Disclosure Framework | Principle 2

ASX

PRINCIPLE 2 – GOVERNANCE

An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations and the objectives of relevant stakeholders

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 2 – KEY CONSIDERATION 1 An FMI should have objectives that place a high priority on the safety and efficiency of the FMI and explicitly support financial stability and other relevant public interest considerations. *FSS 2.1*	↗ These obligations are addressed in the ASX Limited Board Charter and the CS Boards Charter. These are published on the ASX website ↗ The ASX Limited Board Charter sets out the functions of the Board, which include, but are not limited to, responsibility to oversee the conduct of the affairs of the ASX Group consistent with licence obligations as well as public policy objectives directed at financial market and payment systems integrity ↗ The CS Boards Charter sets out the responsibilities of the CS Boards, which include, but are not limited to, reviewing and providing oversight of risk management processes, internal controls and compliance systems in respect of the management of clearing and settlement risks and compliance with the Financial Stability Standards. The CS Boards Charter also refers to the statutory obligations of the CS Boards under the Corporations Act, which also include, but are not limited to, doing all other things necessary to reduce systemic risk, providing the facility's services in a fair and effective way and having adequate conflict handling and compliance arrangements
PFMI 2 – KEY CONSIDERATION 2 An FMI should have documented governance arrangements that provide clear and direct lines of responsibility and accountability. These arrangements should be disclosed to owners, relevant authorities, participants and, at a more general level, the public. *FSS 2.2*	↗ Governance arrangements are documented in the CS Boards Charter, ASX Limited Board Charter & Committee Charters, and the ASX Compliance Charter. These are published on the ASX website ↗ The ASX Limited Board Charter sets out how it relies on the CS Boards to oversee the clearing and settlement operations of the CS entities ↗ The CS Boards Charter sets out the clearing and settlement executive management structure and reporting lines, ownership structure, design and oversight of risk management and internal controls ↗ The Remuneration Committee Charter sets out the Committee's role overseeing executive remuneration and performance management processes. The CS Boards review the performance of the Chief Risk Officer (CRO) and executive management responsible for settlement risk (Group Executive, Operations) and advise the Remuneration Committee of the outcomes ↗ The Managing Director & Chief Executive Officer (CEO) is responsible for the appointment and termination of both of these roles following consultation with the ASX Limited Board and with the agreement of the CS Boards ↗ The Nomination Committee Charter sets out the Committee's role in reviewing nomination matters relating to the composition and performance of the CS Boards ↗ The ASX Compliance Charter sets out the powers delegated to ASX Compliance by the CS Boards to perform compliance and enforcement services ↗ The CS Boards Charter sets out that both the General Manager Regulatory Assurance and General Manager Internal Audit have a direct line of reporting to the CS Boards, with periodic reporting provided

PFMI Disclosure Framework | Principle 2

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
	↗ The CS Boards and ASX Limited Board Committees report regularly to the ASX Limited Board and to each other on relevant matters. Minutes of their meetings are made available to the ASX Limited Board, except where the CS Boards consider commercially sensitive information. This would usually arise in a situation where another market operator or listing venue is obtaining services from, or access to, the CS facility. In those cases, no directors who are also on the ASX Limited Board attend the CS Boards meeting and neither the matter discussed nor the minutes of the CS Boards meeting are reported to the ASX Limited Board
PFMI 2 – KEY CONSIDERATION 3 The roles and responsibilities of an FMI's board of directors (or equivalent) should be clearly specified, and there should be documented procedures for its functioning, including procedures to identify, address and manage member conflicts of interest. The board should review both its overall performance and the performance of its individual board members regularly *FSS 2.3*	↗ Board roles and responsibilities are set out in the CS Boards Charter, ASX Limited Board Charter & Committee Charters. Board responsibility for effective monitoring of senior management is addressed in the CS Boards Charter and the Remuneration Committee Charter ↗ Board responsibility for nomination matters is addressed in the CS Boards Charter and the Nomination Committee Charter. Members of ASX Limited's Nomination Committee (from time to time) are appointed to review nomination matters with reporting to the CS Boards ↗ Board responsibility for risk management and internal control is addressed in the CS Boards Charter and the Audit & Risk Committee (ARC) Charter ↗ Board responsibility for ensuring compliance with all supervisory and oversight requirements, ensuring consideration of financial stability and other relevant public interests is addressed by the CS Boards and ASX Compliance ↗ Board responsibility for providing accountability to owners, participants and other relevant stakeholders is addressed through reporting to the ASX Limited Board, consultation with relevant stakeholders and publication of governance arrangements ↗ Board performance reviews are addressed in the CS Boards Charter ↗ Conflicts handling is addressed in the CS Boards Charter and ASX's Conflict Handling Arrangements, a copy of which is published on the ASX website and meets FSS requirements. These include the additional management protocols in place to manage conflict sensitive information
PFMI 2 – KEY CONSIDERATION 4 The board should contain suitable members with the appropriate skills and incentives to fulfil its multiple roles. This typically requires the inclusion of non-executive board member(s) *FSS 2.4*	↗ These obligations are addressed in the CS Boards Charter and the Nomination and Remuneration Committee Charters ↗ The Nomination Committee Charter sets out that the Committee periodically reviews the composition, skills and experience of the CS Boards. Director appointments to the CS Boards are made by the respective CS Board ↗ All CS Board directors, other than the CEO, are independent non-executives ↗ The Remuneration Committee Charter sets out that the Committee periodically reviews compensation for CS Board directors. CS Board directors do not receive any performance-related compensation ↗ Director information, including directors' interests, ASX Group cross-directorships and independence is published on the ASX website

PFMI Disclosure Framework | Principle 2

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
	↗ Director independence is reviewed annually. The CS Boards have adopted the ASX Limited Board Policy and Guideline to Relationships Affecting Independent Status, which sets out the matters which will be considered when assessing director independence. This policy is published on ASX's website ↗ Directors' interests are tabled at each Board meeting ↗ No tenure limit in CS Boards Charter
PFMI 2 – KEY CONSIDERATION 5 The roles and responsibilities of management should be clearly specified. An FMI's management should have the appropriate experience, a mix of skills, and the integrity necessary to discharge their responsibilities for the operation and risk management of the FMI *FSS 2.5*	↗ The roles and responsibilities of senior management relevant to CS operations are set out in the CS Boards Charter and more fully in defined position descriptions ↗ The CEO has responsibility for the overall operational and business management and profit performance of ASX. The CRO and Group Executive, Operations report to the CEO ↗ The CRO has responsibility for the overall clearing risk management of the CS subsidiaries and for ensuring the CS license obligations are met ↗ The Group Executive, Operations has responsibility for the overall settlement risk management of the CS subsidiaries ↗ The CS Boards Charter sets out that the CS Boards appoint members of the Remuneration Committee (from time to time) to review compensation arrangements for the CRO and Group Executive, Operations. The CS Boards provide input to the Remuneration Committee as part of the annual performance management process. The Remuneration Committee also reviews compensation arrangements for the CRO and Group Executive, Operations to confirm these are structured in such a way as to promote the soundness and effectiveness of risk management. Reporting is provided to the CS Boards ↗ Executive KPIs are structured to promote soundness and effectiveness of risk management
PFMI 2 – KEY CONSIDERATION 6 The board should establish a clear, documented risk management framework that includes the FMI's risk-tolerance policy, assigns responsibilities and accountability for risk decisions, and addresses decision making in crises and emergencies. Governance arrangements should ensure that the risk management and internal control functions have sufficient authority, independence, resources and access to the board *FSS 2.6*	↗ These obligations are addressed in the CS Boards Charter, ARC Charter, Internal Audit Charter, and the ASX Enterprise Risk Management Policy and Framework. Further details are provided under Principle 3; Key Consideration 1 ↗ The CS Boards are responsible for oversight of risk management relevant to the CS Boards, and the ARC is responsible for oversight of enterprise wide risk. The CS Boards appoint members of the ARC (from time to time) to review matters that the ARC is responsible for, which may impact on CS operations. Reporting is provided to the CS Boards ↗ ASX has established an independent ASX Clear (Futures) Risk Consultative Committee and an independent ASX Clear Risk Consultative Committee which will first meet in Q1 2015. The Risk Consultative Committees will have a broad mandate to consider and make recommendations to the Boards of the FMIs on matters related to their risk management ↗ Each of the CRO, Group Executive, Operations, GM, Regulatory Assurance & GM, Internal Audit have a direct line of reporting to the CS Boards. These are documented in their employment agreements or position descriptions ↗ The Internal Audit Charter addresses the independence of Internal Audit. The Internal Audit Plan is approved by the ARC, and by the CS Boards for matters relevant to the CS subsidiaries

PFMI Disclosure Framework | Principle 2

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
A CCP's operations, risk management processes, internal control mechanisms and accounts should be subject to internal audit and, where appropriate, periodic external independent expert review. Internal audits should be performed, at a minimum, on an annual basis. The outcome of internal audits and external reviews should be notified to the Reserve Bank and other relevant authorities *FSS 2.7*	↗ These obligations are addressed in the CS Boards Charter, ARC Charter and Internal Audit Charter ↗ The CS Boards are responsible for oversight of risk management (including internal controls and Internal Audit matters) relevant to the CS Boards and the ARC is responsible for oversight of enterprise wide risk. The CS Boards appoint members of the ARC (from time to time) to review matters that the ARC is responsible for, which may impact on CS operations ↗ The Internal Audit Charter sets out that the principal objective of Internal Audit is to provide independent, objective assurance and consulting services to add value and improve the operations of ASX ↗ The Internal Audit Plan is approved by the ARC, and by the CS Boards for matters relevant to the CS subsidiaries ↗ The ARC assesses the independence and performance of Internal Audit annually. The external auditor has access to the work of the internal audit department. An external assessment of the internal audit department is performed periodically ↗ Each of the CRO, Group Executive, Operations, GM, Regulatory Assurance and GM, Internal Audit have a direct line of reporting to the CS Boards on relevant matters. These are documented in their employment agreements or position descriptions
PFMI 2 – KEY CONSIDERATION 7 The board should ensure that the FMI's design, rules, overall strategy and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other relevant stakeholders. Major decisions should be clearly disclosed to relevant stakeholders and, where there is a broad market impact, the public *FSS 2.8*	↗ Stakeholder management is addressed within the ASX Limited Board, CS Boards and Customer Charters ↗ ASX's Customer Charter sets out how ASX will balance the interests of customers, shareholders, end investors and the broader financial markets. ASX regularly seeks feedback from participants and stakeholders, including through consultation and stakeholder committees ↗ Consultation processes include operational arrangements, risk controls and default management rules and procedures. Details of all public consultation and non-confidential submissions received are published on the ASX website ↗ Outsourcing clauses in intra-group outsourcing arrangements address conflicts of interest, including specifying that ASX Group staff are under a duty to act in the best interests of the SSF receiving the services ↗ The Forum is an advisory body established under the Code of Practice comprising senior representatives from ASX's clearing and settlement participants, and a wide range of other industry stakeholders. The Forum provides a mechanism for ASX to engage with users of clearing and settlement services to ensure that the ongoing development of cash market clearing and settlement infrastructure and services meet the needs of users and are aligned with global standards. A Business Committee to provide business and operational input into the Forum on its forward work program was also established under the Code. Further detail about the Code, Forum and Business Committee is published on ASX's website ↗ The ASX Clear (Futures) Risk Consultative Committee provides a forum for clearing participants to review and make recommendations relating to various matters, including but not limited to the risk model of ASX Clear (Futures), changes to the CCP's Operating Rules, introduction of new asset classes for clearing, changes to admission criteria and all other matters which may have an impact on the risk management of the CCP and its Clearing Participants

PFMI Disclosure Framework | Principle 2

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
	↗ ASX Clear has also established a Risk Consultative Committee which will first meet in Q1 2015 ↗ The Derivative Product Committees allow major users of ASX's Interest Rate and OTC equity option and energy derivative products and services to provide input to ASX on existing and future product and service design, and to raise any customer or market issues impacting ASX derivative products. ASX Clear (Futures) has also established a Default Management Group (DMG) to provide OTC participant feedback on aspects of the default management process
A CCP that is part of a group of companies should ensure that measures are in place such that decisions taken in accordance with its obligations as a CCP cannot be compromised by the group structure or by board members also being members of the board of other entities in the same group. In particular, such a CCP should consider specific procedures for preventing and managing conflicts of interest, including with respect to intragroup outsourcing arrangements *FSS 2.9*	↗ Conflict handling is specifically addressed in the CS Charter and ASX's Group Conflict Handling Arrangements. Enhancements have been made to address being part of a corporate group. These documents are published on the ASX website ↗ Director information, including directors' interests, ASX Group cross-directorships and independence, is published on the ASX website ↗ Directors' interests are tabled at each Board meeting ↗ Outsourcing clauses in intra-group outsourcing arrangements address conflicts of interest, including specifying that ASX Group staff are under a duty to act in the best interests of the CCP receiving the services ↗ ASX Clear and ASX Settlement Boards periodically meet separately from the other CS Boards. ASX Clear and ASX Settlement provide clearing and settlement arrangements to competing listing or trading venues. These are often referred to as "access arrangements". Transparent and non-discriminatory access arrangements have been approved for competing market operators or listing venues. The Boards of ASX Clear and ASX Settlement are made up of 6 directors, the only executive director is the ASX CEO and Managing Director. Three of the five non-executive directors of ASX Clear and ASX Settlement, including the Chair, are not directors on the ASX Limited Board which competes with these venues. Two of these three directors are able to form a quorum to meet and consider any commercially sensitive matters. The three non-ASX Limited directors meet regularly ↗ Each other CS Board is also constituted such that directors who are not on the ASX Limited Board can form a quorum and meet if required. This would usually arise if one of the CS Boards was required to consider commercially sensitive information where another market operator or listing venue is obtaining services from, or access to, the CS facility. In those cases, no directors who are also on the ASX Limited Board attend the CS Boards meeting and neither the matter discussed nor the minutes of the CS Boards meeting are reported to the ASX Limited Board

PFMI Disclosure Framework | Principle 3

ASX

PRINCIPLE 3 – FRAMEWORK FOR THE COMPREHENSIVE MANAGEMENT OF RISKS

An FMI should have a sound risk management framework for comprehensively managing legal, credit, liquidity, operational and other risks

PFMI/FSS

PFMI 3 – KEY CONSIDERATION 1

An FMI should have risk management policies, procedures and systems that enable it to identify, measure, monitor and manage the range of risks that arise in or are borne by the FMI. Risk management frameworks should be subject to periodic review

FSS 3.1

HOW ASX CENTRAL COUNTERPARTIES COMPLY

- **The ASX Enterprise Risk Management (ERM) Policy and Framework is based on the International Standard (ISO 31000) for risk management and approved by the Enterprise Risk Management Committee (ERMC). The 'Summary of Risk Management Policies' is on the ASX website**
- **The CCPs have identified the range of risks that arise from their activities and considered them in the standardised risk categories, being: Strategic, Financial, Legal & Regulatory and Technology & Operations**
- **Clearing Risk Strategy and Policy develops clearing risk specific policies, procedures and analysis. Policies are reviewed and approved by the CS Boards. Policies are subject to annual review**
- **Clearing Risk Management (CRM) has systems and reports which identify key risk indicators, including**
  - Margins (both overnight and intraday);
  - Capital Stress Testing (Capital adequacy);
  - Liquidity Stress Testing;
  - Clearing Participant – Capital Based Position Limits (CBPL);
  - Treasury Investment monitoring;
  - Commitment Calculations / Emergency Assessments;
  - Market movement / Market erosion;
  - Collateral Management;
  - Counterparty Risk Assessment (Capital monitoring);
  - Back Testing;
  - Reverse Stress testing; and,
  - Margin rate setting.
- **Clearing Risk Management provides various reports to Clearing Participants covering:**
  - Cash Market Margining (ASX Clear);
  - Derivatives Margins and Collateral (ASX Clear); and,
  - Derivatives Margins and Collateral (ASX Clear (Futures))

PFMI Disclosure Framework | Principle 3

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
	↗ **Clearing Risk Management provides summaries of certain risk indicators (together with any breaches of the above risk indicators) to various governing committees, including:** • Clearing and Settlement Boards • Clearing Risk Policy Committee • Risk Quantification Group • Capital and Liquidity Committee • CCP Risk, Operations and Compliance Committee • Default Management Steering Group ↗ **Internal Audit includes CCP activities in its risk based audit plan. The Internal Audit Charter is on the ASX website**
A CCP should ensure that financial and other obligations imposed on participants under its risk management framework are proportional to the scale and nature of individual participant's activities *FSS 3.2*	↗ **The CCPs' contribution, commitment and margining regimes are aligned to scale and nature or participant risk exposures and activities. For example, margin and contribution requirements vary in size depending on relevant risk exposure or size of the participant's clearing activities** ↗ **The CCPs' Operating Rules are designed and implemented in a way to recognise the criticality of the individual participant's activities. The CCPs' Operating Rules are on the ASX website**
PFMI 3 – KEY CONSIDERATION 2 An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the FMI *FSS 3.3*	↗ **Incentives for participants to manage their risks are made via capital requirements, margin requirements, etc** ↗ **Penalties for non-compliance with CCP operating rules may be applied** ↗ **Participants may be required to seek alternative clearing arrangements if they are unable to manage their risks to a level acceptable to ASX's CCPs. The CCPs' Operating Rules are on the ASX website** ↗ **Comprehensive information is provided to CCP participants to allow them to manage their risks and include daily gross and net risk positions, and margin requirements**

PFMI Disclosure Framework | Principle 3

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 3 – KEY CONSIDERATION 3 An FMI should regularly review the material risks it bears from and poses to other entities (such as other FMIs, settlement banks, liquidity providers and service providers) as a result of interdependencies, and develop appropriate risk management tools to address these risks *FSS 3.4*	↗ Risk profiling is undertaken every six months which includes risks posed by external entities to the CCPs ↗ Major loss scenario analysis is undertaken periodically ↗ ASX has engaged with ASIC to better communicate to clearing participants and their customers the risks associated with clearing arrangements
PFMI 3 – KEY CONSIDERATION 4 FMI should identify scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern and assess the effectiveness of a full range of options for recovery or orderly wind-down. An FMI should prepare appropriate plans for its recovery or orderly wind-down based on the results of that assessment. Where applicable, an FMI should also provide relevant authorities with the information needed for purposes of resolution planning *FSS 3.5*	↗ The CCPs have developed recovery plans based on existing powers under their operating rules. ASX has commenced work to develop a more comprehensive recovery plan supported by tools to fully address uncovered credit losses and liquidity shortfalls, and replenish financial resources. ASX's proposed recovery approach is consistent with CPMI-IOSCO guidance on FMI recovery planning released in October 2014. ASX undertook public consultation on its proposed recovery approach for participant default in October 2014. Following consideration of the responses to consultation, ASX expects to consult on amendments to the operating rules of the ASX CCPs to implement new recovery tools in early Q2 2015 with a view to implementation of the new rules by mid-2015, and subsequent updating of the recovery plans to reflect the new rules

PFMI Disclosure Framework | Principle 4

ASX

PRINCIPLE 4 – CREDIT RISK:
An FMI should effectively measure, monitor and manage its credit exposures to participants and those arising from its payment, clearing and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, a CCP that is involved in activities with a more complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 4 – KEY CONSIDERATION 1 An FMI should establish a robust framework to manage its credit exposures to its participants and the credit risks arising from its payment, clearing and settlement processes. Credit exposures may arise from current exposures, potential future exposures, or both *FSS 4.1*	↗ **The CCPs have a robust risk framework to manage their credit risks outlined in their Operating Rules and Procedures, which include, at a high level** • Clearing Participant membership requirements • Daily counterparty risk controls • CCP financial resources
PFMI 4 – KEY CONSIDERATION 2 An FMI should identify sources of credit risk, routinely measure and monitor credit exposures, and use appropriate risk management tools to control these risks *FSS 4.2*	↗ **The CCPs' Operating Rules and Procedures detail the CCPs' credit risks and provide the CCPs with processes to control and manage these risks** ↗ **The CCPs have the ability, through their robust models and systems, to calculate and monitor participants' credit standing and credit exposures to participants. Types of activity undertaken by ASX's Clearing Risk Management (CRM) include:** • Ensure the CCPs accurately calculate initial and variation margin requirements at the end of each business day; • Monitor day-to-day developments in market price moves, open positions and settlement obligations to the CCPs; • Initiate intraday margining processes and manage credit risk exposures on a timely basis; • Conduct daily capital stress testing to monitor the effects of extreme but plausible scenarios on participants' portfolios and call AIMs when stress-test results are above a defined limit; • Monitor, assess and investigate matters relating to financial requirements (including participants' monthly financial statements); • Determine and review participants' credit standing, drawing in part on information provided by participants in regular financial returns to ASX;

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
	• When required, coordinate a 'watch list' of participants deemed to warrant more intensive monitoring. Inclusion on the watch list is based on a range of factors, such as: concentration risk; concerns emerging from a specific event or media report; significant changes in a participant's own share price, bond yield or credit default swap price; Internal Credit Rating (ICR) downgrades; calls for Additional Initial Margin (AIM); operational issues; compliance issues; or issues arising from ASX's routine review of financial returns; and, • Review of concentration risk in three areas: » Concentrations in participants' exposures to their clients; » Concentrations of individual participants' positions in particular products; and, » Concentration of positions in a market by a single participant
A CCP should have the authority to impose activity restrictions or additional credit risk controls on a participant in situations where the CCP determines that the participant's credit standing may be in doubt *FSS 4.3*	↗ **Under the CCPs' Operating Rules and Procedures, the CCPs have the ability to impose restrictions on their Clearing Participants' activities and to impose additional credit risk controls where it deems a Clearing Participant's credit standing is in doubt. Types of restrictions available to the CCPs include imposing higher capital requirements, additional capital reporting requirements, or reduce Stress Test Exposure Limit levels** ↗ **In addition to routine calling of Initial Margins, CCPs may also require Clearing Participants to lodge Additional Initial Margins (AIMs) as follows:** • Intra-day Margins – during periods of market volatility, CCPs may impose an intra-day margin to address any significant erosion of existing margin collateral against current position exposures and current prices, as monitored in real-time. This effectively enables the CCPs to bring forward the daily settlement process which substantially reduces the CCPs' contingent exposure to unrealised participant losses. The CCPs make ad hoc margin calls at any point during the settlement hours, subject to banking system availability • Additional Initial Margins – ASX's CCPs may also require Clearing Participants to deposit AIMs when their relevant position is in excess of, or is likely to exceed, various risk thresholds such as Stress Test Exposure or Capital Based Position Limits » AIMs relating to stress test exposure provide the CCPs with additional protection against potential losses in all but the most extreme market conditions. They are calculated on a daily basis and levied (as required) upon Clearing Participants in respect of the calculated exposure of their overall net position portfolio relative to their financial capacity and standing » The CCPs' Capital Based Position Limits are designed to prevent a Clearing Participant from taking excessive risk relative to its capital, and thereby disproportionately increasing a CCP's risk to its default relative to other Clearing Participants. Where a Clearing Participant's initial margin exceeds twice its NTA on ASX Clear (Futures), or three times liquid capital (or Tier 1 capital for banks) on ASX Clear, the CCP requires AIMs from the Clearing Participant, the amount called to ensure its risk is adequately supported by its capital

PFMI Disclosure Framework | Principle 4

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
	• Extra Margins – ASX Clear (Futures) may also require Clearing Participants to deposit extra margins in relation to large open positions or price movements ↗ **ASX Clear has powers under its Operating Rules to require additional margins from its Clearing Participants. In practice, these powers would be used to protect ASX Clear where it believes that the Clearing Participant's counterparty standing or open positions requires further risk mitigation**
PFMI 4 – KEY CONSIDERATION 3 *NO CORRESPONDING FSS*	↗ **Applicable to SSFs only**
PFMI 4 – KEY CONSIDERATION 4 A CCP should cover its current and potential future exposures to each participant fully with a high degree of confidence using margin and other prefunded financial resources. In addition, a CCP that is involved in activities with a more complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. In all cases, a CCP should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount of total financial resources it maintains *FSS 4.4*	↗ **As set out in the Supplementary Interpretation of the Financial Stability Standards for Central Counterparties (issued 27 October 2014) the RBA considers both of ASX's CCPs to be of systematic importance in multiple jurisdictions because of their need to obtain recognition under EMIR in order to either continue to provide services to clearing members established in the EU (ASX Clear (Futures)), or to be considered a 'qualifying CCP' under EU bank capital regulations (ASX Clear). This new Supplementary Interpretation amended the previous Supplementary Interpretation issued in August 2013 which only applied to ASX Clear (Futures) – the new interpretation has been issued as a result of ASX Clear's application for recognition under EMIR** ↗ **As a result of this extended guidance, each CCP is required to maintain financial resources to cover the default of the largest two participants and their affiliates (by credit exposure) in extreme but plausible market conditions** ↗ **ASX Clear (Futures) currently maintains sufficient financial resources to cover the credit exposure in the event of a default of the two Clearing Participants and their affiliates that generate the largest aggregate credit exposure in extreme but plausible market conditions with a high degree of confidence** ↗ **ASX Clear will move from its current "Cover 1" standard to the higher "Cover 2" standard at the end of Q1 2015, and, as a result, will maintain sufficient financial resources to cover the credit exposure in the event of a default of the two Clearing Participants and their affiliates that generate the largest aggregate credit exposure in extreme but plausible market conditions with a high degree of confidence. ASX Clear currently has sufficient financial resources to meet the requirement of the higher "Cover 2" capital standard** ↗ **The CCPs' Operating Rules and Procedures provide the CCPs with powers to ensure that the CCPs cover current and potential future exposures to Clearing Participants with a high degree of confidence using margin and other prefunded financial resources** ↗ **The CCPs' Operating Rules and Procedures detail the prefunded financial resources and the order in which these are applied in a default** ↗ **The CCPs stress test these financial resources on a daily basis to ensure they are adequate to manage the default of the largest/ two largest (as applicable) Clearing Participant(s) and its/ their affiliates**

PFMI Disclosure Framework | Principle 4

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
	↗ Further details of the risk mitigation techniques available to the CCPs to help manage Clearing Participant default are set out on the ASX website at www.asx.com.au/services/clearing/default-management.htm
PFMI 4 – KEY CONSIDERATION 5 A CCP should determine the amount and regularly test the sufficiency of its total financial resources available in the event of a default or multiple defaults in extreme but plausible market conditions through rigorous stress testing. A CCP should have clear procedures to report the results of its stress tests to appropriate decision makers at the CCP and to use these results to evaluate the adequacy of and adjust its total financial resources. Stress tests should be performed daily using standard and predetermined parameters and assumptions. On at least a monthly basis, a CCP should perform a comprehensive and thorough analysis of stress-testing scenarios, models and underlying parameters and assumptions used to ensure they are appropriate for determining the CCP's required level of default protection in light of current and evolving market conditions. A CCP should perform this analysis of stress testing more frequently when the products cleared or markets served display high volatility, become less liquid, or when the size or concentration of positions held by a CCP's participants increases significantly. A full validation of a CCP's risk management model should be performed at least annually *FSS 4.5*	↗ Both CCPs conduct rigorous stress testing to ensure that sufficient total financial resources are available in the event of the default of the largest/ two largest Clearing Participant(s) and its/ their affiliates, for ASX Clear and ASX Clear (Futures) respectively. Stress testing results are regularly reported to the RBA ↗ Both CCPs use standard and predetermined parameters and assumptions in their capital and liquidity stress testing ↗ The CCPs' Operating Rules and Procedures give the CCPs the power to adjust the stress testing methodology to account for any structural changes in the markets they clear, or to capture significant position concentrations on CCP capital (e.g. the rebound regime scenario) ↗ Model validation is in line with the CCPs' Model Validation Standard, which defines validation and reporting methods of model reviews. Model validation is performed on a regular basis in compliance with the RBA's FSS requirement for independent and comprehensive model reviews. Summary reports relating to back-testing and sensitivity analysis are also provided to the RBA on a monthly basis and the Clearing Boards on a quarterly or ad-hoc basis, dependent on the introduction of a new model or a material model development

PFMI Disclosure Framework | Principle 4

ASX

PFMI/FSS

PFMI 4 – KEY CONSIDERATION 6

In conducting stress testing, a CCP should consider the effect of a wide range of relevant stress scenarios in terms of both defaulters' positions and possible price changes in liquidation periods.
Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions.

FSS 4.6

HOW ASX CENTRAL COUNTERPARTIES COMPLY

↗ **ASX Clear's stress testing is based on 102 scenarios, each calibrated to a once in 30 year event and based on a sample distribution constructed from 20 years of price and volatility data. These scenarios have been set to model individual stock, sector specific and market wide moves:**

- Individual Stock Scenarios: these scenarios capture events where a single stock moves significantly compared with the other stocks
- Sector Wide Scenarios: these reflect simultaneous extreme movements in cash market securities and derivative products within the same sector
  - » Only sectors that generate the largest exposures to ASX Clear are used (currently 6)
  - » The stress scenario is applied to all stocks in the specified sector
- Market Wide Scenarios: these account for simultaneous extreme movements in all cash market securities and derivative products. These scenarios are the most extreme and are likely to produce the highest potential stress losses
  - » The largest market level stress scenarios are currently a 15% price decrease and 10% price increase

↗ **The stress testing regime for ASX Clear (Futures) comprises a suite of 42 portfolio and single-contract stress-test scenarios, each calibrated to a severity equivalent to a one-in-30 year event for single-asset scenarios, and a one-in-100 year event for multi-asset scenarios. 32 of these scenarios apply shocks to the SPI 200, 90-day bank accepted bill, 3-year bond and 10-year bond futures contracts. The sampling distribution used by ASX Clear (Futures) reflects the period in which ASX has judged historical data as consistent and relevant to current market structures. Scenario shocks that include the 4 listed futures contracts include:**

- 20 'multi-asset' scenarios apply combinations of simultaneous price movements across all four contracts listed futures products
- 8 'single contract' scenarios model extreme price movements in each of the four contracts individually
- 4 scenarios model large co-movements in the interest rate contracts, but with no movement in equities
- 40 (of the 42 total) scenarios apply shocks to OTC Interest Rate Derivatives instruments (including positions in futures allocated for cross margining)

PFMI Disclosure Framework | Principle 4

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
A CCP should have clearly documented and effective rules and procedures to report stress-test information to appropriate decision-makers and ensure that additional financial resources are obtained on a timely basis in the event that projected stress-test losses exceed available financial resources. Where projected stress-test losses of a single or only a few participants exceed available financial resources, it may be appropriate to increase non-pooled financial resources; otherwise, where projected stress-test losses are frequent and consistently widely dispersed across participants, clear processes should be in place to augment pooled financial resources *FSS 4.7*	↗ ASX's CCPs report stress-test information to appropriate decision-makers on a daily basis and ensure that additional financial resources are available on a timely basis in the event that a projected stress-test loss exceeds available financial resources ↗ The CCPs' Operating Rules and Procedures allow for additional initial margin to be called from a Clearing Participant where the CCP deems the current level of cover from that Clearing Participant to be insufficient ↗ To determine the Additional Initial Margin requirements of a Clearing Participant, calculations take into account stress test scenarios which shift underlying prices (and volatility for options). The results from these calculations determine the Potential Stress Loss for each Clearing Participant under extreme market conditions. The Potential Stress Loss is then compared to the Stress Test Exposure Limit assigned to the Clearing Participant. Each Clearing Participant is assigned a Stress Test Exposure Limit (STEL) in accordance with their current Internal Credit Rating. Clearing Participants with higher internal credit ratings are allocated higher STEL. A maximum Potential Stress Loss will be calculated for each Clearing Participant and will be compared against the STEL. Any participant whose Potential Loss exceeds their STEL will be required to lodge STEL related Additional Initial Margin with the CCP. The size of such Additional Initial Margin will equal the excess of stress testing losses beyond the CCP's financial resources, and, in a default, would be available to ASX Clear and ASX Clear (Futures) ahead of their own financial resources ↗ Factors that ASX would consider when determining an increase or change to default resources would be if stress-test results in excess of prefunded pooled resources were persistent, significant and widespread
PFMI 4 – KEY CONSIDERATION 7 An FMI should establish explicit rules and procedures that address fully any credit losses it may face as a result of any individual or combined default among its participants with respect to any of their obligations to the FMI. These rules and procedures should address how potentially uncovered credit losses would be allocated, including the repayment of any funds an FMI may borrow from liquidity providers. These rules and procedures should also indicate the FMI's process to replenish any financial resources that the FMI may employ during a stress event, so that the FMI can continue to operate in a safe and sound manner *FSS 4.8*	↗ ASX undertook public consultation in October 2014 on proposed new recovery tools to fully allocate uncovered losses and replenish financial resources following participant default. Following consideration of the responses to consultation, ASX expects to consult on amendments to the operating rules of the ASX CCPs to implement these new recovery tools in early Q22015 with a view to implementation of the new rules in mid-2015

PFMI Disclosure Framework | Principle 5

ASX

PRINCIPLE 5 – COLLATERAL:
An FMI that requires collateral to manage its or its participants' credit exposures should accept collateral with low credit, liquidity and market risks. A CCP should also set and enforce appropriately conservative haircuts and concentration limits

PFMI/FSS

PFMI 5 – KEY CONSIDERATION 1

An FMI should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity and market risks

FSS 5.1

HOW ASX CENTRAL COUNTERPARTIES COMPLY

↗ **The CCPs set strict criteria for the assets they accept as collateral, and ensure that:**

- Collateral is of a high credit standard, to mitigate the risk of:
  - » a double default event (i.e. the default of a Clearing Participant and of the collateral issuer); and,
  - » excessive levels of market volatility
- Collateral is liquid, enabling ASX's CCPs to:
  - » liquidate the collateral in a timely fashion in the event of a default, and without any legal or operational impediments; and,
  - » mark-to-market the collateral each day, based on good quality market prices prior to any default
- Collateral risks are managed through:
  - » valuation haircuts;
  - » related party collateral restrictions – that prevent Clearing Participants from posting their own debt or equity securities or debt or equity of companies closely linked to them; and,
  - » exception limits – where exceptions are granted in respect of related party collateral, such exceptions are monitored on a regular basis

↗ **Details of acceptable collateral are set out on the ASX website at www.asx.com.au/services/clearing/acceptable-collateral.htm**

In determining its collateral policies, a CCP should take into consideration the broad effect of these policies on the market. As part of this, a CCP should consider allowing the use of collateral commonly accepted in the relevant jurisdictions in which it operates

FSS 5.2

↗ **The CCPs take into account market liquidity in determining the eligibility of collateral. Securities must be sufficiently liquid in order to be eligible as collateral and therefore should not have any material impact on market liquidity or pricing. ASX Clear (Futures) also accept US Treasury bills and foreign currencies that are highly liquid and commonly accepted and traded in the Australian market**

PFMI Disclosure Framework | Principle 5

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 5 – KEY CONSIDERATION 2 An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions *FSS 5.3*	**The CCPs apply prudent collateral valuation haircuts, that take into consideration relevant risk characteristics of the instrument including:** • the risks arising from issuer's country of residence; • the maturity of the instrument; • historical and potential future price volatility of the instrument in both normal and stressed market conditions; • the liquidity of the underlying market; • foreign exchange risk (if any); and, • procyclical effects
PFMI 5 – KEY CONSIDERATION 3 In order to reduce the need for procyclical adjustments, an FMI should establish stable and conservative haircuts that are calibrated to include periods of stressed market conditions, to the extent practicable and prudent *FSS 5.4*	**The CCPs have stable and conservative haircuts that consider potential pro-cyclical effects on collateral prices. This includes taking into account stressed market conditions when setting haircut rates**
PFMI 5 – KEY CONSIDERATION 4 An FMI should avoid concentrated holdings of certain assets where this would significantly impair the ability to liquidate such assets quickly without significant adverse price effects *FSS 5.5*	**The impact of concentrations on collateral holdings is mitigated by the fact ASX's CCPs only accept collateral where Credit quality is transparent, either through externally verifiable standards (S&P ratings of A+/AAA, A+ ADIs, or being a constituent of a major index- the S&P ASX 200). The standard for credit quality is an indication that those high quality instruments are liquid, non-volatile, and priced adequately**

PFMI Disclosure Framework | Principle 5

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 5 – KEY CONSIDERATION 5 An FMI that accepts cross-border collateral should mitigate the risks associated with its use and ensure that the collateral can be used in a timely manner *FSS 5.6*	↗ **The CCPs have limits on the amount of collateral held that is denominated in foreign currency. In addition, the CCPs have the ability to use FX swaps to ensure that cross-border collateral can be used in a timely manner**
PFMI 5 – KEY CONSIDERATION 6 An FMI should use a collateral management system that is well designed and operationally flexible *FSS 5.7*	↗ **ASX's CCPs have well-designed collateral management systems that manage collateral lodgement against margins. The systems have the ability to allocate collateral in order to optimally manage collateral coverage of exposures. The systems also facilitate valuation of collateral through an automated daily pricing process**

PFMI Disclosure Framework | Principle 6

ASX

PRINCIPLE 6 – MARGIN:

A CCP should cover its credit exposures to its participants for all products through an effective margin system that is risk based and regularly reviewed

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 6 – KEY CONSIDERATION 1 A CCP should have a margin system that establishes margin levels commensurate with the risks and particular attributes of each product, portfolio and market it serves *FSS 6.1*	↗ **The CCPs operate margin systems that ensure margin levels are commensurate with the risks and particular attributes of each product, portfolio and market** ↗ **The choice of margin system is driven by the specific requirements and characteristics of each market/ product class. The systems themselves use proven methodologies:** ↗ **The margin systems used for Initial Margin are:** • ASX Clear: » Equity Derivatives: SPAN (Standard Portfolio Analysis of Risk) » Cash Equities: Combination of Historical Simulation VaR and Flat Rates • ASX Clear (Futures): » Futures: SPAN » OTC Interest Rate Derivatives: Filtered Historical Simulation VaR ↗ **Further details on margining for ASX Clear can be found on the ASX website at** www.asx.com.au/services/clearing/asx-clear-margining.htm ↗ **Further details on Futures margining for ASX Clear (Futures) can be found on the ASX website at** www.asx.com.au/services/clearing/asx-clear-futures-margining.htm ↗ **Further details on OTC Interest Rate Derivatives margining can be found in the** "ASX OTC Interest Rate Derivatives Clearing – Service Description"
PFMI 6 – KEY CONSIDERATION 2 A CCP should have a reliable source of timely price data for its margin system. A CCP should also have procedures and sound valuation models for addressing circumstances in which pricing data are not readily available or reliable *FSS 6.2*	↗ **For listed products, official end-of-day settlement prices are used for margining** ↗ **For OTC Interest Rate Derivatives, standard mark-to-market methodologies in conjunction with end-of-day market interest rates are used for margining**

PFMI Disclosure Framework | Principle 6

ASX

PFMI/FSS

PFMI 6 – KEY CONSIDERATION 3

A CCP should adopt initial margin models and parameters that are risk based and generate margin requirements sufficient to cover its potential future exposure to participants in the interval between the last margin collection and the close out of positions following a participant default. Initial margin should meet an established single-tailed confidence level of at least 99 per cent with respect to the estimated distribution of future exposure.

For a CCP that calculates margin at the portfolio level, this requirement applies to each portfolio's distribution of future exposure. For a CCP that calculates margin at more granular levels, such as at the sub-portfolio level or by product, the requirement must be met for the corresponding distributions of future exposure.

The model should (a) use a conservative estimate of the time horizons for the effective hedging or close out of the particular types of products cleared by the CCP (including in stressed market conditions), (b) have an appropriate method for measuring credit exposure that accounts for relevant product risk factors and portfolio effects across products and, (c) to the extent practicable and prudent, limit the need for destabilising, procyclical changes

FSS 6.3

HOW ASX CENTRAL COUNTERPARTIES COMPLY

- **The CCPs ensure that margin requirements are sufficient to cover its potential future exposure to participants in the interval between the last margin collection and the close out of positions following a participant default**
- **The margin models assume a conservative time horizon for hedging and close out**
- **A summary of the margin methodology used for each product class, including confidence intervals and assumed close out periods, are highlighted in the following table:**

Product Group	Margin Methodology	Confidence Intervals	Close-out Assumption
Equity Derivatives	SPAN	99	Max(1-2)
Cash Equity - VaR	VaR, Flat Rates	99	1 - 3
Exchange-Traded-Derivatives	SPAN	99	Max(1-2)
OTC	VaR	99.5	5 - 7

PFMI Disclosure Framework | Principle 6

ASX

PFMI/FSS

PFMI 6 – KEY CONSIDERATION 4

A CCP should mark participant positions to market and collect variation margin at least daily to limit the build-up of current exposures. A CCP should have the authority and operational capacity to make intraday margin calls and payments, both scheduled and unscheduled, to participants

FSS 6.4

HOW ASX CENTRAL COUNTERPARTIES COMPLY

↗ **The CCPs' Operating Rules and Procedures give the CCPs authority and operational capacity to collect margins on a daily basis and variation margin on an intraday basis in order to limit the build-up of current exposures**

↗ **Each of the CCPs has slightly different arrangements for the calling and collecting of margins:**

- ASX Clear:
  - » For cash equities transactions (risk and mark to market), margins are calculated based on end of day prices and settled at 10.30am the following business day. Currently there is no intraday margin called against cash equities transactions;
  - » For derivatives transactions (Exchange Traded Options), margins are calculated based on end of day prices and settled at 10.30am the following business day. If during the day the S&P/ASX 200 index moves by greater than 1% in either direction then an ad hoc intraday margin call will be made and Clearing Participants will be called for margin where the initial margin on their portfolio has been eroded by more than 40% and the margin call is greater than $100,000
- ASX Clear (Futures):
  - » For Futures (Futures and Options over Futures), margins are calculated based on end of day prices and settled at 10.30am the following business day. At 8.30am the CCP also looks at the impact on positions from the trading conducted in the overnight trading session to assess if any of the 10.30 am settlement obligations need to be adjusted
  - » There is a scheduled intraday margin call at 11.30am and Clearing Participants will be called for margin where the initial margin on their portfolio has been eroded by a certain percentage and the margin call is greater than a certain value, refer below:

Participant Type	Erosion	Value
OTC Clearing Participant	10%	$1,000,000
OTC & Futures Clearing Participant	20%	$1,000,000
Futures Clearing Participant	25%	$100,000

  - » If during the day the S&P/ASX 200 index moves by greater than 1% in either direction then an ad hoc intraday margin call will be made and Clearing Participants will be called for margin where the initial margin on their portfolio has been eroded by a certain percentage and the margin call is greater than a certain value, refer above table

For all scheduled and ad hoc intraday margin calls, the impacted clearing participants are notified via email and given two hours to settle their margin obligation via Austraclear, unless otherwise advised

PFMI Disclosure Framework | Principle 6

ASX

PFMI/FSS

PFMI 6 – KEY CONSIDERATION 5

In calculating margin requirements, a CCP may allow offsets or reductions in required margin across products that it clears or between products that it and another CCP clear, if the risk of one product is significantly and reliably correlated with the risk of the other product. Where two or more CCPs are authorised to offer cross-margining, they must have appropriate safeguards and harmonised overall risk management systems

FSS 6.5

HOW ASX CENTRAL COUNTERPARTIES COMPLY

- The margining methodology used by the CCPs allows for margin requirements to be offset across products if one product is significantly and reliably correlated with the risk of the other product, however this is only allowed within a CCP and not across CCPs
- ASX Clear (Futures) – Exchange Traded Derivatives and ASX Clear Derivative Margins: SPAN methodology allows offsets in the form of 'inter-commodity spread concessions'. These offsets reduce margin requirements for reliable correlations across related contracts. Inter-commodity spread concessions are only applied where measures of correlation between contracts exceed 30 per cent and the correlation is based on economic fundamentals. ASX uses sensitivity analysis to verify the reliability of correlations between products used in calculating inter-commodity spread concessions
- ASX Clear Cash Market: ASX Clear applies margin at a portfolio (Clearing Participant) level for its cash market securities using its HSVaR methodology. This implicitly reduces the margin requirements for any products within the portfolio that have displayed negatively correlated risks over the previous 2 years. The use of historical simulation over a 2-year period establishes the significance and reliability of these correlations
- ASX Clear (Futures) OTC Market: ASX Clear (Futures) applies HSVaR methodology in its margining approach for the OTC interest market. This implicitly reduces the margin requirements for any products within the portfolio that have displayed negatively correlated risks over the previous 5 years. The use of historical simulation over a 5-year period establishes the significance and reliability of these correlations
- ASX Clear (Futures) also offers OTC participants the ability to choose to cross-margin specific directly cleared interest rate futures by allocating these positions to their OTC derivatives portfolio. If participants choose to do so, the allocated interest rate futures are margined under the OTC IRS Historic VaR model, rather than using the SPAN methodology. HSVaR margining can result in less conservative estimates of correlations than SPAN, and higher margins (lower offsets) as interest rate futures in the pool under the OTC IRS Historic VaR methodology are subjected to a five-day rather than a one to two day close-out assumption

PFMI Disclosure Framework | Principle 6

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 6 – KEY CONSIDERATION 6 A CCP should analyse and monitor its model performance and overall margin coverage by conducting rigorous daily backtesting and at least monthly, and more frequent where appropriate, sensitivity analysis. A CCP should regularly conduct an assessment of the theoretical and empirical properties of its margin model for all products it clears. In conducting sensitivity analysis of the model's coverage, a CCP should take into account a wide range of parameters and assumptions that reflect possible market conditions, including the most volatile periods that have been experienced by the markets it serves and extreme changes in the correlations between prices *FSS 6.6*	↗ Both CCPs monitor overall margin coverage on a daily basis ↗ Daily backtesting of margin coverage, both static and dynamic, is performed for both CCPs and is summarised in monthly reports ↗ Sensitivity analysis of the key margin model parameters is performed on both CCPs and is summarised in monthly reports as part of an ongoing Margin Rate review process ↗ Daily emails on Back Testing results are sent out to internal stakeholders ↗ The pro-cyclicality is addressed by setting floors across a range of risk parameter inputs in CCPs margin models, incorporating stressed market conditions in the sensitivity analysis and using short term volatilities. Sensitivity analysis then looks to stretch assumptions and look for possible breaches
PFMI 6 – KEY CONSIDERATION 7 A CCP should regularly review and validate its margin system *FSS 6.7*	↗ Model validation process in place is over and above the ongoing back testing and sensitivity analysis of margin model inputs and outputs ↗ Model validation also includes the evaluation of model assumptions and conceptual soundness commensurate with the risks and particular attributes of the product and the market in which the model operates ↗ There is a model validation standard and an approach as agreed with the RBA which addresses all models including margining models which lays out the framework for external and internal model validations. Models are ranked by key factors: Dollar Impact, Priority of Protection, External Impact, Market Structure, Product impact, Model Review (last) and Complexity ↗ For Models above 3/5 risk rating external independent model validation is required annually. For models between 2.5-3 external model validation is required bi-annually. And for models below 2.5 independent model validation is done every 2-3 years ↗ Note if the margin model has been materially changed or the market materially changed then such factors will impact weighting such that models may increase risk weightings into higher buckets requiring review sooner or full external validation rather than independent validation
In designing its margin system, a CCP should consider the operating hours of payment and settlement systems in the markets in which it operates *FSS 6.8*	↗ All margin calls must be settled through Austraclear. It is business practice to provide participants with 2 hours' notice in which to settle a margin call. Therefore, as Austraclear closes at 4:25pm, the latest that ASX will exercise an intraday margin call is approximately 2pm. In extreme circumstances, the CCPs may elect to shorten the notice period, however, any shortened notice would still be required to meet Austraclear's opening hours, which are stated in the Austraclear Regulations ↗ The CCPs' Operating Rules and Procedures also state the operating hours of the payment and settlement systems

PFMI Disclosure Framework | Principle 7

ASX

PRINCIPLE 7 – LIQUIDITY RISK:
An FMI should effectively measure, monitor, and manage its liquidity risk. An FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the FMI in extreme but plausible market conditions

PFMI/FSS

PFMI 7 – KEY CONSIDERATION 1

An FMI should have a robust framework to manage its liquidity risks from its participants, settlement agents, nostro agents, custodian banks, liquidity providers and other entities

FSS 7.1

HOW ASX CENTRAL COUNTERPARTIES COMPLY

- **ASX Clearing Corporation (ASXCC) manages the investment of Clearing Participant cash margins and default funds for both of ASX's CCPs**
- **The CCPs' liquidity risk management framework is set out in the ASX Liquidity Risk Policy and the ASXCC Investment Mandate which is implemented by using appropriate systems, models, processes and procedures**
- **The key features of ASX's approach to liquidity management are as follows:**
  - 100% of the capital for both CCPs (from ASX and from participants) is in cash
  - Overwhelming majority of margin for ASX Clear (Futures) is received as cash
  - The eligible collateral for ASX Clear consists of high quality equity securities which are subject to a substantial (30%) haircut
  - All securities invested in by ASXCC (for both CCPs) are eligible for a repurchase agreement (Repo) at the RBA
  - ASXCC is one of only a handful of non-bank entities who have a direct Exchange Settlement Account (ESA) with the RBA (allowing repo directly with the RBA)
  - ASX's liquidity policy requires a minimum holding of liquidity (defined as same day availability) to meet both Ordinary Liquidity Requirements and estimated Default Liquidity Requirements (DLR)
  - The DLR is calculated on a Cover 2 plus affiliates basis for ASX Clear Futures and Cover 1 plus affiliates for ASX Clear (both on a stress basis). As set out in Key Consideration 4 below, ASX Clear will move to a Cover 2 plus affiliates basis at the end of Q1 2015
  - ASX Clear's rule book gives the CCP the contractual right to use Offsetting Transaction Arrangements (OTAs) with non-defaulting participants who are counterparties to outstanding sale transactions with a defaulting participant. OTAs are a form of contingent liquidity from participants available at the option of the CCP and which are "funded" by the sale proceeds due to be received by that participant from the defaulting participant
- **ASX helps enable its Participants to manage their own liquidity risk by:**
  - Providing sufficient notification to meet Intraday, end of day and ad-hoc margin obligations,
  - Providing transparency in the methodologies used in margin and settlement determination,
  - Providing sufficient transparency of the collateral lodgement requirements and timings

PFMI Disclosure Framework | Principle 7

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 7 – KEY CONSIDERATION 2 An FMI should have effective operational and analytical tools to identify, measure and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity *FSS 7.2*	↗ The CCPs' daily settlement and funding flows are identified, measured and monitored on a timely basis, including on an intraday basis through a number of systems ↗ Daily reports of key risk indicators, related to liquidity demands are reviewed to ensure there are no issues. Margin and collateral holding information feeds into ASX's Treasury Management System every morning (or intraday if required). This allows Portfolio Risk Management to view this information and enter trades required to manage daily cash-flows into ASX's Treasury Management System. Clearing and Settlement Operations then use daily settlement reports produced by the Treasury Management System to generate settlement instructions in Austraclear, which results in cash flow movements to be monitored in RITS
PFMI 7 – KEY CONSIDERATION 3 *NO CORRESPONDING FSS*	↗ Applicable to SSFs only
PFMI 7 – KEY CONSIDERATION 4 A CCP should maintain sufficient liquid resources in all relevant currencies to settle securities-related payments, make required variation margin payments and meet other payment obligations on time with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions. In addition, a CCP that is involved in activities with a more complex risk profile or that is systemically important in multiple jurisdictions should consider maintaining additional liquidity resources sufficient to cover a wider range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions *FSS 7.3*	↗ ASXCC's liquidity requirement is determined by estimating the liquidity requirements of ASX Clear and ASX Clear (Futures) in both normal conditions (i.e. ordinary day-to-day portfolio cash outflows) and the potential liquidity needs of the CCPs in the event of Clearing Participant default ↗ As set-out in the Supplementary Interpretation of the Financial Stability Standards for Central Counterparties (issued 27 October 2014) the RBA considers both of ASX's CCPs to be of systematic importance in multiple jurisdictions because of their need to obtain recognition under EMIR in order either to continue to provide services to clearing members established in the EU (ASX Clear (Futures)), or to be considered a 'qualifying CCP' under EU bank capital regulations (ASX Clear). This new Supplementary Interpretation amended the Supplementary Interpretation issued in August 2013 which only applied to ASX Clear (Futures) – the new interpretation has been issued as a result of ASX Clear's application for recognition under EMIR ↗ As a result of this new guidance each CCP is required to maintain liquid resources to cover liquidity needs in the event of the default of the two participants and their affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions ↗ ASX Clear (Futures) currently maintains sufficient liquid resources to cover the default of the two Clearing Participants and their affiliates that generate the largest aggregate payment obligation to ASX Clear (Futures) in extreme but plausible market conditions with a high degree of confidence ↗ ASX Clear will move from its current "Cover 1" standard to the higher "Cover 2" standard at the end of Q1 2015, and, as a result, will maintain liquid resources to cover liquidity needs in the event of the default of the two participants and their affiliates that would generate the largest aggregate payment obligation to the central counterparty in extreme but plausible market conditions

PFMI Disclosure Framework | Principle 7

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
	↗ **ASX has introduced ASX Clear and ASX Settlement Operating Rule amendments to allow the creation of OTAs with non-defaulting Clearing Participants in the event that a Clearing Participant fails to meet a payment obligation in relation to a cash equity transaction. This arrangement settles obligations and entitlements under CCP Batch Instructions which would otherwise fail due to outstanding payment obligations. OTAs replace the previous settlement rescheduling arrangements for those failed CCP Batch Instructions and facilitate the settlement of CCP Batch Instructions on the scheduled settlement date**
PFMI 7 – KEY CONSIDERATION 5 For the purpose of meeting its minimum liquid resources requirement, an FMI's qualifying liquid resources in each currency include cash at the central bank of issue and at creditworthy commercial banks, committed lines of credit, committed foreign exchange swaps and committed repos, as well as highly marketable collateral held in custody and investments that are readily available and convertible into cash with prearranged and highly reliable funding arrangements, even in extreme but plausible market conditions. If an FMI has access to routine credit at the central bank of issue, the FMI may count such access as part of the minimum requirement to the extent it has collateral that is eligible for pledging to (or for conducting other appropriate forms of transactions with) the relevant central bank. All such resources should be available when needed *FSS 7.4*	↗ **ASXCC is the controlling entity for the treasury investments for both ASX Clear and ASX Clear (Futures), which are settled across ASXCC's Exchange Settlement Account (ESA) held with the RBA** ↗ **ASXCC invests funds in accordance with the Investment Mandate - this covers both cash margin collected and prefunded default funds** ↗ **The principal objective of the Investment Mandate is to ensure that the investment portfolio is made up of highly liquid financial instruments with a high credit quality and low levels of market risk** ↗ **Investments are restricted to highly liquid, short term investments with counterparties of high credit standing. All securities purchased are required to be on the RBA's eligible securities list for re-purchase purposes** ↗ **The primary driver of ASXCC's investment objective is the need to ensure timely and certain access to funds at all times, including in the event of a Clearing Participant default** ↗ **Timely and reliable access to liquid resources, as defined by the Investment Mandate, means:** • Cash available for use within two hours; or, Securities traded in a liquid market which can be sold for same day value with settlement proceeds available within two hours and which are eligible for repurchase transactions with the Reserve Bank of Australia

PFMI Disclosure Framework | Principle 7

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 7 – KEY CONSIDERATION 6 An FMI may supplement its qualifying liquid resources with other forms of liquid resources. If the FMI does so, these liquid resources should be in the form of assets that are likely to be saleable or acceptable as collateral for lines of credit, swaps or repos on an ad hoc basis following a default, even if this cannot be reliably prearranged or guaranteed in extreme market conditions. Even if an FMI does not have access to routine central bank credit, it should still take account of what collateral is typically Vaccepted by the relevant central bank, as such assets may be more likely to be liquid in stressed circumstances. An FMI should not assume the availability of emergency central bank credit as part of its liquidity plan *FSS 7.5*	↗ **The CCPs do not rely on supplemental liquid resources, as they meet their minimum liquidity requirements though their qualifying liquid resources**
PFMI 7 – KEY CONSIDERATION 7 An FMI should obtain a high degree of confidence, though rigorous due diligence, that each provider of its minimum required qualifying liquid resources, whether a participant of the FMI or an external party, has sufficient information to understand and to manage its associated liquidity risks, and that it has the capacity to perform as required under its commitment. Where relevant to assessing a liquidity provider's performance reliability with respect to a particular currency, a liquidity provider's potential access to credit from the central bank of issue may be taken into account. An FMI should regularly test its procedures for accessing its liquid resources at a liquidity provider *FSS 7.6*	↗ **As set out in the ASXCC Investment Mandate, investments are restricted to highly liquid, short term investments with counterparties of high credit standing. The credit quality of investment counterparties takes into account both short and long term publically available credit ratings – eligible counterparties are required to have a minimum external short-term credit rating equal to or above Standard & Poor's 'A-1' rating** ↗ **Exposures within the investment portfolio are managed using several different limits including limits on maximum exposure to a single investment counterparty and by counterparty category**

PFMI Disclosure Framework | Principle 7

ASX

PFMI/FSS

HOW ASX CENTRAL COUNTERPARTIES COMPLY

PFMI 7 – KEY CONSIDERATION 8

An FMI with access to central bank accounts, payment services or securities services should use these services, where practical, to enhance its management of liquidity risk

FSS 7.7

The CCPs use the following services to enhance their liquidity risk management:

- Austraclear: Clearing Participants settle routine margin payments in respect of ASX derivatives positions (for both ASX Clear and ASX Clear (Futures)) and novated unsettled cash equity market obligations (for ASX Clear only) via cash transfers in Austraclear, which settle in real time via RITS
- RBA ESA: Payments transactions reflecting margin-related funds movements and treasury investments for both CCPs are settled using ASXCC's ESA

PFMI 7 – KEY CONSIDERATION 9

An FMI should determine the amount and regularly test the sufficiency of its liquid resources through rigorous stress testing. An FMI should have clear procedures to report the results of its stress tests to appropriate decision-makers at the FMI and to use these results to evaluate the adequacy of, and adjust, its liquidity risk management framework. In conducting stress testing, an FMI should consider a wide range of relevant scenarios. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions. Scenarios should also take into account the design and operation of the FMI, include all entities that might pose material liquidity risks to the FMI (such as settlement banks, nostro agents, custodian banks, liquidity providers and linked FMIs) and, where appropriate, cover a multiday period. In all cases, an FMI should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount and form of total liquid resources it maintains

FSS 7.8

The CCPs assess the adequacy of their liquidity arrangements in the event of Clearing Participant default using the ASX Liquidity Stress Testing (LST) model on a daily basis

In order to estimate the liquidity that the CCPs need to hold in order to manage Clearing Participant default events, the CCPs stress test Clearing Participant positions using possible adverse price moves (stress scenarios) in extreme but plausible market conditions (and, in the case of ASX Clear, different settlement/close-out assumptions) in the time between the last payment of margin and the time of close-out, these are the LST values. The worst case LST value (i.e. the largest hypothetical LST loss for any single Clearing Participant and its affiliates (increased to the two largest Clearing Participants and their affiliates at the end of Q1 2015 as per Key Consideration 4 above) on ASX Clear and the two largest Clearing Participants and their affiliates on ASX Clear (Futures)) irrespective of credit standing and across all scenarios, is taken as the Default Liquidity Requirement (DLR) each day (for ASX Clear (Futures)) or used to monitor the adequacy of the liquidity resources (for ASX Clear)

The Liquidity Stress Testing model is aligned with the ASX Capital Stress Testing (CST) model which uses a comprehensive range of stress scenarios, however, assumption on portability and settlement cashflows within the CST model and the LST model differ for ASX Clear

The Liquidity Risk Policy and ASXCC Investment Mandate sets out the rationale for, and governance arrangements relating to, the amount and form of liquid resources it maintains

The results of liquidity stress testing are regularly reported to ASX senior management, Clearing and Settlement Boards and the RBA

PFMI Disclosure Framework | Principle 7

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 7 – KEY CONSIDERATION 10 An FMI should establish explicit rules and procedures that enable the FMI to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially uncovered liquidity shortfalls and should aim to avoid unwinding, revoking or delaying the same-day settlement of payment obligations. These rules and procedures should also indicate the FMI's process to replenish any liquidity resources it may employ during a stress event, so that it can continue to operate in a safe and sound manner *FSS 7.9*	↗ ASX has introduced ASX Clear and ASX Settlement Operating Rule amendments to allow the creation of OTAs with non-defaulting Clearing Participants in the event that a Clearing Participant fails to meet a payment obligation in relation to a cash equity transaction. This arrangement settles obligations and entitlements under CCP Batch Instructions which would otherwise fail due to outstanding payment obligations. OTAs replace the previous settlement rescheduling arrangements for those failed CCP Batch Instructions and facilitate the settlement of CCP Batch Instructions on the scheduled settlement date ↗ ASX undertook public consultation in October 2014 on proposed new recovery tools to address uncovered liquidity shortfalls and replenish financial resources following participant default. Following consideration of the responses to consultation, ASX expects to consult on amendments to the operating rules of the ASX CCPs to implement these new recovery tools in early Q22015 with a view to implementation of the new rules in mid-2015

PFMI Disclosure Framework | Principle 8

ASX

PRINCIPLE 8 – SETTLEMENT FINALITY:
An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 8 – KEY CONSIDERATION 1 An FMI's rules and procedures should clearly define the point at which settlement is final *FSS 8.1*	↗ Movement of equity securities in CHESS from delivering settlement Entrepot accounts to receiving Entrepot accounts will only occur after receipt of a message from RITS indicating that cash has settled across ESA accounts (for ASX Clear only) ↗ ASX CCPs' Operating Rules and Procedures describe the extent of the CCPs' contractual obligations including the point of settlement finality ↗ Margin payments within Austraclear will occur after receipt of a message from RITS indicating that cash has settled across ESA accounts for settlement. All payments are irrevocable once they are accepted by Austraclear ↗ Margin payments within NZ Clear will occur after receipt of a message that they have been accepted by NZ Clear. All payments are irrevocable once they are accepted by NZ Clear. Transactions are not accepted by the system unless the paying member has sufficient credit provided by their Settlement Bank
PFMI 8 – KEY CONSIDERATION 2 An FMI should complete final settlement no later than the end of the value date, and preferably intraday or in real time, to reduce settlement risk *FSS 8.2*	↗ ASX CCPs complete settlement in accordance with the Operating Rules and Procedures of Austraclear, ASX Settlement (for ASX Clear only) or RITS ↗ Delivery versus Payment (DvP) Model 1 (Austraclear – for ASX Clear (Futures) and ASXCC Treasury settlements) and DvP Model 3 (Equities – for ASX Clear only) settlement systems are used ↗ In addition, CHESS facilitates Real Time Gross Settlement (RTGS) – ASX Clear only ↗ Movement of equity securities in CHESS from delivering settlement Entrepot accounts to receiving Entrepot accounts will only occur after receipt of a message from RITS indicating that cash has settled across ESA accounts (ASX Clear only) ↗ The deadlines for completion of equity batch settlement and the obligations of Payment Providers are set out in the CHESS Payments Interface Standard Payments Provider Deed (ASX Clear only)
PFMI 8 – KEY CONSIDERATION 3 An FMI should clearly define the point after which unsettled payments, transfer instructions or other obligations may not be revoked by a participant *FSS 8.3*	↗ ASX CCPs complete settlement in accordance with the Operating Rules and Procedures of Austraclear, ASX Settlement (for ASX Clear only) or RITS ↗ Movement of securities in Austraclear will only occur once a message is received from RITS that the cash leg has settled across ESA accounts. The point at which settlement is final is set out in the Austraclear Regulations at Sections 14, 15 and 16 ↗ For ASX Settlement, movement of equity securities in CHESS from delivering settlement Entrepot accounts to receiving Entrepot accounts will only occur after receipt of a message from RITS indicating that cash has settled across ESA accounts. The point at which settlement is final is set out in the ASX Settlement Operating Rules at Section 10 ↗ Unsettled payments may not be revoked after they match and the cash leg has settled across ESA accounts

PFMI Disclosure Framework | Principle 9

ASX

PRINCIPLE 9 – MONEY SETTLEMENTS:
An FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimise and strictly control the credit and liquidity risk arising from the use of commercial bank money

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 9 – KEY CONSIDERATION 1 An FMI should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks *FSS 9.1*	↗ All $AUD settlements are conducted via CHESS (for ASX Clear only) and Austraclear (for both CCPs) across ESAs in RITS ↗ All $NZ settlements are conducted via NZ Clear accounts (ASX Clear (Futures) only) ↗ ESA accounts are held in the name of ASXCC (for both CCPs) and ASX Settlement Pty Limited (for ASX Clear only) ↗ NZ Clear accounts are held in the name of ASXCC Limited as Trustee for ASXCC Trust (ASX Clear (Futures) only) ↗ Other currencies are all low value/volume and are settled via commercial bank arrangements (ASX Clear (Futures) only)
PFMI 9 – KEY CONSIDERATION 2 If central bank money is not used, an FMI should conduct its money settlements using a settlement asset with little or no credit or liquidity risk *FSS 9.2*	↗ Other currencies are all low value/volume and are settled via commercial bank arrangements. (ASX Clear (Futures) only) ↗ The account is held in the name of ASX Clear (Futures), however novated to ASXCC Limited ↗ ASX maintains a small float in required currencies
PFMI 9 – KEY CONSIDERATION 3 If an FMI settles in commercial bank money, it should monitor, manage and limit its credit and liquidity risks arising from the commercial banks. In particular, an FMI should establish and monitor adherence to strict criteria for its settlement banks that take account of, among other things, their regulation and supervision, creditworthiness, capitalisation, access to liquidity and operational reliability. An FMI should also monitor and manage the concentration of credit and liquidity exposures to its commercial settlement banks *FSS 9.3*	↗ Other currencies are all low value/volume and are settled via commercial bank arrangements. (ASX Clear (Futures) only) ↗ Given the current value and volume of non-$AUD/$NZ settlements, no formal criteria have been established to deal with the regulation, supervision, creditworthiness, capitalisation, access to liquidity and operational reliability of commercial bank arrangements ↗ Should future initiatives increase the value and volume of settlements through commercial bank arrangements, the appropriate criteria and risk management framework will be established ↗ The CCPs do not monitor or manage Clearing Participants' credit and liquidity exposure inherent in the Clearing Participant's own banking arrangements. The individual Clearing Participants are in the best position to monitor and manage their own arrangements ↗ In the case of ASX Clear, Section 5 and Schedule 1 of the CCP's Operating Rules incorporate measures around Clearing Participant's credit and liquidity exposures

PFMI Disclosure Framework | Principle 9

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 9 – KEY CONSIDERATION 4 If an FMI conducts money settlements on its own books, it should minimise and strictly control its credit and liquidity risks. No corresponding FSS *FSS 9.4*	↗ **This obligation is not applicable to ASX's CCPs**
PFMI 9 – KEY CONSIDERATION 5 An FMI's legal agreements with any settlement banks should state clearly when transfers on the books of individual settlement banks are expected to occur, that transfers are to be final when effected, and that funds received should be transferable as soon as possible, at a minimum by the end of the day and ideally intraday, in order to enable the FMI and its participants to manage credit and liquidity risks *FSS 9.5*	↗ **Terms and Conditions set out the manner in which the commercial bank accounts operate**

ASX

PRINCIPLE 10 – PHYSICAL DELIVERY:

An FMI should clearly state its obligations with respect to the delivery of physical instruments or commodities and should identify, monitor and manage the risks associated with such physical deliveries

PFMI/FSS

PFMI 10 – KEY CONSIDERATION 1

An FMI's rules should clearly state its obligations with respect to the delivery of physical instruments or commodities

FSS 10.1

HOW ASX CENTRAL COUNTERPARTIES COMPLY

↗ **The delivery obligations of ASX Clear (Futures) are set out in Operating Rule 63 and Schedule 14. This includes both deliverable commodity and 90 Day Bank Bill futures contracts**

- At the discretion of ASX Clear (Futures), ASX Clear (Futures) may:
  - » direct a clearing participant with delivery obligations to make delivery to a nominated clearing participant holding an opposite position and to receive the settlement amount accordingly; or
  - » make or take delivery itself and pay or receive the settlement amounts accordingly
- In certain circumstances contracts can be cash settled e.g. where ASX Clear (Futures) is required to make delivery but delivery is not received or is impossible
- In respect of grain contracts, delivery is effected by book entry by ASX Clear (Futures) to reduce or increase, as the case may be, the amount of the Interest in the commodity held by ASX Clear (Futures) for a seller or a buyer
- ASX 24 Operating Rules Schedules. The Futures contract specifications provide details of FMI obligations regarding physical delivery
- ASX 24 Operating Rules Procedure 3801
- Information about the ASX commodity markets is available on the ASX website at: www.asx.com.au/products/about-asx-grain-futures-options.htm

PFMI 10 – KEY CONSIDERATION 2

An FMI should identify, monitor and manage the risks and costs associated with the storage and delivery of physical instruments or commodities

FSS 10.2

↗ **The delivery obligations of ASX Clear (Futures) are set out in the ASX Clear (Futures)'s Operating Rule 63**

↗ **ASX 24 Operating Rules Schedules (in particular 2.77.1 Item 23)**

↗ **ASX 24 Operating Rules Procedure 3801**

↗ **Information about the ASX commodity markets is available on the ASX website at: www.asx.com.au/products/about-asx-grain-futures-options.htm**

PRINCIPLE 11: CENTRAL SECURITIES DEPOSITORIES:

A CSD should have appropriate rules and procedures to help ensure the integrity of securities issues and minimise and manage the risks associated with the safekeeping and transfer of securities. A CSD should maintain securities in an immobilised or dematerialised form for their transfer by book entry.

↗ **This PFMI is Not applicable to ASX's CCPs.**

PFMI Disclosure Framework | Principle 12

ASX

PRINCIPLE 12 – EXCHANGE-OF-VALUE SETTLEMENT SYSTEMS

If an FMI settles transactions that involve the settlement of two linked obligations (for example, securities or foreign exchange transactions), it should eliminate principal risk by conditioning the final settlement of one obligation upon the final settlement of the other

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 12 – KEY CONSIDERATION 1 An FMI that is an exchange-of-value settlement system should eliminate principal risk by ensuring that the final settlement of one obligation occurs, regardless of whether the FMI settles on a gross or net basis and when finality occurs *FSS 11.1*	↗ Model 1 (Austraclear – for ASX Clear (Futures) and ASXCC Treasury settlements) and Model 3 (Equities – ASX Clear only) settlement systems used ↗ Electronic dematerialised DvP settlement ↗ Movement of securities in Austraclear (ASX Clear (Futures) or ASXCC treasury settlements) will only occur once a message is received from RITS that the cash leg has settled across ESA accounts ↗ Movement of equity securities in CHESS (ASX clear only) from delivering settlement Entrepot accounts to receiving Entrepot accounts will only occur after receipt of a message from RITS indicating that cash has settled across ESA accounts ↗ ASX Settlement Operating Rules, Section 10 ↗ ASX Clear Operating Rules, Section 12 ↗ Austraclear Regulations, Sections 14, 15 and 16
A CCP should eliminate principal risk associated with the settlement of linked obligations by ensuring that it employs an appropriate delivery versus payment (DvP), delivery versus delivery (DvD) or payment versus payment (PvP) settlement mechanism *FSS 11.2*	↗ DvP Model 1 (Austraclear– for ASX Clear (Futures) and ASXCC Treasury settlements) and Model 3 (Equities – ASX Clear only) settlement systems used ↗ Electronic dematerialised DvP settlement ↗ Movement of securities in Austraclear (ASX Clear (Futures) or ASXCC treasury settlements) will only occur once a message is received from RITS that the cash leg has settled across ESA accounts ↗ Movement of equity securities in CHESS (ASX clear only) from delivering settlement Entrepot accounts to receiving Entrepot accounts will only occur after receipt of a message from RITS indicating that cash has settled across ESA accounts ↗ ASX Settlement Operating Rules, Section 10 ↗ ASX Clear Operating Rules, Section 12 ↗ Austraclear Regulations, Sections 14, 15 and 16

PFMI Disclosure Framework | Principle 13

ASX

PRINCIPLE 13 – PARTICIPANT-DEFAULT RULES AND PROCEDURES:
An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 13 – KEY CONSIDERATION 1 An FMI should have default rules and procedures that enable the FMI to continue to meet its obligations in the event of a participant default and that address the replenishment of resources following a default *FSS 12.1*	↗ **The ASX Operating Rules detail the powers and actions available to a CCP in the event of a default** ↗ **A Participant Incident Review Committee (PIRC) is called upon an incident with a Participant becoming apparent** ↗ **In the event of a potential default, the PIRC will refer the matter to the Default Management committee (DMC)** • ASX Clear Clearing Participant or ASX Clear (Futures) futures Clearing Participant default: once the DMC has determined that the Clearing Participant involved is in default then (following notification to the market) ASX will liaise with one or both of its brokers (authorised to act on behalf of ASX in the event of a default) to close out or hedge the defaulting Clearing Participant's outstanding obligations to the Clearing House; • OTC Clearing Participant default: once the DMC has determined that the Clearing Participant involved is in default then (following notification to the market) ASX will convene the Default Management Group (comprising representatives from each of the OTC Clearing Participant entities of ASX Clear (Futures)) to provide guidance and advice (such advice will be referred back to the DMC for consideration) on the best way to hedge, and subsequently auction, the defaulter's portfolio ↗ **ASX maintains a documented 'Default Management Framework' and comprehensive default management procedures** ↗ **Default management processes for both CCPs are documented on the ASX website at: www.asx.com.au/services/clearing/default-management.htm**
PFMI 13 – KEY CONSIDERATION 2 An FMI should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules *FSS 12.2*	↗ **The ASX operating rule framework places an obligation on all Participants to self-report to ASX if they become aware of any circumstances which may prevent them being able to continue their obligations as an ASX Clearing Participant** ↗ **A PIRC is called upon an incident with a Participant becoming apparent** ↗ **In the event of a potential default, the PIRC will refer the matter to the DMC** ↗ **Under the Default Management Framework, ASX has the power to close out or hedge a Participant's open contracts in order to appropriately control the risk of the participant**
PFMI 13 – KEY CONSIDERATION 3 An FMI should publicly disclose key aspects of its default rules and procedures *FSS 12.3*	↗ **Default management processes for both CCPs are documented on the ASX website at: www.asx.com.au/services/clearing/default-management.htm** ↗ **The Rules that cover the default processes in each of the CCP's are:** • ASX Clear Operating Rules & Procedures – Section 15 - Default • ASX Clear Operating Rules & Procedures – Section 8 – Emergency Assessment • ASX Clear (Futures) Operating Rules & Procedures – Part 7 – Procedures on Default • ASX Clear (Futures) OTC Rulebook – Section 6 – Default

PFMI Disclosure Framework | Principle 13

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 13 – KEY CONSIDERATION 4 An FMI should involve its participants and other stakeholders in the testing and review of the FMI's default procedures, including any close out procedures. Such testing and review should be conducted at least annually and following material changes to the rules and procedures to ensure that they are practical and effective *FSS 12.4*	↗ Involvement in the testing and review of default procedures by Clearing Participants is not catered for, due to the confidential nature of, and real-time information discussed in default management fire drill processes ↗ In the event of default by a non-OTC Clearing Participant, the default management fire drills procedures require the two default brokers authorised to close out positions on behalf of ASX to verify that they can accept the order formats provided by ASX ↗ In the event of default by an OTC Clearing Participant, A Default Management Group (DMG) would be established, comprising representatives from each of the OTC Clearing Participant entities of ASX Clear (Futures). The DMG would provide advice on hedging and auctioning of the defaulting participant's portfolio
A CCP should demonstrate that its default management procedures take appropriate account of interests in relevant jurisdictions and, in particular, any implications for pricing, liquidity and stability in relevant financial markets *FSS 12.5*	↗ ASX have a documented Default Management Framework and comprehensive default management procedures

PFMI Disclosure Framework | Principle 14

ASX

PRINCIPLE 14 – SEGREGATION AND PORTABILITY:

A CCP should have rules and procedures that enable the segregation of positions of a participant's customers and the collateral provided to the CCP with respect to those positions

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 14 – KEY CONSIDERATION 1 A CCP should, at a minimum, have segregation and portability arrangements that effectively protect a participant's customers' positions and related collateral from the default or insolvency of that participant. If the CCP additionally offers protection of such customer positions and collateral against the concurrent default of the participant and a fellow customer, the CCP should take steps to ensure that such protection is effective *FSS 13.1*	↗ **ASX Clear maintains a segregated account structure for its options and futures products which separates client positions from the participant's proprietary positions. For these products, clients are able to access individually segregated accounts that offer protection against the concurrent default of the participant and a fellow client. Under the Operating Rules, ASX Clear also has the power to transfer (port) participants' clients' positions and collateral without the need to seek approval from the participant's external administrator** ↗ **ASX is in the process of enhancing ASX Clear client asset protections to ensure they provide "materially equivalent protection of customer assets by alternative means" under FSS 13.2.10. These enhancements are being introduced in two stages:** • Stage 1: In April 2014, ASX made amendments to the ASX Settlement Operating Rules to confirm that client stock in the Accumulation Account is maintained beneficially for the client and requiring accurate records to allow daily reconciliation of stock in the Accumulation Account. Amendments were also made to the ASX Clear Operating Rules to confirm that funds covering client purchases can only be withdrawn from the client trust account if the Participant has taken all steps required to register the stock into the client's name (subject to certain exceptions based on the Corporations Act) • Stage 2: New CHESS processes and associated rule changes are expected to go live in May 2015. These changes will ensure that when client stock is transferred from the Accumulation Account or a Direct/ Sponsored HIN into the Settlement Account that funds representing the sale proceeds (net of brokerage) are paid into the client trust account or to the client on the same day the stock is transferred
PFMI 14 – KEY CONSIDERATION 2 A CCP should employ an account structure that enables it readily to identify positions of a participant's customers and to segregate related collateral. A CCP should maintain customer positions and collateral in individual customer accounts or in omnibus customer accounts, or in omnibus customer accounts *FSS 13.2*	↗ **Refer to Key Consideration 1 above**

PFMI Disclosure Framework | Principle 14

ASX

PRINCIPLE 14 – SEGREGATION AND PORTABILITY:

A CCP should have rules and procedures that enable the segregation of positions of a participant's customers and the collateral provided to the CCP with respect to those positions

PFMI/FSS

PFMI 14 – KEY CONSIDERATION 3

A CCP should structure its portability arrangements in a way that makes it highly likely that the positions and collateral of a defaulting participant's customers will be transferred to one or more other participants

FSS 13.3

HOW ASX CENTRAL COUNTERPARTIES COMPLY

↗ **Under the Operating Rules, ASX Clear has the power to transfer (port) participants' clients' positions and collateral without the need to seek approval from the participant's external administrator in the event of a default. The availability of individually segregated client accounts for both options and futures supports the transfer of client positions and collateral to another participant in the event of a clearing participant default. Under individual client segregation, margin requirements are calculated on a gross basis for the positions held by each client. Accordingly, there should be sufficient collateral available to support the transfer of each client's positions to another clearing participant**

↗ **Individually segregated client clearing arrangements for OTC and futures transactions on ASX Clear (futures) are as follows:**

- Futures Client Clearing:

  The Futures Client Clearing service (operational as at 14th July 2014) introduced an Individual Client Account (ICA) option which allows for an individual client's net position to be segregated from the positions of other clients and ASX's initial margin requirement for that client's position to be collected and accounted for by ASX within an operationally comingled client collateral account of the clearing participant. The positions and related initial margin value of clients that opt for the ICA are highly likely to be ported in the event of the clearing participant's default, subject to an alternate clearer being able and willing to accept the client's positions within prescribed timeframes

- OTC Client Clearing:

  ASX Clear (Futures) extended its existing OTC interest rate derivatives dealer clearing service to cover the clearing of OTC end client (e.g. buy-side) transactions. The OTC client clearing service makes use of the new individual client account structure (ICA) in ASX Clear (Futures) that allows for the segregation of individual client positions with related initial margin requirements managed within an operationally comingled client collateral account. The OTC service also facilitates the allocation of client trades executed bilaterally, through electronic execution facilities or via voice brokers to the clearing house from market standard interfaces (Markitwire in the first instance). The OTC service also supports cross margining of eligible ASX futures contracts and related OTC interest rate derivatives positions where a client uses ICAs for both OTC and futures positions at the same clearing participant. The OTC client clearing service became operational in April 2014 with cross margining functionality between OTC and ASX futures positions available from mid-July 2014 when the Futures Client Clearing service went live

- Enhanced Protection:

  ASX Clear (Futures) and ASX Clear (ETOs) propose to introduce enhancements to ASX's client clearing structures that will offer derivatives clients the choice of increased collateral protection. The enhancements will enable excess customer collateral to be held directly with the central counterparty and attributed to individual client accounts (ICA). The enhancements are scheduled to be delivered mid-2015

ASX

PFMI/FSS

HOW ASX CENTRAL COUNTERPARTIES COMPLY

ASX is introducing the enhancements:

» To comply with regulatory guidance of the RBA, and so that the ASX CCPs can gain recognition in the European Union; and

» In response to market feedback received from consultation in July 2014

Under ASX Clear (Futures), the account structure will facilitate collateral excess (collateral not utilised to cover the ICA initial margin requirement) to be calculated at an ICA level, based upon the cash/non-cash collateral (or total collateral) attributed to the ICA by the Clearing Participant. Clearing Participants will have the option (but not the obligation) to notify ASX Clear (Futures) of these collateral amounts, on behalf of the client. The account structure will also introduce a "tracking" capability, for lodgement of assets on behalf of an ICA, which identifies that asset as belonging to that particular client, in the books and records of the CCP

Under ASX Clear (ETOs), collateral excess is already recorded at the client account level, with the lodgement of client non-cash collateral into individual accounts already common practice. However, the enhancements will allow clearing participants to notify/ lodge excess cash collateral against the clients' individual accounts

Client collateral will continue to be held in the pooled client collateral account of the clearing participant. The demand/ requirements for a full segregation account structure will be considered at a later date

PFMI 14 – KEY CONSIDERATION 4

A CCP should disclose its rules, policies, and procedures relating to the segregation and portability of a participant's customers' positions and related collateral. In particular, the CCP should disclose whether customer collateral is protected on an individual or omnibus basis. In addition, a CCP should disclose any constraints, such as legal or operational constraints, that may impair its ability to segregate or port a participant's customers' positions and related collateral

NO CORRESPONDING FSS

↗ **ASX Clear (Futures):**

- Chapters 4 and 7 of the Operating Rules for ASX Clear (Futures)
- Clearing brokers are required by the ASX Clear (Futures) Operating Rules to provide the following fact sheet to clients who have invested in, or are considering investing in, ASX 24 Exchange Traded Derivatives or OTC Interest Rate Derivatives: www.asx.com.au/documents/about/ASX_client_clearing_client_fact_sheet.PDF
- The following fact sheet outlines the key features of the Client Protection Model that supports the Client Clearing Service offered by ASX Clear (Futures) www.asx.com.au/documents/clearing/client-protection-model-fact-sheet.pdf
- Detailed information relating to the ASX default management process is on the ASX website at www.asx.com.au/services/clearing/default-management.htm

↗ **ASX Clear:**

- Current arrangements for segregation and portability are defined in chapters 10, 13, 15 and 17 of the ASX Clear Operating Rules and Procedures
- During 2013 and 2014, ASX publicly consulted stakeholders on segregation and portability arrangements for both derivatives and cash market transactions cleared in ASX Clear: www.asx.com.au/documents/public-consultations/Derivatives_Account_Segregation_and_Portability.pdf

PFMI Disclosure Framework | Principle 15

ASX

PRINCIPLE 15 – GENERAL BUSINESS RISK:
An FMI should identify, monitor and manage its general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialise. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 15 – KEY CONSIDERATION 1 An FMI should have robust management and control systems to identify, monitor and manage general business risks, including losses from poor execution of business strategy, negative cash flows or unexpected and excessively large operating expenses *FSS 14.1*	↗ ASX's CCPs have robust management and control systems to identify, monitor and manage their general business risks ↗ Business unit risk profiling is conducted twice yearly. Sources of business risk and their potential impact on operations and services are identified and assessed. Potential impacts on cash flow, liquidity and capital position are analysed ↗ Annual financial planning and budgeting processes are in place. Major loss analysis is undertaken periodically. Capital forecasting and cash flow sensitivity analysis is undertaken and presented to the Capital & Liquidity Committee (CALCO) every quarter
PFMI 15 – KEY CONSIDERATION 2 An FMI should hold liquid net assets funded by equity (such as common stock, disclosed reserves or other retained earnings) so that it can continue operations and services as a going concern if it incurs general business losses. The amount of liquid net assets funded by equity an FMI should hold should be determined by its general business risk profile and the length of time required to achieve a recovery or orderly wind-down, as appropriate, of its critical operations and services if such action is taken *FSS 14.2*	↗ ASX has set aside capital for operational and business risk across the two ASX Group CCPs if they incur general business losses. Since ASX has identified constraints to making business risk capital bankruptcy remote within the CCP, this capital is held at the ASX Group level to ensure that it cannot be applied to meet losses caused by a participant default. Each CCP has a separate allocation for business risk capital - $15 million for ASX Clear and $60 million for ASX Clear (Futures) - that is explicitly made available to the CCPs from ASX Limited ↗ In determining the sufficiency of the operational and business risk capital set aside for ASX Clear and ASX Clear (Futures), ASX has estimated the capital required to cover six months of current operating expenses, plus that required to cover operational and legal risk, non-covered credit and counterparty credit risk, non-covered market risk, business risk and an additional capital buffer. It has calculated these components consistent with the methodology used by CCPs in the EU, under the European Regulation on OTC derivatives, central counterparties and trade repositories (EMIR) ↗ ASX's CCP business/ operational risk capital is determined and reviewed by CALCO periodically and monitored quarterly ↗ Annual financial forecasts, budgets, major loss scenario assessments etc. are undertaken to ensure the CCPs have adequate liquid assets to continue as a going concern should business risks eventuate

PFMI Disclosure Framework | Principle 15

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 15 – KEY CONSIDERATION 3 An FMI should maintain a viable recovery or orderly wind-down plan and should hold sufficient liquid net assets funded by equity to implement this plan. At a minimum, an FMI should hold liquid net assets funded by equity equal to at least six months of current operating expenses. These assets are in addition to resources held to cover participant defaults or other risks covered under the financial resources principles. However, equity held under international risk-based capital standards can be included where relevant and appropriate to avoid duplicate capital requirements *FSS 14.3*	↗ The CCPs have developed recovery plans based on existing powers under their operating rules. ASX has commenced work to develop a more comprehensive recovery plan supported by tools to fully address uncovered credit losses and liquidity shortfalls, and replenish financial resources. ASX's proposed recovery approach consistent with CPMI-IOSCO guidance on FMI recovery planning released in October 2014. ASX undertook public consultation on its proposed recovery approach for participant default in October 2014. Following consideration of the responses to consultation, ASX expects to consult on amendments to the operating rules of the ASX CCPs to implement new recovery tools in early Q22015 with a view to implementation of the new rules in mid-2015, and subsequent updating of the recovery plans to reflect those new rules ↗ General business risk capital is held on behalf of the CCPs at the ASX Group level to ensure that it cannot be applied to meet losses caused by a participant default. A group-wide capital buffer provides protection to allocated business risk capital against potential losses sustained elsewhere in the group. This arrangement has been included in the ASX Group Support Agreement ↗ The amount of operational and business risk capital set aside for the CCPs has been estimated as the capital required to cover six months of current operating expenses, with an additional buffer to allow for future growth. These funds are also sufficient to cover the estimated largest general business loss that the CCPs may incur. Loss scenarios considered include closure due to external events such as pandemics, the fraudulent redirection of payments, or the unauthorised transfer of funds
PFMI 15 – KEY CONSIDERATION 4 Assets held to cover general business risk should be of high quality and sufficiently liquid in order to allow the FMI to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions *FSS 14.4*	↗ The assets held to cover general business risks are liquid net assets funded by equity and reserves ↗ The liquid net assets comprise at call and fixed term bank deposits, bank bills and negotiable certificates of deposits ↗ The ASX investment mandates, which are reviewed annually by CALCO and approved by the Board, set out allowed asset types and liquidity limits. Compliance with the mandates is reviewed quarterly by CALCO and monitored daily by CRM

PFMI Disclosure Framework | Principle 15

ASX

PFMI/FSS

PFMI 15 – KEY CONSIDERATION 5

An FMI should maintain a viable plan for raising additional equity should its equity fall close to or below the amount needed. This plan should be approved by the board of directors and updated regularly

FSS 14.5

HOW ASX CENTRAL COUNTERPARTIES COMPLY

↗ **The ASX Limited Board monitors the on-going capital adequacy and requirements of the Group and, when needed, will determine the most appropriate means of raising additional capital after due consideration of prevailing market conditions and available alternative financing mechanisms. The ASX Limited pro rata accelerated renounceable entitlement offer in July 2013 is an example of capital raising by the ASX Group with proceeds being applied to the CS facilities**

PFMI Disclosure Framework | Principle 16

ASX

PRINCIPLE 16 – CUSTODY AND INVESTMENT RISKS:
An FMI should safeguard its own and its participants' assets and minimise the risk of loss on and delay in access to these assets. An FMI's investments should be in instruments with minimal credit, market and liquidity risks

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 16 – KEY CONSIDERATION 1 An FMI should hold its own and its participants' assets at supervised and regulated entities that have robust accounting practices, safekeeping procedures and internal controls that fully protect these assets *FSS 15.1*	↗ The assets of the CCPs and their participants are administered and held within the ASX Group. Intragroup arrangements allow the CCPs to fully understand the nature of their risk exposure to ASXCC and other group entities. This exposure is managed within the context of ASX's overall Clearing Risk Policy Framework. ASX has robust accounting practices, safekeeping procedures and internal controls to protect its own and its participants' assets ↗ ASX's CCPs' Operating Rules and Procedures define how CCPs use lodged collateral. Cash investments, including cash collateral, clearing participant contributions and shareholder funds, are controlled by ASXCC, of which the CCPs are subsidiaries. ASXCC makes its investments in accordance with its Investment Mandate and ASX's Investment Policy, which together define investment objectives, investment specifications, and audit and maintenance of the policy
PFMI 16 – KEY CONSIDERATION 2 An FMI should have prompt access to its assets and the assets provided by participants, when required *FSS 15.2*	↗ ASXCC's Investment Mandate requires that a portion of its portfolio be held in liquid asset form to cover liquidity risks from both general business risks and risks related to CCP activities
PFMI 16 – KEY CONSIDERATION 3 An FMI should evaluate and understand its exposures to its custodian banks, taking into account the full scope of its relationships with each *FSS 15.3*	↗ ASX's CCPs do not use the services of external custodians

PFMI Disclosure Framework | Principle 16

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 16 – KEY CONSIDERATION 4 An FMI's investment strategy should be consistent with its overall risk management strategy and fully disclosed to its participants, and investments should be secured by, or be claims on, high-quality obligors. These investments should allow for quick liquidation with little, if any, adverse price effect *FSS 15.4*	↗ ASXCC is the controlling entity for the investments of both CCPs. ASXCC invests funds in accordance with a defined treasury investment policy and endorsed by the Clearing Boards. The treasury investment policy, articulates the basis for ASX Clear's mitigation of investment-related credit, market and liquidity risks ↗ The primary objective of the investment mandate is to ensure that the investment portfolio is made up of highly liquid financial instruments with a high credit quality and low levels of market risk. This is driven by the CCPs' requirement to have timely, certain and ease of access to funds at all times, including in the event of clearing participant default. This objective is achieved by setting appropriates limits and restrictions on investment products and on the amount and source of credit, liquidity and market risk exposures. All investments are purchased by ASXCC with the intent to hold until maturity, however investments may be sold as liquidity or other needs arise, and so will be deemed "available-for-sale" ↗ The performance of the investment portfolio within the parameters of the investment policy is closely monitored by ASXCC, with trigger points to automatically escalate potential issues to the Chief Risk Officer before actual limits are reached

PFMI Disclosure Framework | Principle 17

ASX

PRINCIPLE 17 – CUSTODY AND INVESTMENT RISKS:
An FMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 17 – KEY CONSIDERATION 1 An FMI should establish a robust operational risk management framework with appropriate systems, policies, procedures and controls to identify, monitor and manage operational risks *FSS 16.1*	↗ ASX's CCPs adopt ASX's framework for risk management which is described in its Enterprise Risk Management Policy. This policy outlines the overall risk environment in the ASX Group; the objectives of risk management policies; the process by which risks are identified and assessed; the controls in place to detect and mitigate risks; and how risks are monitored and communicated. ASX's stated tolerance for financial, operational, legal and regulatory risks is 'very low' ↗ Specific policies are in place across key operational risks. Systems, procedures and controls are in place to support operational processes ↗ The CCPs integrate commercial standards into their operational risk management frameworks. For instance, the risk management framework is regularly assessed against the international standard ISO 31000 Risk Management – Principles and Guidelines. The Business Continuity Framework has been prepared with reference to the Business Continuity Institute's Good Practice Guidelines, the British Standard (BS), and ISO International Standard on business continuity. The ISO Information Security Management System (ISMS) standard has also been integrated into the technology risk management framework and an annual comparative assessment is completed. The ASX internal compliance framework has been benchmarked to the AS Australian Standard Compliance Program. The ASX Fraud Control Policy references AS Australian Standard on Fraud and Corruption Control
PFMI 17 – KEY CONSIDERATION 2 An FMI's board of directors should clearly define the roles and responsibilities for addressing operational risk and should endorse the FMI's operational risk management framework. Systems, operational policies, procedures and controls should be reviewed, audited and tested periodically and after significant changes *FSS 16.2*	↗ The ASX Board has endorsed the the ASX Enterprise Risk Management Policy and framework which assigns specific risk responsibilities across the ASX Group, including to the ASX Limited Board of Directors, the Audit and Risk Committee, the Enterprise Risk Management Committee, the General Manager, Enterprise Risk and managers of individual departments. The Clearing Boards oversee the ASX CCP operational risks as per carve out in the ARC Charter ↗ The Enterprise Risk Management Committee, comprising executives from across the departments, is responsible for enterprise risk management policy and reviewing controls, processes and procedures to identify and manage risks. This committee is also responsible for formally approving significant operational risk policies prepared by individual departments ↗ Individual departments are responsible for: identifying business-specific risks; applying controls; maintaining risk management systems; reporting on the effectiveness of risk controls; and implementing enhancements and taking remedial action as appropriate. Each department is required to maintain a record of its risk profile, reviewing this on a six-monthly basis and updating as appropriate. Policies are formally reviewed periodically. More frequent reviews are undertaken where there are potential changes to technology, legal or regulatory requirements, or business drivers ↗ Policies and procedures are the subject of internal and external review. ASX's Internal Audit department routinely monitors compliance with operational policy, reporting to the Audit and Risk Committee on a quarterly basis. Audit findings may prompt a review of policy, which would be conducted in consultation with key stakeholders. Technology-related security policy is considered by external auditors annually

PFMI Disclosure Framework | Principle 17

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
	↗ The ASX Project Framework and separate Change Management Procedures include comprehensive checks to ensure changes are implemented effectively
PFMI 17 – KEY CONSIDERATION 3 An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives *FSS 16.3*	↗ Clearly defined operational objectives are in place. The monthly Key Indicators Report summaries performance against availability measures and other such as critical system capacity and description of any incidents. The Monthly Critical System capacity report includes an assessment of the headroom remaining on peak values for each critical system ↗ The actual capacity and performance of CCP systems is tested on an on-going basis. A required level of redundant capacity is taken into account. There are tools/controls in place that are used to monitor, review and test the capacity and performance of the systems ↗ The system's performance is reported regularly to the CS Boards and to the RBA every quarter ↗ The CCPs' physical and information security policies are reviewed and assessed annually. The ASX Information System Security Policy recognises that employees, contractors and consultants have an obligation and a significant role to play in helping protect the information systems resources of ASX ↗ Availability targets are documented and defined formally for critical services. The CCP systems are required to meet a minimum availability target of 99.8 per cent
PFMI 17 – KEY CONSIDERATION 4 An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives *NO CORRESPONDING FSS*	↗ ASX's CCPs are designed to have scalable capacity which is maintained at levels to support increasing volumes and service availability objectives. The guideline for target capacity is to maintain 50% over peak recorded daily volumes, with the ability to increase to 100% over peak within six months. Monthly reviews of current and projected capacity requirements are undertaken
PFMI 17 – KEY CONSIDERATION 5 An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats *NO CORRESPONDING FSS*	↗ The ASX Employee Physical Security Policy outlines CCP requirements in regards to the protection of people, information and other assets and to ensure security risks from crime, activism and terrorism are minimised ↗ The ASX Information Security Policy Framework includes a range of policies designed to safeguard the ASX technology environment against threats which may disable or affect its effectiveness. Policies and standards cover firewalls, encryption, virus protection, passwords, removable media, email, internet and other risks

PFMI Disclosure Framework | Principle 17

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 17 – KEY CONSIDERATION 6 An FMI should have a business continuity plan that addresses events posing a significant risk of disrupting operations, including events that could cause a wide-scale or major disruption. The plan should incorporate the use of a secondary site and should be designed to ensure that critical information technology systems can resume operations within two hours following disruptive events. The plan should be designed to enable the FMI to complete settlement by the end of the day of the disruption, even in case of extreme circumstances. The FMI should regularly test these arrangements *NO CORRESPONDING FSS*	↗ ASX's CCPs maintain business continuity plans detailing the operational responses to a facility disruption. The plans identify and address events that pose a significant risk of disrupting operations, e.g. events such as technology failure, staff unavailability, pandemic, greater CBD inaccessibility and primary site & systems unusable. These plans are updated annually ↗ ASX maintains both primary and backup data centres, and its business continuity arrangements are designed to achieve failover to the backup site data centre within two hours. Front-end servers handling communications with participants are configured to provide automatic failover across sites. Failover of the more critical data servers will generally take place within an hour under the control of management; however, the disruption to participants in such a case is reduced due to the high degree of redundancy in the front-end system components, which in most circumstances will maintain communications with external systems and queue transactions until the data servers are reactivated ↗ The CCPs regularly test their business continuity arrangements. Dual site operational teams across the primary and alternate secondary operations sites effectively test backup operational processes on a continuous basis. For those teams not located across both sites, connectivity and procedural testing of the backup secondary site are performed. Live tests, where clearing services are provided in real time from the alternate backup data centre site, have been conducted on a 1-2 year cycle and are moving to yearly
A CCP should ensure that it can reliably access and utilise well-trained and competent personnel, as well as technical and other resources. These arrangements should be designed to ensure that all key systems are operated securely and reliably in all circumstances, including where a related body becomes subject to external administration *FSS 16.4*	↗ The CCPs employ sufficient well-qualified personnel. Appropriate human resource policies are implemented to mitigate the effects of high rates of staff turnover and key-person risk. Examples of policies in place are: Workplace Health & Safety, Recruitment, Secondment & Transfers, Ethics & Conduct and Security - Workplace Surveillance and Information Security ↗ Within the ASX group structure, most operational resources are provided by ASX Operations Limited, a subsidiary of ASX Limited, under a contractual Support Agreement. In the event that ASX Operations Limited became subject to external administration, to the extent permissible by law, provisions within the Support Agreement provide for the CCPs to retain the use of operational resources ↗ Major projects are overseen by the Enterprise Portfolio Steering Committee (EPSC), which is comprised of representatives of the Group Executive. The EPSC is tasked with ensuring that ASX has sufficient well-qualified project personnel. Project management of major projects is undertaken by the Project Management Office (PMO). For projects affecting core systems the PMO rates projects to ensure that they receive appropriate access to resources

PFMI Disclosure Framework | Principle 17

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 17 – KEY CONSIDERATION 7 An FMI should identify, monitor and manage the risks that key participants, other FMIs and service and utility providers might pose to its operations. In addition, an FMI should identify, monitor and manage the risks its operations might pose to other FMIs *FSS 16.5*	↗ CCP six monthly risk profiling considered the risk they pose to external parties and vice-versa ↗ The CCPs inform the RBA of major risks and dependencies as part of their active engagement programme ↗ CCP services and operational support are provided to participants of ASX Clear (Futures) that clear NZ dollar-denominated products as part of normal business procedures
A participant of a CCP should have complementary operational and business continuity arrangements that are appropriate to the nature and size of the business undertaken by that participant. The CCP's rules and procedures should clearly specify operational requirements for participants *FSS 16.6*	↗ The CCPs consider Business Continuity Plan (BCP) arrangements for their participants as part of the participant's admission and on-going operating rule requirements. Clearing Participants are required to have arrangements which are comparable to the nature and size of their business as a participant. As a guide, Clearing Participants should be in a position to be able to continue operating their clearing functions within 2-4 hours after a disruption ↗ The CCPs' Operating Rules have criteria for critical participants which specify operational requirements
A CCP should have a business continuity plan that addresses events posing a significant risk of disrupting operations, including events that could cause a wide-scale or major disruption. The plan should incorporate the use of a secondary site and should be designed to ensure that critical information technology systems can resume operations within two hours following disruptive events. Business continuity arrangements should provide appropriate redundancy of critical systems and appropriate mitigants for data loss. The business continuity plan should be designed to enable the CCP to facilitate settlement by the end of the day of the disruption, even in case of extreme circumstances. The CCP should regularly test these arrangements *FSS 16.7*	↗ CCP BCPs are in place, and include the recovery and resumption of critical operations within 2 hours following an incident. The BCPs identify and address events that pose a significant risk of disrupting operations, e.g. events such as technology failure, staff unavailability, pandemic, greater CBD inaccessibility and primary site and systems being unable to be used ↗ A 3-site model is in place with separate secondary sites for operations recovery and the data centre ↗ Technology recovery arrangements include inter- and intra-site system redundancy and data recovery ↗ Comprehensive Business Continuity Management (BCM) testing is conducted every 1-2 years ↗ Participants are involved in testing each time the CCPs roll out a major change or new system ↗ Connectivity testing with the clients is undertaken regularly. An external testing environment is in place

PFMI Disclosure Framework | Principle 17

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
A CCP should consider making contingency testing compulsory for the largest participants to ensure they are operationally reliable and have in place tested contingency arrangements to deal with a range of operational stress scenarios that may include impaired access to the CCP *FSS 16.8*	↗ The ASX Clear Operating Rules include BCP testing requirements. These are assessed at the time of admission and periodically as part of ASX Compliance monitoring and enforcement procedures. Clearing Participants are required to conduct annual BCM testing ↗ The Operating Rules and Procedures for both CCPs require participants to maintain adequate business continuity arrangements that are appropriate to the nature and size of their business as a participant. The guidance issued by ASX on these obligations includes guidance that a participant should test its disaster recovery and business continuity arrangements at least once annually and as soon as practicable following any material change to its business or its disaster recovery business continuity arrangements. These arrangements are reviewed as part of the participant admission process
A CCP that relies upon, outsources some of its operations to, or has other dependencies with a related body, another FMI or a third-party service provider (for example, data processing and information systems management) should ensure that those operations meet the resilience, security and operational performance requirements of these CCP Standards and equivalent requirements of any other jurisdictions in which it operates *FSS 16.9*	↗ ASX has developed a set of standard clauses for inclusion in contracts with third-party critical service providers to the CCPs. The clauses seek to ensure that the agreements meet the resilience, security and operational performance requirements of the FSS ↗ In particular, the clauses allow the RBA to gather information from the service provider about the operation of critical functions and, in the event that the RBA concludes that the terms of the service provider agreement do not meet FSS requirements, the clauses require the service provider to negotiate acceptable new terms with ASX ↗ Furthermore, the standard clauses allow the RBA to take steps to remedy a breach to a contract with a critical service provider to the CCPs (or negotiate a replacement contract) if the contract may be terminated as a consequence of insolvency of an ASX entity ↗ ASX is applying these clauses to all new agreements with critical service providers, and has incorporated them into all of its key existing service agreements

PFMI Disclosure Framework | Principle 17

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
All of a CCP's outsourcing or critical service provision arrangements should provide rights of access to the Reserve Bank to obtain sufficient information regarding the service provider's operation of any critical functions provided. A CCP should consult with the Reserve Bank prior to entering into an outsourcing or service provision arrangement for critical functions *FSS 16.10*	↗ **ASX's standard clauses for agreements with critical service providers to the CCPs require the provider to grant reasonable access to the RBA in respect of information relating to its operation of a critical function. ASX is applying these clauses to all new agreements with critical service providers to the CCPs, and has incorporated them into agreements with key existing critical service providers to the CCPs**
A CCP should organise its operations, including any outsourcing or critical service provision arrangements, in such a way as to ensure continuity of service in a crisis and to facilitate effective crisis management actions by the Reserve Bank or other relevant authorities. These arrangements should be commensurate with the nature and scale of the CCP's operations *FSS 16.11*	↗ **Standard clauses in the CCP agreements with critical service providers require that those providers give the RBA notice of any intention to terminate the agreement as a consequence of CCP failure to pay fees, or in the event of the insolvency of a CCP or any other relevant ASX entity. This is intended to give the RBA an opportunity to take action to remedy the breach on behalf of the CCP or take other steps to ensure service provision** ↗ **The CCP's arrangements to ensure continuity of operations in the event of a crisis will be aligned to the new resolution regime for FMIs once introduced to Australian law**

PFMI Disclosure Framework | Principle 18

ASX

PRINCIPLE 18 – ACCESS AND PARTICIPATION REQUIREMENTS:

An FMI should have objective, risk-based and publicly disclosed criteria for participation, which permit fair and open access

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 18 – KEY CONSIDERATION 1 An FMI should allow for fair and open access to its services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk-related participation requirements *FSS 17.1*	↗ **In consultation with industry stakeholders and Australian regulators, ASX has developed a Code of Practice (the Code) for the clearing and settlement of cash equities (ASX Clear and ASX Settlement only) in Australia which commenced operation on 9 August 2013. Under the Code, ASX commits, among other things, to transparent and non-discriminatory terms of access to cash equities clearing and settlement services. Refer to section 4 of the Code for further details regarding standard access to these services** ↗ **The document: "A guide to becoming an ASX Participant" details the range of Participation choices available for prospective Participants, and can be found on the ASX website at: https://www.asxonline.com/intradoc-cgi/groups/public/documents/participantapplicationkitsfe/asx_022625.pdf. Note: the risk-related participants' requirements are located on Page 24, 1.8 of Capital Requirements** ↗ **Relevant Operating Rule oversight can be found at: www.asx.com.au/regulation/rules-guidance-notes-and-waivers.htm** • Refer ASX Clear: » Section 3: Participation in the Clearing Facility » Section 4: Rights and Obligations of Participants » Section 5: Risk Management Capital Requirements • Refer ASX Clear (Futures): » Part 2: General
PFMI 18 – KEY CONSIDERATION 2 An FMI's participation requirements should be justified in terms of the safety and efficiency of the FMI and the markets it serves, be tailored to and commensurate with the FMI's specific risks, and be publicly disclosed. Subject to maintaining acceptable risk control standards, an FMI should endeavour to set requirements that have the least restrictive impact on access that circumstances permit *FSS 17.2*	↗ **The document: "A guide to becoming an ASX Participant" details the range of Participation choices available for prospective Participants, and can be found on the ASX website at: https://www.asxonline.com/intradoc-cgi/groups/public/documents/participantapplicationkitsfe/asx_022625.pdf. Note: the risk-related participants' requirements are located on Page 24, 1.8 of Capital Requirements** ↗ **Relevant Operating Rule oversight can be found at www.asx.com.au/regulation/rules-guidance-notes-and-waivers.htm** • Refer ASX Clear: » Section 3: Participation in the Clearing Facility » Section 4: Rights and Obligations of Participants » Section 5: Risk Management Capital Requirements • Refer ASX Clear (Futures): » Part 2: General

PFMI Disclosure Framework | Principle 18

ASX

PFMI/FSS

PFMI 18 – KEY CONSIDERATION 3

An FMI should monitor compliance with its participation requirements on an ongoing basis and have clearly defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements

FSS 17.3

HOW ASX CENTRAL COUNTERPARTIES COMPLY

↗ **Relevant documents which are disclosed on the ASX website include:**

- Monitoring and Enforcing Compliance:
  - » Monitoring: www.asx.com.au/documents/about/operating-rules-monitoring.pdf
  - » Enforcing: www.asx.com.au/documents/about/operating-rules-enforcement.pdf

↗ **Relevant Operating Rule oversight can be found at: www.asx.com.au/regulation/rules-guidance-notes-and-waivers.htm**

- Refer ASX Clear: Section 15
- Refer ASX Clear (Futures): Part 7

↗ **The Counterparty Risk Assessment unit reviews financial information provided by Participants to monitor their compliance with the relevant capital requirements. Participants provide financial information via monthly, annual, ad hoc and summary returns. The Counterparty Risk Assessment unit is also responsible for developing and monitoring the capital regimes that Clearing Participants must comply with. This includes developing the policy framework and reporting mechanisms designed to ensure that the financial strength of Participants is measured and monitored on a regular basis**

PFMI Disclosure Framework | Principle 19

ASX

PRINCIPLE 19 – TIERED PARTICIPATION ARRANGEMENTS:

An FMI should identify, monitor and manage the material risks to the FMI arising from tiered participation arrangements

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 19 – KEY CONSIDERATION 1 An FMI should ensure that its rules, procedures and agreements allow it to gather basic information about indirect participation in order to identify, monitor and manage any material risks to the FMI arising from such tiered participation arrangements *FSS 18.1*	↗ **Under the capital monitoring provisions of the ASX operating rule framework, ASX gathers information on all activities conducted by the Participants** ↗ **The ASX operating rule framework allows ASX to request information on any activities covered under the ASX operating rule framework**
PFMI 19 – KEY CONSIDERATION 2 An FMI should identify material dependencies between direct and indirect participants that might affect the FMI *FSS 18.2*	↗ **ASX monitors all Clearing Participants' material counterparty risk exposures** ↗ **For ASX Clear (Futures), ASX Compliance monitors concentrations at the account level through the Daily Beneficial Ownership Report (DBOR). The Operating Rules require each participant to provide the CCP with the name and address of the beneficial holder of each open position, on a daily basis** ↗ **For ASX Clear (Futures), all expiry contracts are monitored by a committee comprising of ASX Compliance, ASX Operations, ASX Business Development and ASX Legal to ensure there are no concentration or delivery issues** ↗ **For ASX Clear, concentration in Exchange Traded Options (ETOs) is monitored as part of the Clearing Risk Management concentration monitoring. This includes:** • Disproportionate client risk relative to other client accounts for the same Clearing Participant; • Portfolios dominated by a particular product; and, • Large percentage holdings in a particular market. ↗ **For ASX Clear, the concentration in cash equities is only monitored at the Participant level as positions are only recorded at the Participant "House Portfolio" level**

PFMI Disclosure Framework | Principle 19

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 19 – KEY CONSIDERATION 3 An FMI should identify indirect participants responsible for a significant proportion of transactions processed by the FMI and indirect participants whose transaction volumes or values are large relative to the capacity of the direct participants through which they access the FMI in order to manage the risks arising from these transactions *FSS 18.3*	↗ ASX monitors all Clearing Participants' material counterparty risk exposures ↗ For ASX Clear (Futures), ASX Compliance monitors concentrations at the account level through the DBOR ↗ For ASX Clear (Futures), all expiry contracts are monitored by a committee comprising of ASX Compliance, ASX Operations, ASX Clearing Risk Management, ASX Business Development and ASX Legal to ensure there are no concentration or delivery issues ↗ For ASX Clear, concentration in ETOs is monitored as part of the Clearing Risk Management concentration monitoring ↗ For ASX Clear, the concentration in cash equities is only monitored at the Participant level as positions are only recorded at the Participant "House Portfolio" level ↗ The CCPs meet with Clearing Participants on an annual basis to discuss and encourage Clearing Participants to ensure that they have adequate risk management processes and controls, including the ability to assess the impact of new business against their Stress Test Exposure Limit and Capital Based Position Limit and the impact on mark to market movements against their existing house and client positions
PFMI 19 – KEY CONSIDERATION 4 An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate *FSS 18.4*	↗ ASX monitors all Clearing Participants' material counterparty risk exposures ↗ For ASX Clear (Futures), ASX Compliance monitors concentrations at the account level through the DBOR ↗ For ASX Clear (Futures), all open positions in expiry contracts are monitored by ASX Compliance and, for major contracts, by a committee comprising of ASX Compliance, ASX Operations, ASX Derivatives and OTC Markets team and ASX Legal to ensure there are no concentration or delivery issues ↗ For ASX Clear, concentration in ETOs is monitored as part of the Clearing Risk Management concentration monitoring ↗ For ASX Clear, the concentration in cash equities is only monitored at the Participant level as positions are only recorded at the Participant "House Portfolio" level ↗ If an issue is identified via any of the monitoring, then the CCP will contact the Clearing Participant to obtain a better understanding of the risk. If not satisfied, the CCP has the right to call for Additional Initial Margins to cover the exposure or to place restrictions on their admission regarding the ability to open new positions

PFMI Disclosure Framework | Principle 20

ASX

PRINCIPLE 20 – FMI LINKS:

An FMI that establishes a link with one or more FMIs should identify, monitor and manage link-related risks

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 20 – KEY CONSIDERATION 1 Before entering into a link arrangement, and on an ongoing basis once the link is established, an FMI should identify, monitor and manage all potential sources of risk arising from the link arrangement. Link arrangements should be designed such that each FMI is able to observe the other PFMI *FSS 19.1*	↗ **The following links exist between ASX's CCPs and other FMIs:** • ASX Clear and ASX Settlement, for the settlement of financial products; • ASX Clear and Austraclear, for margin payments in AUD; • ASX Clear (Futures) and Austraclear, for AUD fund transfers and lodgement of AUD-denominated non-cash collateral; and, • ASX Clear (Futures) and NZ Clear, for the settlement of NZ dollar payments ↗ **The CCPs' links to ASX Settlement and Austraclear are subject to the operational risk management framework that exists for all the ASX Clearing and Settlement facilities. The framework addresses operational risks associated with software, infrastructure or network failures and manual processing errors. Incident reports are required for all significant technical or operational incidents and include, in the assessment, mitigating actions to reduce the risk of reoccurrence. In addition, a risk profile assessment is also prepared for the Audit and Risk Committee every six months, and an independent system-controls audit is conducted annually** ↗ **The link from ASX Clear (Futures) to NZ Clear is limited by the small size of NZD margin requirements. NZ Clear is owned, operated and overseen by the Reserve Bank of New Zealand. Any operational issues that arise in NZ Clear are notified to ASX Clear (Futures). NZ Clear has the ability to perform transactions on behalf of ASX Clear (Futures) in the event of an operational disruption to the link arrangements of ASX Clear (Futures). ASX Clear (Futures) also has contingency arrangements that allow for late payment of margin on New Zealand futures products via Austraclear in AUD if required**
PFMI 20 – KEY CONSIDERATION 2 A link should have a well-founded legal basis, in all relevant jurisdictions, that supports its design and provides adequate protection to the FMIs involved in the link *FSS 19.2*	↗ **All links have a well-founded legal basis supported by contractual arrangements which include, where applicable, operating rules that establish the framework for participation in the FMI or the provision of settlement instructions from one FMI to another**

PFMI Disclosure Framework | Principle 20

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 20 – KEY CONSIDERATION 3 Linked CSDs should measure, monitor, and manage the credit and liquidity risks arising from each other. Any credit extensions between CSDs should be covered fully with high quality collateral and be subject to limits *NO CORRESPONDING FSS*	↗ Noted
PFMI 20 – KEY CONSIDERATION 4 Provisional transfers of securities between linked CSDs should be prohibited or, at a minimum, the retransfer of provisionally transferred securities should be prohibited prior to the transfer becoming final *NO CORRESPONDING FSS*	↗ Noted
PFMI 20 – KEY CONSIDERATION 5 An investor CSD should only establish a link with an issuer CSD if the arrangement provides a high level of protection for the rights of the investor CSD's participants *NO CORRESPONDING FSS*	↗ Noted
PFMI 20 – KEY CONSIDERATION 6 An investor CSD that uses an intermediary to operate a link with an issuer CSD should measure, monitor and manage the additional risks (including custody, credit, legal and operational risks) arising from the use of the intermediary *NO CORRESPONDING FSS*	↗ Noted

PFMI Disclosure Framework | Principle 20

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
Where relevant to its operations in Australia, a CCP should consult with the Reserve Bank prior to entering into a link arrangement with another FMI *FSS 19.3*	↗ **Noted**
PFMI 20 – KEY CONSIDERATION 7 Before entering into a link with another CCP, a CCP should identify and manage the potential spillover effects from the default of the linked CCP. If a link has three or more CCPs, each CCP should identify, assess and manage the risks of the collective link arrangement *FSS 19.4*	↗ **Noted**
PFMI 20 – KEY CONSIDERATION 8 Each CCP in a CCP link arrangement should be able to cover, at least on a daily basis, its current and potential future exposures to the linked CCP and its participants, if any, fully with a high degree of confidence without reducing the CCP's ability to fulfil its obligations to its own participants at any time *FSS 19.5*	
PFMI 20 – KEY CONSIDERATION 9 A TR should carefully assess the additional operational risks related to its links to ensure the scalability and reliability of IT and related rescources *NO CORRESPONDING FSS*	Applicable to Trade Repositories only

PFMI Disclosure Framework | Principle 21

ASX

PRINCIPLE 21 – EFFICIENCY AND EFFECTIVENESS:

An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 21 – KEY CONSIDERATION 1 An FMI should be designed to meet the needs of its participants and the markets it serves, in particular, with regard to choice of a clearing and settlement arrangement; operating structure; scope of products cleared, settled, or recorded; and use of technology and procedures *NO CORRESPONDING FSS*	↗ ASX provides a range of Participation choices to suit the market and tailors the application process and arrangements dependant on the products and markets available. Refer to https://www.asxonline.com/intradoc-cgi/groups/public/documents/participantapplicationkitsfe/asx_022625.pdf ↗ Commencing in FY14, the ASX Clear Code of Practice Business Committee and Forum for ASX Clear and the Risk and Product Committees for ASX Clear (Futures) will provide input to the Clearing Boards on enhancement to services
PFMI 21 – KEY CONSIDERATION 2 An FMI should have clearly defined goals and objectives that are measurable and achievable, such as in the areas of minimum service levels, risk management expectations, and business priorities *NO CORRESPONDING FSS*	In respect of each of the FMI: ↗ Operational targets – ASX has availability targets for critical systems which have been set and are monitored and reported to relevant governance committees including the Audit and Risk Committee and Clearing Boards on a regular basis ↗ Operating Rules and Procedures, together with other participant communications such as guidance notes and circulars, provide transparency to participants and other stakeholders regarding the operation of the FMI and are available on the ASX website ↗ Risk Management Expectation – ASX has a comprehensive suite of policies and procedures regarding the Risk Management of each of the facilities ↗ Business priorities: ASX has a 3 year strategic plan approved by the ASX Board and reviewed on a continuous basis
PFMI 21 – KEY CONSIDERATION 3 An FMI should have established mechanisms for the regular review of its efficiency and effectiveness *NO CORRESPONDING FSS*	↗ ASX Group has a robust corporate governance framework, which enables ASX to oversee its FMIs' efficiency and effectiveness ↗ Senior management report periodically on the goals and objectives of the CS facilities to the various boards and committees ↗ The Clearing Boards review relevant CCP efficiency and effectiveness statistics and reports on a quarterly basis ↗ ASX undertakes regular customer engagement. Participant feedback provides an important basis to test against efficiency and effectiveness standards ↗ As part of its commitment to continuous improvement, the ASX Operations and Risk divisions have a comprehensive suite of policies and procedures to support the activities to supervise the FMI, which are reviewed on a regular basis ↗ ASX business streams capture results and track progress

PFMI Disclosure Framework | Principle 22

ASX

PRINCIPLE 22 - COMMUNICATION PROCEDURES AND STANDARDS:
An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording

PFMI/FSS

PFMI 22 – KEY CONSIDERATION 1

An FMI should use, or at a minimum accommodate, internationally accepted communication procedures and standards

NO CORRESPONDING FSS

HOW ASX CENTRAL COUNTERPARTIES COMPLY

- ASX Clear and ASX Clear (Futures) use industry recognised communication standards specific to the domestic and regional market
- ASX Clear's CHESS system is a proprietary system, used by domestic Clearing Participants, Settlement Banks and Registries for the secure and efficient clearing and settlement of products transacted on ASX Trade
- The clearing of ASX transactions has taken place in CHESS for over 15 years and is an integral part of the technology infrastructure for Australian equity clearing
- ASX Clear (Futures) uses Genium Clearing and OMNet API as an industry recognised communication standard to facilitate and manage the clearing of ASX24 products
- Genium Clearing and the OMNet API are used regionally in neighbouring exchanges (e.g. SGX) and further afield across Scandinavian markets
- ASX Group is informed of any changes to connectivity protocols (either standardised or commercial) and there are processes and procedures in place to determine impact and actions required to accommodate changes. Similarly well-established processes and procedures exist for the notification of changes to downstream users and dependent applications

PFMI Disclosure Framework | Principle 23

ASX

PRINCIPLE 23 – DISCLOSURE OF RULES, KEY PROCEDURES AND MARKET DATA:
An FMI should have clear and comprehensive rules, policies and procedures and should provide sufficient information and data to enable participants to have an accurate understanding of the risks, fees and other material costs they incur by participating in the FMI. All relevant rules and key policies and procedures should be publicly disclosed

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 23 – KEY CONSIDERATION 1 An FMI should adopt clear and comprehensive rules, policies and procedures that are fully disclosed to participants. Relevant rules and key policies and procedures should also be publicly disclosed *FSS 20.1*	↗ **The CCPs' Operating Rules are publicly disclosed at** www.asx.com.au/regulation/rules-guidance-notes-and-waivers.htm
A CCP's rules, policies and procedures should clearly identify the nature and scope of the risk exposure assumed by the CCP, such as by novation, open offer or other similar legal devices. A CCP's rules, policies and procedures should clearly identify the point in the clearing process at which the CCP assumes the risk exposure *FSS 20.2*	↗ **Relevant Operating Rule oversight can be found at** www.asx.com.au/regulation/rules-guidance-notes-and-waivers.htm • Refer ASX Clear: » Section 12: Registration, Novation, Netting and Settlement • Refer ASX Clear (Futures): » Part 3: Registration of Market Contracts and Obligations of ASX Clear (Futures).
PFMI 23 – KEY CONSIDERATION 2 An FMI should disclose clear descriptions of the system's design and operations, as well as the FMI's and participants' rights and obligations, so that participants can assess the risks they would incur by participating in the FMI *FSS 20.3*	↗ **Details of the systems' design and operations are contained in the following marketing document on the ASX website:** https://www.asxonline.com/intradoc-cgi/groups/public/documents/participantapplicationkitsfe/asx_022625.pdf ↗ **Refer also to "System design and operations" on page 8 of this document**

PFMI Disclosure Framework | Principle 23

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
PFMI 23 – KEY CONSIDERATION 3 An FMI should provide all necessary and appropriate documentation and training to facilitate participants' understanding of the FMI's rules, policies and procedures and the risks they face from participating in the FMI *FSS 20.4*	↗ **Regular forums and workshops are held with Participants for ASX Clear and ASX Clear (Futures) to communicate current and upcoming developments** ↗ **ASX Operations provides a helpdesk for Participants, covering operational hours**
PFMI 23 – KEY CONSIDERATION 4 An FMI should publicly disclose its fees at the level of the individual services it offers as well as its policies on any available discounts. The FMI should provide clear descriptions of priced services for comparability purposes *NO CORRESPONDING FSS*	↗ **Fee schedules are available on the ASX website at:** • ASX Clear https://www.asxonline.com/intradoc-cgi/groups/participant_services/documents/information/asx_015359.pdf • ASX Clear (Futures) https://www.asxonline.com/intradoc-cgi/groups/participant_services/documents/information/asx_027438.pdf
PFMI 23 – KEY CONSIDERATION 5 An FMI should complete regularly and disclose publicly responses to the CPMI-IOSCO Disclosure Framework for Financial Market Infrastructures. An FMI also should, at a minimum, disclose basic risk and activity data on transaction volumes and values *FSS 20.5*	↗ **ASX's response to the CPMI-IOSCO Disclosure Framework for Financial Market Infrastructures is updated periodically and available on the ASX website at www.asx.com.au/documents/regulation/pfmi_disclosure_framework.pdf**

PRINCIPLE 24 – DISCLOSURE OF MARKET DATA BY TRADE REPOSITORIES :

A TR should provide timely and accurate data to relevant authorities and the public in line with their respective needs

This PFMI is Not applicable to ASX's CCPs.

PFMI Disclosure Framework | FSS 21

ASX

FSS 21 – REGULATORY REPORTING:
A CCP should inform the Reserve Bank in a timely manner of any events or changes to its operations or circumstances that may materially impact its management of risks or ability to continue operations. A CCP should also regularly provide information to the Reserve Bank regarding its financial position and risk controls on a timely basis.

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
A CCP should inform the Reserve Bank as soon as reasonably practicable if: a. it breaches, or has reason to believe that it will breach: i. a CCP Standard; or ii. its broader legislative obligation to do, to the extent that it is reasonably practicable to do so, all things necessary to reduce systemic risk; b. it becomes subject to external administration, or has reasonable grounds for suspecting that it will become subject to external administration; c. a related body to the CCP becomes subject to external administration, or if the CCP has reasonable grounds for suspecting that a related body will become subject to external administration; d. a participant becomes subject to external administration, or if the CCP has reasonable grounds for suspecting that a participant will become subject to external administration; e. a participant fails to meet its obligations under the CCP's risk control requirements or has its participation suspended or cancelled because of a failure to meet the CCP's risk control requirements; f. it fails to enforce any of its own risk control requirements;	If any of these matters arose, ASX would notify the RBA as soon as reasonably practicable following an incident. Identification and monitoring measures include: **a. Ongoing monitoring; formal semi-annual review of FSS compliance obligations** **b. The CCPs' financial position and activities are reviewed with the Clearing Boards every quarter. Externally audited Financial Statements are produced annually** **c. ASX Group, including related entities' financial position is reviewed quarterly by the ASX Limited Board and the ARC. Externally audited financial statements are produced annually** **d. Daily monitoring of participant credit indicators; use of "watchlist"; participant communication. A PIRC and then potentially a DMC would be convened and relevant information communicated to regulators. Updates would continue to be provided as further information became available** **e. Daily participant monitoring of risk and compliance obligations. A PIRC and then potentially a DMC would be convened and relevant information communicated to regulators. Updates would continue to be provided as further information became available** **f. Daily Risk Indicator Report; escalation to senior management**

PFMI Disclosure Framework | FSS 21

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
g. it plans to make significant changes to its risk control requirements or its rules, policies and procedures;	**g. Discussion at the quarterly RBA Executive Liaison meeting and/or the RBA Operations meeting**
h. it or a service it relies on from a third party or outsourced provider experiences a significant operational disruption, including providing the conclusions of its post-incident review;	**h. Any incidents are escalated to senior risk management**
i. any internal audits or independent external expert reviews are undertaken of its operations, risk management processes or internal control mechanisms, including providing the conclusions of such audits or reviews;	**i. Reviews are provided to regulators, upon request**
j. its operations or risk controls are affected, or are likely to be affected, by distress in financial markets;	**j. Regular risk reporting is provided to the RBA, including stress test exposures. Cyclical impact (e.g. GFC) or distress from participant default (e.g. MF Global) is discussed with the RBA as required**
k. it has critical dependencies on utilities or service providers, including providing a description of the dependency and an update if the nature of this relationship changes;	**k. Discussion at the RBA quarterly liaison meeting and/or the RBA operational meeting**
l. it proposes to grant a security interest over its assets (other than a lien, right of retention or statutory charge that arises in the ordinary course of business);	**l. No such interests exist. The Chief Financial Officer/ CRO would discuss with the RBA prior to entering in to any such arrangements**
m. it proposes to incur or permit to subsist any loans from participants or members unless such loans are subordinated to the claims of all other creditors of the CCP; or	**m. Discussion as required prior to loan approval**
n. any other matter arises which has or is likely to have a significant impact on its risk control arrangements (see also CCP Standards 1.6, 16.10 and 19.3)	**n. As required**
FSS 21.1	

PFMI Disclosure Framework | FSS 21

ASX

PFMI/FSS	HOW ASX CENTRAL COUNTERPARTIES COMPLY
A CCP should also provide to the Reserve Bank, on a timely basis: a. audited annual accounts; b. management accounts on a regular basis, and at least quarterly; c. risk management reports, including detailed information on margining and stress testing, on a regular basis, and at least quarterly; d. periodic activity, risk and operational data, as agreed with the Reserve Bank; and, e. any other information as specified by the Reserve Bank from time to time *FSS 21.2*	All of the required reports and data are on the deliverable lists of responsible executives within ASX **a. Annually audited licensed accounts for ASX Clear and ASX Clear (Futures) are provided to the RBA** **b. Management accounts for ASX Clear and ASX Clear (Futures) are provided to the RBA quarterly** **c. Risk reports are provided to the RBA quarterly** **d. Agreed additional data is provided to the RBA quarterly** **e. As required**

PFMI Disclosure Framework | Principle 1

ASX

PRINCIPLE 1 - LEGAL BASIS:

An FMI should have a well-founded, clear, transparent and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions

PFMI/FSS

A SSF should be a legal entity which is separate from other entities that may expose it to risks unrelated to those arising from its function as a SSF

FSS 1.1

HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY

↗ **The ASX Group operates two SSFs:**

- 'ASX Settlement', operated by ASX Settlement Pty Limited ABN 49 008 504 532; and,
- 'Austraclear', operated by Austraclear Limited ABN 94 002 060 773

↗ **The SSFs are separate legal entities, incorporated in Australia**

↗ **Neither of the SSFs is exposed to the risks associated with the other's SSF activities, or the activities of any other ASX Group entity, for example:**

- There is no cross-guarantee arrangement in place between the CS facilities. In particular, none of the CS facilities is a party to the ASX Group's deed of cross-guarantee, which relates to ASIC's financial reporting requirements

PFMI 1 – KEY CONSIDERATION 1

The legal basis should provide a high degree of certainty for each material aspect of an FMI's activities in all relevant jurisdictions

FSS 1.2

↗ **The material aspects of the SSFs' activities, and their legal basis, are:**

- Licensing. The primary activity of the SSFs is the provision of settlement services to their participants. Each of the SSFs holds a CS facility licence (under Part 7.3 of the Corporations Act), which provides the legal basis for these services. The relevant licences can be found on ASIC's website
- Effecting transfers (ASX Settlement only). ASX Settlement is a 'prescribed CS facility' for the purposes of the Corporations Act. Part 7.11 of the Act provides the legal basis for transfers of prescribed classes of financial products to be effected through the settlement facility in accordance with its operating rules
- Legally binding nature of the SSFs' operating rules. Section 822B of the Corporations Act provides that the operating rules of each of the SSFs have effect as a contract under seal between:
  - » the SSF and each issuer,
  - » the SSF and each participant,
  - » each issuer and each participant, and
  - » each participant and each other participant

  The operating rules therefore comprise a statutory contract
- Payment Systems and Netting Act (PSNA). In the event that a participant in the CS facility enters into external administration, the PSNA provides certain protections under Australian law, from reversal or invalidation under the laws of any jurisdiction, of termination, netting and settlement of obligations effected in accordance with the operating rules of ASX's CS facilities, as follows:

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY

» Part 2 protects real time gross settlements effected through an approved RTGS system (each of Austraclear and ASX Settlement has this approval; the Reserve Bank Information and Transfer System (RITS), in relation to which Austraclear and ASX Settlement are "feeder systems", is also an approved RTGS system); and,

» Part 3 protects net settlements effected through an approved netting arrangement (each of Austraclear and ASX Settlement has this approval)

↗ **The legal bases outlined above apply irrespective of the jurisdiction in which a participant in the SSF may be incorporated**

PFMI 1 – KEY CONSIDERATION 2

An FMI should have rules, procedures and contracts that are clear, understandable and consistent with relevant laws and regulations

FSS 1.3

↗ **Rules, procedures and contracts in place:**

- Rules and procedures. Each SSF has its own set of operating rules and procedures which govern the operation of its CS facility
- Contracts. Under an ASX Group intra-group services agreement, ASX Operations Pty Limited (a wholly owned subsidiary of ASX Limited) acts as the group's operating company, entering into contracts on behalf of the ASX Group and its subsidiaries, and then 'on-supplying' the services to the relevant ASX Group entity

↗ **Processes in place to ensure that the rules, procedures and contracts are clear and understandable:**

- Quality control measures are in place for all amendments to the SSFs' operating rules and procedures. Such measures include those which are internal to ASX:
  - » management oversight of the drafting of the amendments,
  - » General Manager sign-off for all amendments, and those which are controlled by ASIC and RBA, namely the regulatory clearance process for amendments to the operating rules, under Part 7.3 of the Corporations Act (Division 2, Subdivision B)

↗ **Processes in place to ensure that the rules, procedures and contracts are consistent with relevant laws and regulations:**

- ASX conducts a continuous internal review of amendments to (or introduction of) laws and regulations that affect the SSFs' operations, and works with ASIC and RBA as appropriate to amend its operating rules, procedures and contracts to ensure ongoing consistency with the law
- ASIC and RBA conduct annual assessments of ASX Group's compliance with licence obligations, which provides further oversight of the FMIs' consistency with the relevant laws and regulations

PFMI Disclosure Framework | Principle 1

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 1 – KEY CONSIDERATION 3 An FMI should be able to articulate the legal basis for its activities to relevant authorities, participants and, where relevant, participants' customers, in a clear and understandable way *FSS 1.4*	**How the SSFs articulate the legal basis for their activities to stakeholders:** • The legal basis for the activities of the SSFs and the facilities' protection under Parts 2 and 3 of the PSNA are set out on ASX's public website in this Disclosure Framework document • ASX Limited (on behalf of each licensed entity within the ASX Group, including the SSFs) submits an 'Annual Group Licence Report' to ASIC. This report sets out the legal basis for the SSFs' activities (namely the licence obligations), and is used by ASIC in the preparation of ASIC's 'market assessment reports' which are published on ASIC's website • Where appropriate, ASX commissions and makes available to participants and/or clients of participants, on a confidential basis, external legal opinions to (1) confirm the legal efficacy of operating rules that are introduced to support new ASX services or meet regulatory requirements that apply to ASX or its participants, or (2) confirm the impact of new ASX services on participants' existing contractual arrangements
PFMI 1 – KEY CONSIDERATION 4 An FMI should have rules, procedures and contracts that are enforceable in all jurisdictions. There should be a high degree of certainty that actions taken by the FMI under such rules and procedures will not be voided, reversed or subject to stays *FSS 1.5*	**Rules and Procedures. Section 822B of the Corporations Act provides that the operating rules of each SSF have effect as a contract under seal between the SSF, participants and issuers. The operating rules are enforceable as a statutory contract** **Contracts. The contracts entered into by the SSFs and third parties are enforceable under Australian contract law** **Actions taken by a SSF under its operating rules** • The status of actions taken by a SSF which has entered into external administration is expected to be addressed by the introduction into Australian law of a statutory management regime for financial market infrastructure, as foreshadowed in consultations undertaken by the Council of Financial Regulators and Treasury in 2011, 2012 and 2015 • The status of actions taken by a SSF under Australian law where one of its participants defaults and enters into administration is addressed by the PSNA, which, as noted above, provides certain protections under Australian law from reversal or invalidation under the laws of any jurisdiction, of netting and settlement of obligations effected in accordance with a SSF's operating rules
PFMI 1 – KEY CONSIDERATION 5 An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflicts of law across jurisdictions *FSS 1.6*	**The operating rules of the SSFs are governed by Australian law and participants submit to the jurisdiction of the courts of New South Wales. Accordingly, Australia is the relevant jurisdiction for enforcement of the rules** **The legal bases outlined above apply irrespective of the jurisdiction in which a participant in the SSF may be incorporated**

PFMI Disclosure Framework | Principle 2

ASX

PRINCIPLE 2 - GOVERNANCE:
An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations and the objectives of relevant stakeholders

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 2 – KEY CONSIDERATION 1 An FMI should have objectives that place a high priority on the safety and efficiency of the FMI and explicitly support financial stability and other relevant public interest considerations *FSS 2.1*	↗ These obligations are addressed in the ASX Limited Board Charter and the CS Boards Charter. These are published on the ASX website ↗ The ASX Limited Board Charter sets out the functions of the Board, which include, but are not limited to, responsibility to oversee the conduct of the affairs of the ASX Group consistent with licence obligations as well as public policy objectives directed at financial market and payment systems integrity ↗ The CS Boards Charter sets out the responsibilities of the CS Boards, which include, but are not limited to, reviewing and providing oversight of risk management processes, internal controls and compliance systems in respect of the management of clearing and settlement risks and compliance with the Financial Stability Standards. The CS Boards Charter also refers to the statutory obligations of the CS Boards under the Corporations Act, which also include, but are not limited to, doing all other things necessary to reduce systemic risk, providing the facility's services in a fair and effective way and having adequate conflict handling and compliance arrangements
PFMI 2 – KEY CONSIDERATION 2 An FMI should have documented governance arrangements that provide clear and direct lines of responsibility and accountability. These arrangements should be disclosed to owners, relevant authorities, participants and, at a more general level, the public *FSS 2.2*	↗ Governance arrangements are documented in the CS Boards Charter, ASX Limited Board Charter & Committee Charters, and the ASX Compliance Charter. These are published on the ASX website ↗ The ASX Limited Board Charter sets out how it relies on the CS Boards to oversee the clearing and settlement operations of the CS entities ↗ The CS Boards Charter sets out the clearing and settlement executive management structure and reporting lines, ownership structure, design and oversight of risk management and internal controls ↗ The Remuneration Committee Charter sets out the Committee's role overseeing executive remuneration and performance management processes. The CS Boards review the performance of the CRO and Group Executive, Operations and advise the Remuneration Committee of the outcomes ↗ The CEO is responsible for the appointment and termination of both of these roles following consultation with the ASX Limited Board and with the agreement of the CS Boards ↗ The Nomination Committee Charter sets out the Committee's role in reviewing nomination matters relating to the composition and performance of the CS Boards ↗ The ASX Compliance Charter sets out the powers delegated to ASX Compliance by the CS Boards to perform compliance and enforcement services ↗ The CS Boards Charter sets out that both the General Manager Regulatory Assurance and General Manager Internal Audit have a direct line of reporting to the CS Boards, with periodic reporting provided

PFMI Disclosure Framework | Principle 2

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
	↗ The CS Boards and ASX Limited Board Committees report regularly to the ASX Limited Board and to each other on relevant matters. Minutes of their meetings are made available to the ASX Limited Board, except where the CS Boards consider commercially sensitive information. This would usually arise in a situation where another market operator or listing venue is obtaining services from, or access to, the CS facility. In those cases, no directors who are also on the ASX Limited Board attend the CS Boards meeting and neither the matter discussed nor the minutes of the CS Boards meeting are reported to the ASX Limited Board
PFMI 2 – KEY CONSIDERATION 3 The roles and responsibilities of an FMI's board of directors (or equivalent) should be clearly specified, and there should be documented procedures for its functioning, including procedures to identify, address and manage member conflicts of interest. The board should review both its overall performance and the performance of its individual board members regularly *FSS 2.3*	↗ Board roles and responsibilities are set out in the CS Boards Charter, ASX Limited Board Charter & Committee Charters ↗ Board responsibility for effective monitoring of senior management is addressed in the CS Boards Charter and the Remuneration Committee Charter ↗ Board responsibility for nomination matters is addressed in the CS Boards Charter and the Nomination Committee Charter. Members of ASX Limited's Nomination Committee (from time to time) are appointed to review nomination matters, with reporting to the CS Boards ↗ Board responsibility for risk management and internal control is addressed in the CS Boards Charter and the ARC Charter ↗ Board responsibility for ensuring compliance with all supervisory and oversight requirements, ensuring consideration of financial stability and other relevant public interests is addressed by the CS Boards and ASX Compliance ↗ Board responsibility for providing accountability to owners, participants and other relevant stakeholders is addressed through reporting to the ASX Limited Board, consultation with relevant stakeholders and publication of governance arrangements ↗ Board performance reviews are addressed in the CS Boards Charter ↗ Conflicts handling is addressed in the CS Boards Charter and ASX's Conflict Handling Arrangements, a copy of which is published on the ASX website and meets FSS requirements
PFMI 2 – KEY CONSIDERATION 4 The board should contain suitable members with the appropriate skills and incentives to fulfil its multiple roles. This typically requires the inclusion of non-executive board member(s) *FSS 2.4*	↗ These obligations are addressed in the CS Boards Charter and the Nomination and Remuneration Committee Charters ↗ The Nomination Committee Charter sets out that the Committee periodically reviews the composition, skills and experience of the CS Boards. Director appointments to the CS Boards are made by the respective CS Board ↗ All CS Board directors, other than the CEO, are independent non-executives ↗ The Remuneration Committee Charter sets out that the Committee periodically review compensation for CS Board directors. CS Board directors do not receive any performance-related compensation

PFMI Disclosure Framework | Principle 2

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
	↗ Director information, including directors' interests, details of ASX Group cross-directorships and independence is published on the ASX website ↗ Director independence is reviewed annually. The CS Boards have adopted the ASX Limited Board Policy and Guideline to Relationships Affecting Independent Status, which sets out the matters which will be considered when assessing director independence. This policy is published on ASX's website ↗ Directors' interests are tabled at each Board meeting ↗ No tenure limit in CS Boards Charter
PFMI 2 – KEY CONSIDERATION 5 The roles and responsibilities of management should be clearly specified. An FMI's management should have the appropriate experience, a mix of skills and the integrity necessary to discharge their responsibilities for the operation and risk management of the FMI *FSS 2.5*	↗ The roles and responsibilities of senior management relevant to CS operations are set out in the CS Boards Charter and more fully in defined position descriptions ↗ The CEO has responsibility for the overall operational and business management and profit performance of ASX. The CRO and Group Executive, Operations report to the CEO ↗ The CRO has responsibility for the overall clearing risk management of the CS subsidiaries and for ensuring the CS license obligations are met ↗ The Group Executive, Operations has responsibility for the overall settlement risk management of the CS subsidiaries ↗ The CS Boards Charter sets out that the CS Boards appoint members of the Remuneration Committee (from time to time) to review compensation arrangements for the CRO and Group Executive, Operations. The CS Boards provide input to the Remuneration Committee as part of the annual performance management process ↗ The Remuneration Committee also reviews compensation arrangements for the CRO and Group Executive, Operations to confirm these are structured in such a way as to promote the soundness and effectiveness of risk management. Reporting is provided to the CS Boards ↗ Executive KPIs are structured to promote soundness and effectiveness of risk management

PFMI Disclosure Framework | Principle 2

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 2 – KEY CONSIDERATION 6 The board should establish a clear, documented risk management framework that includes the FMI's risk tolerance policy, assigns responsibilities and accountability for risk decisions, and addresses decision-making in crises and emergencies. Governance arrangements should ensure that the risk management and internal control functions have sufficient authority, independence, resources and access to the board *FSS 2.6*	↗ These obligations are addressed in the CS Boards Charter, ARC Charter, Internal Audit Charter, and the ASX Enterprise Risk Management Policy and Framework. Further details are provided under Principle 3; Key Consideration 1 ↗ The CS Boards are responsible for oversight of risk management relevant to the CS Boards and the ARC is responsible for oversight of enterprise wide risk. The CS Boards appoint members of the ARC (from time to time) to review matters that the ARC is responsible for, which may impact on CS operations. Reporting is provided to the CS Boards ↗ Each of the CRO, Group Executive, Operations GM, Regulatory Assurance & GM, Internal Audit have a direct line of reporting to the CS Boards. These are documented in their employment agreements or position descriptions ↗ The Internal Audit Charter addresses the independence of Internal Audit. The Internal Audit Plan is approved by the ARC, and by the CS Boards for matters relevant to the CS subsidiaries
A SSF's operations, risk management processes, internal control mechanisms and accounts should be subject to internal audit and, where appropriate, periodic external independent expert review. Internal audits should be performed, at a minimum, on an annual basis. The outcome of internal audits and external reviews should be notified to the Reserve Bank and other relevant authorities *FSS 2.7*	↗ These obligations are addressed in the CS Boards Charter, ARC Charter and Internal Audit Charter ↗ The CS Boards are responsible for oversight of risk management (including internal controls and Internal Audit matters) relevant to the CS Boards and the ARC is responsible for oversight of enterprise wide risk. The CS Boards appoint members of the ARC (from time to time) to review matters that the ARC is responsible for, which may impact on CS operations ↗ The Internal Audit Charter addresses the independence of Internal Audit. The Internal Audit Plan is approved by the ARC, and by the CS Boards for matters relevant to the CS subsidiaries
PFMI 2 – KEY CONSIDERATION 7 The board should ensure that the FMI's design, rules, overall strategy and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other relevant stakeholders. Major decisions should be clearly disclosed to relevant stakeholders and, where there is a broad market impact, the public *FSS 2.8*	↗ Stakeholder management is addressed within the ASX Limited Board, CS Boards and Customer Charters ↗ ASX's Customer Charter sets out how ASX will balance the interests of customers, shareholders, end investors and the broader financial markets. ASX regularly seeks feedback from participants and stakeholders, including through consultation and stakeholder committees ↗ Consultation processes include operational arrangements, risk controls and default management rules and procedures. Details of all public consultation and non-confidential submissions received are published on the ASX website ↗ The Forum is an advisory body established under the Code of Practice comprising senior representatives from ASX's clearing and settlement participants, and a wide range of other industry stakeholders. The Forum provides a mechanism for ASX to engage with users of clearing and settlement services to ensure that the ongoing development of cash market clearing and settlement infrastructure and services meet the needs of users and are aligned with global standards. A Business Committee to provide business and operational input into the Forum on its forward work program was also established under the Code. Further detail about the Code, Forum and Business Committee is published on ASX's website ↗ ASX also seeks participant input into the design, operation and development of Austraclear through an Austraclear advisory committee

PFMI Disclosure Framework | Principle 2

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
A SSF that is part of a group of companies should ensure that measures are in place such that decisions taken in accordance with its obligations as a SSF cannot be compromised by the group structure or by board members also being members of the board of other entities in the same group. In particular, such a SSF should consider specific procedures for preventing and managing conflicts of interest, including with respect to intragroup outsourcing arrangements *FSS 2.9*	↗ Conflict handling is specifically addressed in the CS Charter and ASX's Group Conflict Handling Arrangements. Enhancements have been made to address being part of a corporate group. These documents are published on the ASX website ↗ Director information, including directors' interests, ASX Group cross-directorships and independence, is published on the ASX website ↗ Directors' interests are tabled at each Board meeting ↗ Outsourcing clauses in intra-group outsourcing arrangements address conflicts of interest, including specifying that ASX Group staff are under a duty to act in the best interests of the SSF receiving the services ↗ ASX Clear and ASX Settlement Boards periodically meet separately from the other CS Boards. ASX Clear and ASX Settlement provide clearing and settlement arrangements to competing listing or trading venues. These are often referred to as "access arrangements". Transparent and non-discriminatory access arrangements have been approved for competing market operators or listing venues. The Boards of ASX Clear and ASX Settlement are made up of 6 directors, the only executive director is the ASX CEO and Managing Director. Three of the five non-executive directors of ASX Clear and ASX Settlement, including the Chair, are not directors on the ASX Limited Board which competes with these venues. Two of these three directors are able to form a quorum to meet and consider any commercially sensitive matters. The three non-ASX Limited directors meet regularly ↗ Each other CS Board is also constituted such that directors who are not on the ASX Limited Board can form a quorum and meet if required. This would usually arise if one of the CS Boards was required to consider commercially sensitive information where another market operator or listing venue is obtaining services from, or access to, the CS facility. In those cases, no directors who are also on the ASX Limited Board attend the CS Boards meeting and neither the matter discussed nor the minutes of the CS Boards meeting are reported to the ASX Limited Board

PFMI Disclosure Framework | Principle 3

ASX

PRINCIPLE 3 – FRAMEWORK FOR THE COMPREHENSIVE MANAGEMENT OF RISKS:

An FMI should have a sound risk management framework for comprehensively managing legal, credit, liquidity, operational and other risks

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 3 – KEY CONSIDERATION 1 An FMI should have risk management policies, procedures and systems that enable it to identify, measure, monitor and manage the range of risks that arise in or are borne by the FMI. Risk management frameworks should be subject to periodic review *FSS 3.1*	↗ The ASX Enterprise Risk Management Policy and Framework is based on the International Standard (ISO 31000) for risk management and approved by the ERMC. The 'Summary of Risk Management Policies' is on the ASX website ↗ The SSFs have identified the range of risks that arise from their activities and considered them in the standardised risk categories, being: Strategic, Financial, Legal & Regulatory and Technology & Operations ↗ ASX Operations has developed a Settlement Risk Policy Framework which encompasses settlement policies and standards. Existing settlement policies and standards will be documented and reviewed against that Framework and any changes will be approved by the CS Boards and subject to annual review ↗ Clearing & Settlement Operations has systems and reports which identify key risk indicators and balances ↗ Internal Audit includes SSF activities in its risk based audit plan. The Internal Audit Charter is on the ASX website
A SSF should ensure that financial and other obligations imposed on participants under its risk management framework are proportional to the scale and nature of individual participant's activities *FSS 3.2*	↗ The SSFs' settlement risk policies will be aligned to scale and nature or participant risk exposures and activities and subject to annual review ↗ The SSFs' operating rules are designed and implemented in a way to recognise the criticality of the individual participant's activities. The SSFs' Operating Rules are on the ASX website
PFMI 3 – KEY CONSIDERATION 2 An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the FMI *FSS 3.3*	↗ Incentives for ASX Settlement participants to manage their risks are via fees for failed settlements, security bonds (settlement bond for all ASX General Settlement participants and sponsorship bonds for any ASX Settlement Participant that is not also a Market Participant), etc ↗ The Austraclear facility provides two messaging alternatives (SWIFT and HTHL) that enable participants to achieve straight through processing of settlement transactions that must be matched bilaterally. This helps mitigate participants' operational and settlement risk through the reduction or elimination of manual processing ↗ Penalties for non-compliance with SSF operating rules may be applied ↗ Participants may be required to seek alternative settlement arrangements if they are unable to manage their risks to a level acceptable to ASX's SSFs. The ASX Settlement and Austraclear Operating Rules are on the ASX website ↗ Information is provided to SSF participants to allow them to manage their risks and include daily gross and net settlement positions (ASX Settlement)

PFMI Disclosure Framework | Principle 3

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 3 – KEY CONSIDERATION 3 An FMI should regularly review the material risks it bears from and poses to other entities (such as other FMIs, settlement banks, liquidity providers and service providers) as a result of interdependencies, and develop appropriate risk management tools to address these risks *FSS 3.4*	↗ Risk profiling is undertaken every six months which includes risks posed by external entities to the SSFs ↗ Major loss scenario analysis is undertaken periodically ↗ ASX has engaged with ASIC to better communicate to participants and their customers the risks associated with settlement arrangements. Incentives for participants to manage their risks are via capital requirements, fees for failed settlements (ASX Settlement only), etc
PFMI 3 – KEY CONSIDERATION 4 An FMI should identify scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern and assess the effectiveness of a full range of options for recovery or orderly wind-down. An FMI should prepare appropriate plans for its recovery or orderly wind-down based on the results of that assessment. Where applicable, an FMI should also provide relevant authorities with the information needed for purposes of resolution planning *FSS 3.5*	↗ The SSFs have developing recovery plans based on existing powers. The SSFs have commenced work to develop a more comprehensive recovery plan in line with CPMI-IOSCO guidance on FMI recovery planning, released in October 2014

PFMI Disclosure Framework | Principle 4

ASX

PRINCIPLE 4 – CREDIT RISK:
An FMI should effectively measure, monitor and manage its credit exposures to participants and those arising from its payment, clearing and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 4 – KEY CONSIDERATION 1 An FMI should establish a robust framework to manage its credit exposures to its participants and the credit risks arising from its payment, clearing and settlement processes. Credit exposures may arise from current exposures, potential future exposures, or both *FSS 4.1*	↗ **Not applicable – the SSFs do not enter into arrangements with participants that give rise to credit risk**
PFMI 4 – KEY CONSIDERATION 2 An FMI should identify sources of credit risk, routinely measure and monitor credit exposures, and use appropriate risk management tools to control these risks *FSS 4.2*	↗ **Not applicable – the SSFs do not enter into arrangements with participants that give rise to credit risk**
A SSF should have the authority to impose activity restrictions or additional credit risk controls on a participant in situations where the SSF determines that the participant's credit standing may be in doubt *FSS 4.3*	↗ **Not applicable – the SSFs do not enter into arrangements with participants that give rise to credit risk**

PFMI Disclosure Framework | Principle 4

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 4 – KEY CONSIDERATION 3 A SSF should cover its current and, where they exist, potential future exposures to each participant fully with a high degree of confidence using collateral and other equivalent financial resources (see SSF Standard 5 on collateral). In the case of a deferred net settlement (DNS) SSF in which there is no settlement guarantee, but where its participants face credit exposures arising from its settlement processes, the facility should maintain, at a minimum, sufficient resources to cover the exposures of the two participants and their affiliates that would create the largest aggregate credit exposure in the system *FSS 4.4*	↗ **Not applicable – the SSFs do not enter into arrangements with participants that give rise to credit risk**
PFMI 4 – KEY CONSIDERATION 4, 5 & 6 *NO CORRESPONDING FFS*	↗ **Applicable to CCPs only**
PFMI 4 – KEY CONSIDERATION 7 An FMI should establish explicit rules and procedures that address fully any credit losses it may face as a result of any individual or combined default among its participants with respect to any of their obligations to the FMI. These rules and procedures should address how potentially uncovered credit losses would be allocated, including the repayment of any funds an FMI may borrow from liquidity providers. These rules and procedures should also indicate the FMI's process to replenish any financial resources that the FMI may employ during a stress event, so that the FMI can continue to operate in a safe and sound manner *FSS 4.5*	↗ **Not applicable – the SSFs do not enter into arrangements with participants that give rise to credit risk**

PFMI Disclosure Framework | Principle 5

ASX

PRINCIPLE 5 – COLLATERAL:
An FMI that requires collateral to manage its or its participants' credit exposures should accept collateral with low credit, liquidity and market risks. A SSF should also set and enforce appropriately conservative haircuts and concentration limits

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 5 – KEY CONSIDERATION 1 An FMI should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity and market risks *FSS 5.1*	↗ **Not applicable – the SSFs do not undertake activities that require the lodgement of collateral**
In determining its collateral policies, a SSF should take into consideration the broad effect of these policies on the market. As part of this, a SSF should consider allowing the use of collateral commonly accepted in the relevant jurisdictions in which it operates *FSS 5.2*	↗ **Not applicable – the SSFs do not undertake activities that require the lodgement of collateral**
PFMI 5 – KEY CONSIDERATION 2 An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions *FSS 5.3*	↗ **Not applicable – the SSFs do not undertake activities that require the lodgement of collateral**

PFMI Disclosure Framework | Principle 5

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 5 – KEY CONSIDERATION 3 In order to reduce the need for procyclical adjustments, an FMI should establish stable and conservative haircuts that are calibrated to include periods of stressed market conditions, to the extent practicable and prudent *FSS 5.4*	↗ **Not applicable – the SSFs do not undertake activities that require the lodgement of collateral**
PFMI 5 – KEY CONSIDERATION 4 An FMI should avoid concentrated holdings of certain assets where this would significantly impair the ability to liquidate such assets quickly without significant adverse price effects *FSS 5.5*	↗ **Not applicable – the SSFs do not undertake activities that require the lodgement of collateral**
PFMI 5 – KEY CONSIDERATION 5 An FMI that accepts cross-border collateral should mitigate the risks associated with its use and ensure that the collateral can be used in a timely manner *FSS 5.6*	↗ **Not applicable – the SSFs do not undertake activities that require the lodgement of collateral**
PFMI 5 – KEY CONSIDERATION 6 An FMI should use a collateral management system that is well designed and operationally flexible *FSS 5.7*	↗ **Not applicable – the SSFs do not undertake activities that require the lodgement of collateral**

PFMI Disclosure Framework | Principle 6 & 7

ASX

PRINCIPLE 6 – MARGIN

Not applicable to SSFs

PRINCIPLE 7 – LIQUIDITY RISK:

An FMI should effectively measure, monitor, and manage its liquidity risk. An FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the FMI in extreme but plausible market conditions

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 7 – KEY CONSIDERATION 1 An FMI should have a robust framework to manage its liquidity risks from its participants, settlement agents, nostro agents, custodian banks, liquidity providers and other entities *FSS 6.1*	↗ **Not applicable – the SSFs do not undertake activities that give rise to funding requirements**
PFMI 7 – KEY CONSIDERATION 2 An FMI should have effective operational and analytical tools to identify, measure and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity *FSS 6.2*	↗ **Not applicable – the SSFs do not undertake activities that give rise to funding requirements**
PFMI 7 – KEY CONSIDERATION 3 A payment system or securities settlement system, including one employing a deferred net settlement mechanism, should maintain sufficient liquid resources in all relevant currencies to effect same-day settlement and, where appropriate, intraday or multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation in extreme but plausible market conditions *FSS 6.3*	↗ **Not applicable – the SSFs do not undertake activities that give rise to funding requirements**

PFMI Disclosure Framework | Principle 7

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 7 – KEY CONSIDERATION 4 *NO CORRESPONDING FFS*	↗ **Applicable to CCPs only**
PFMI 7 – KEY CONSIDERATION 5 For the purpose of meeting its minimum liquid resources requirement, an FMI's qualifying liquid resources in each currency include cash at the central bank of issue and at creditworthy commercial banks, committed lines of credit, committed foreign exchange swaps and committed repos, as well as highly marketable collateral held in custody and investments that are readily available and convertible into cash with prearranged and highly reliable funding arrangements, even in extreme but plausible market conditions. If an FMI has access to routine credit at the central bank of issue, the FMI may count such access as part of the minimum requirement to the extent it has collateral that is eligible for pledging to (or for conducting other appropriate forms of transactions with) the relevant central bank. All such resources should be available when needed *FFS 6.4*	↗ **Not applicable – the SSFs do not undertake activities that give rise to funding requirements**

PFMI Disclosure Framework | Principle 7

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 7 – KEY CONSIDERATION 6 An FMI may supplement its qualifying liquid resources with other forms of liquid resources. If the FMI does so, these liquid resources should be in the form of assets that are likely to be saleable or acceptable as collateral for lines of credit, swaps or repos on an ad hoc basis following a default, even if this cannot be reliably prearranged or guaranteed in extreme market conditions. Even if an FMI does not have access to routine central bank credit, it should still take account of what collateral is typically accepted by the relevant central bank, as such assets may be more likely to be liquid in stressed circumstances. An FMI should not assume the availability of emergency central bank credit as part of its liquidity plan *FSS 6.5*	↗ **Not applicable – the SSFs do not undertake activities that give rise to funding requirements**
PFMI 7 – KEY CONSIDERATION 7 An FMI should obtain a high degree of confidence, though rigorous due diligence, that each provider of its minimum required qualifying liquid resources, whether a participant of the FMI or an external party, has sufficient information to understand and to manage its associated liquidity risks, and that it has the capacity to perform as required under its commitment. Where relevant to assessing a liquidity provider's performance reliability with respect to a particular currency, a liquidity provider's potential access to credit from the central bank of issue may be taken into account. An FMI should regularly test its procedures for accessing its liquid resources at a liquidity provider *FSS 6.6*	↗ **Not applicable – the SSFs do not undertake activities that give rise to funding requirements**

PFMI Disclosure Framework | Principle 7

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 7 – KEY CONSIDERATION 8 An FMI with access to central bank accounts, payment services or securities services should use these services, where practical, to enhance its management of liquidity risk *FSS 6.7*	↗ **Not applicable – the SSFs do not undertake activities that give rise to funding requirements**
PFMI 7 – KEY CONSIDERATION 9 An FMI should determine the amount and regularly test the sufficiency of its liquid resources through rigorous stress testing. An FMI should have clear procedures to report the results of its stress tests to appropriate decision-makers at the FMI and to use these results to evaluate the adequacy of, and adjust, its liquidity risk management framework. In conducting stress testing, an FMI should consider a wide range of relevant scenarios. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions. Scenarios should also take into account the design and operation of the FMI, include all entities that might pose material liquidity risks to the FMI (such as settlement banks, nostro agents, custodian banks, liquidity providers and linked FMIs) and, where appropriate, cover a multiday period. In all cases, an FMI should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount and form of total liquid resources it maintains *FSS 6.8*	↗ **Not applicable – the SSFs do not undertake activities that give rise to funding requirements**

PFMI Disclosure Framework | Principle 7

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 7 – KEY CONSIDERATION 10 An FMI should establish explicit rules and procedures that enable the FMI to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially uncovered liquidity shortfalls and should aim to avoid unwinding, revoking or delaying the same-day settlement of payment obligations. These rules and procedures should also indicate the FMI's process to replenish any liquidity resources it may employ during a stress event, so that it can continue to operate in a safe and sound manner *FSS 6.9*	↗ **Not applicable – the SSFs do not undertake activities that give rise to funding requirements**

PFMI Disclosure Framework | Principle 8

ASX

PRINCIPLE 8 – SETTLEMENT FINALITY:
An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 8 – KEY CONSIDERATION 1 An FMI's rules and procedures should clearly define the point at which settlement is final *FSS 7.1*	↗ Settlement occurs simultaneously within Austraclear and CHESS after cash settlement across the ESA account within RITS. Movement of securities in Austraclear will only occur once a message is received from RITS that the cash leg has settled across ESA accounts. The point at which settlement is final is set out in the Austraclear Regulations at Sections 14, 15 and 16 ↗ For cash transactions in a foreign currency in Austraclear, the point at which settlement is final is set out in Austraclear Regulation 29.1 ↗ For ASX Settlement, movement of equity securities in CHESS from delivering settlement Entrepot accounts to receiving Entrepot accounts will only occur after receipt of a message from RITS indicating that cash has settled across ESA accounts. The point at which settlement is final is set out in the ASX Settlement Operating Rules at Section 10
PFMI 8 – KEY CONSIDERATION 2 An FMI should complete final settlement no later than the end of the value date, and preferably intraday or in real time, to reduce settlement risk. A large value payment system or securities settlement system should consider adopting real-time gross settlement or multiple-batch processing during the settlement day *FSS 7.2*	↗ DvP Model 1 (Austraclear) and DvP Model 3 (Equities - ASX Settlement) settlement systems are used ↗ In addition, CHESS facilitates RTGS (ASX Settlement) ↗ Settlement occurs simultaneously within Austraclear and CHESS after cash settlement across the ESA account within RITS. Movement of securities in Austraclear will only occur once a message is received from RITS that the cash leg has settled across ESA accounts. If a settlement instruction remains unsettled (neither cash nor securities legs have settled), the transaction is cancelled and purged from the Austraclear System. (This applies equally to cash transactions in a foreign currency in Austraclear) ↗ For ASX Settlement, movement of equity securities in CHESS from delivering settlement Entrepot accounts to receiving Entrepot accounts will only occur after receipt of a message from RITS indicating that cash has settled across ESA accounts ↗ The deadlines for completion of the ASX Settlement equity batch settlement and the obligations of Payment Providers are set out in the CHESS Payments Interface Standard Payments Provider Deed ↗ See ASX Settlement Operating Rules, Section 10 ↗ See Austraclear Regulations Sections 14, 15 and 16

PFMI Disclosure Framework | Principle 8

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 8 – KEY CONSIDERATION 3 An FMI should clearly define the point after which unsettled payments, transfer instructions or other obligations may not be revoked by a participant *FSS 7.3*	↗ **ASX SSFs complete settlement in accordance with the Operating Rules and Procedures of ASX Settlement and Austraclear, at:** • Refer ASX Settlement – Section 10 • Refer Austraclear Regulations – Sections 14, 15 & 16. ↗ **Movement of securities in Austraclear will only occur once a message is received from RITS that the cash leg has settled across ESA accounts. The point at which settlement is final is set out in the Austraclear Regulations at Sections 14, 15 and 16** ↗ **For ASX Settlement, movement of equity securities in CHESS from delivering settlement Entrepot accounts to receiving Entrepot accounts will only occur after receipt of a message from RITS indicating that cash has settled across ESA accounts. The point at which settlement is final is set out in the ASX Settlement Operating Rules at Section 10** ↗ **Unsettled payments may not be revoked after they match and the cash leg has settled across ESA accounts.** ↗ **Unsettled transactions in Austraclear are removed from the system after the end of the business day under Regulations 14.4 and 14.4A**

PFMI Disclosure Framework | Principle 9

ASX

PRINCIPLE 9 – MONEY SETTLEMENTS:
An FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimise and strictly control the credit and liquidity risk arising from the use of commercial bank money

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 9 – KEY CONSIDERATION 1 An FMI should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks *FSS 8.1*	↗ **All $AUD settlements are conducted via CHESS (for ASX Settlement) and Austraclear across ESAs in RITS** ↗ **The ESA account for settlement of cash equities is held in the name of ASX Settlement**
PFMI 9 – KEY CONSIDERATION 2 If central bank money is not used, an FMI should conduct its money settlements using a settlement asset with little or no credit or liquidity risk *FSS 8.2*	↗ **All settlements involving the SSFs are completed in central bank money, except cash transactions in a foreign currency within Austraclear** ↗ **Cash transactions in a foreign currency in Austraclear are conducted using central bank money or commercial money. The foreign currency and the foreign currency settlement bank must meet the requirements of Austraclear Regulations 29.2 and 29.3. Funds are settled when Austraclear has successfully verified that sufficient funds are available with the foreign currency settlement bank in line with Regulation 29.1**
PFMI 9 – KEY CONSIDERATION 3 If an FMI settles in commercial bank money, it should monitor, manage and limit its credit and liquidity risks arising from the commercial banks. In particular, an FMI should establish and monitor adherence to strict criteria for its settlement banks that take account of, among other things, their regulation and supervision, creditworthiness, capitalisation, access to liquidity and operational reliability. An FMI should also monitor and manage the concentration of credit and liquidity exposures to its commercial settlement banks *FSS 8.3*	↗ **Subject to the following, all settlements involving the SSFs are completed in central bank money** For cash transactions in a foreign currency in Austraclear, the requirements for foreign currency settlement banks are principally set out in Regulation 29.3 and Regulation 29.4. In considering whether to approve an entity as a foreign currency settlement bank, matters including the regulation and supervision, creditworthiness, capitalisation, access to liquidity and organisational competencies of the applicant are assessed. These requirements are ongoing. Particular organisational competencies include prescribed operating hours, system reliability, system capacity, outage reporting, business continuity, communication links, notifications and outsourcing. In addition, the admission requirements also include the obligation for the foreign currency settlement bank to provide prescribed risk disclosures to parties that hold a foreign currency account

PFMI Disclosure Framework | Principle 9 | Principle 10

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 9 – KEY CONSIDERATION 4 If an FMI conducts money settlements on its own books, it should minimise and strictly control its credit and liquidity risks *FSS 8.4*	↗ **Not applicable**
PFMI 9 – KEY CONSIDERATION 5 An FMI's legal agreements with any settlement banks should state clearly when transfers on the books of individual settlement banks are expected to occur, that transfers are to be final when effected, and that funds received should be transferable as soon as possible, at a minimum by the end of the day and ideally intraday, in order to enable the FMI and its participants to manage credit and liquidity risks *FSS 8.5*	↗ **Not applicable other than for cash transactions in a foreign currency within Austraclear. For those transactions, refer to Regulation 29.4(b). Regulation 14.4A specifies that unsettled cash transactions in a foreign currency are removed from the Austraclear system at the end of the settlement day**

PRINCIPLE 10 - PHYSICAL DELIVERY:

An FMI should clearly state its obligations with respect to the delivery of physical instruments or commodities and should identify, monitor and manage the risks associated with such physical deliveries

Not applicable to ASX's SSFs. No corresponding FSS for SSFs

PFMI Disclosure Framework | Principle 11

ASX

PRINCIPLE 11 – CENTRAL SECURITIES DEPOSITORIES (CSD):
A CSD should have appropriate rules and procedures to help ensure the integrity of securities issues and minimise and manage the risks associated with the safekeeping and transfer of securities. A CSD should maintain securities in an immobilised or dematerialised form for their transfer by book entry

PFMI/FSS

PFMI 11 – KEY CONSIDERATION 1

A CSD should have appropriate rules, procedures and controls, including robust accounting practices, to safeguard the rights of securities issuers and holders, prevent the unauthorised creation or deletion of securities, and conduct periodic and at least daily reconciliation of securities issues it maintains

FSS 9.1

HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY

- **Austraclear and ASX Settlement have rules, procedures and controls to:**
- **safeguard the rights of securities issuers and owners; and**
- **prevent the unauthorised creation or deletion/withdrawal of securities**
- **A reconciliation of securities issues is conducted on a daily basis**

Austraclear:

- **Austraclear's rules and procedures adequately address the following issues, in respect of both non-paper securities and dematerialised securities:**
- **Type of title:**
  - Non-paper securities:
    - Under the Austraclear Regulations:
      - non-paper securities are debt obligations (or certain rights or interests that are equivalent to debt obligations); and,
      - Austraclear holds non-paper securities as nominee for the owner

Therefore, owners of non-paper securities hold a beneficial interest

- **Dematerialised securities:**
  - Under the Austraclear Regulations:
    - dematerialised securities are electronically recorded debt obligations;
    - the holder of a dematerialised security has good title provided it is taken in good faith for value and without notice at that time of any defect in title; and,
    - the rights of a holder of a dematerialised security are equivalent to those which the holder would be entitled to if it held an equivalent paper security
- **Method of transfer:**
  - Non-paper securities:
    - The Austraclear Regulations provide a comprehensive framework for the requirements and conditions relating to the transfer of these securities and related payments

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
	• Dematerialised securities: » The Austraclear Regulations provide a comprehensive framework for the requirements and conditions relating to the transfer of these securities and related payments ↗ **Whether the SSF has any claim over securities:** • Non-paper securities: » The creditors of Austraclear Limited have no claim over non-paper securities registered by participants in the facility, because Austraclear holds non-paper securities as nominee for the Owners • Dematerialised securities: » The creditors of Austraclear Limited have no claim over dematerialised securities registered by participants in the facility, because Austraclear has no title in such securities *ASX Settlement – CHESS Holdings:* ↗ **ASX Settlement's rules and procedures adequately address the following issues: in respect of CHESS Holdings on an electronic CHESS subregister** ↗ **Type of title:** • Dematerialised securities: » Under the ASX Settlement Operating Rules, legal title is retained by the "Holder" (i.e. the person registered as the legal owner of financial products in a CHESS Holding (account)) • Method of transfer: » The ASX Settlement Operating Rules provide a comprehensive framework for the requirements and conditions relating to the transfer of registered financial products and related payments • Whether the SSF has any claim over securities: » The creditors of ASX Settlement have no claim over securities in CHESS because ASX Settlement has no title in such securities

PFMI Disclosure Framework | Principle 11

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 11 – KEY CONSIDERATION 2 A CSD should prohibit overdrafts and debit balances in securities accounts *FSS 9.2*	↗ **Austraclear and ASX Settlement do not permit overdrafts and debit balances in their securities accounts**
PFMI 11 – KEY CONSIDERATION 3 A CSD should maintain securities in an immobilised or dematerialised form for their transfer by book entry. Where appropriate, a CSD should provide incentives to immobilise or dematerialise securities *FSS 9.3*	↗ **Austraclear and ASX Settlement maintain securities in a dematerialised form for their transfer by book entry**
PFMI 11 – KEY CONSIDERATION 4 A CSD should protect assets against custody risk through appropriate rules and procedures consistent with its legal framework *FSS 9.4*	↗ **Custody risk (protection of assets against creditor claims through operating rules) – as above, the creditors of Austraclear and ASX Settlement have no claim over securities registered in the facility/ies, because:** • in respect of non-paper securities, Austraclear holds non-paper securities as nominee for the owners; and • in respect of dematerialised securities in Austraclear and ASX Settlement, the facilities have no title ↗ **In addition, a framework of controls limit the risk of loss from negligence, misuse of assets, fraud, poor administration or inadequate recordkeeping. These include regular reporting and reconciliations, authorised signatories and verification, account set-up controls, dual authorisations, leave policies and regular and external audits**

PFMI Disclosure Framework | Principle 11

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 11 – KEY CONSIDERATION 5 A CSD should employ a robust system that ensures segregation between its own assets and the securities of its participants, and segregation among the securities of participants. Where supported by the legal framework, the CSD should also support operationally the segregation of securities belonging to a participant's customers on the participant's books and facilitate the transfer of customer holdings *FSS 9.5*	↗ **Austraclear and ASX Settlement segregate the securities of their participants and also support operationally the segregation of securities belonging to participants' customers on participants' books and facilitate the transfer of customer holdings**
PFMI 11 – KEY CONSIDERATION 6 A CSD should identify, measure, monitor and manage its risks from other activities that it may perform; additional tools may be necessary in order to address these risks *FSS 9.6*	↗ **Austraclear and ASX Settlement are included in ASX Group's approach to enterprise-wide risk management**

PFMI Disclosure Framework | Principle 12

ASX

PRINCIPLE 12 – EXCHANGE-OF-VALUE SETTLEMENT SYSTEMS:
If an FMI settles transactions that involve the settlement of two linked obligations (for example, securities or foreign exchange transactions), it should eliminate principal risk by conditioning the final settlement of one obligation upon the final settlement of the other

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 12 – KEY CONSIDERATION 1 An FMI that is an exchange-of-value settlement system should eliminate principal risk by ensuring that the final settlement of one obligation occurs if and only if the final settlement of the linked obligation also occurs, regardless of whether the FMI settles on a gross or net basis and when finality occurs *FSS 10.1*	↗ **Neither ASX Settlement nor Austraclear are counterparties to transactions that settle through the settlement facilities and therefore are not exposed to principal risk** ↗ **Principal risk of users of the facilities is managed in the following ways:** • DvP Model 1 (Austraclear) and DvP Model 3 (Equities – ASX Settlement) settlement systems are used • Electronic dematerialised DvP settlement • Movement of securities in Austraclear will only occur once a message is received from RITS that the cash leg has settled across ESA accounts • Movement of equity securities in CHESS from delivering settlement Entrepot accounts to receiving Entrepot accounts will only occur after receipt of a message from RITS to ASX Settlement indicating that cash has settled across ESA accounts • See ASX Settlement Operating Rules Section 10 • See ASX Clear Operating Rules Section 12 • See Austraclear Regulations Sections 14, 15 and 16
A SSF that is an exchange-of-value settlement system should eliminate principal risk by linking the final settlement of one obligation to the final settlement of the other through an appropriate delivery versus payment (DvP), delivery versus delivery (DvD) or payment versus payment (PvP) settlement mechanism *FSS 10.2*	↗ **Neither ASX Settlement nor Austraclear are counterparties to transactions that settle through the settlement facilities and therefore are not exposed to principal risk** ↗ **Principal risk of users of the facilities is managed in the following ways:** • DvP Model 1 (Austraclear) and DvP Model 3 (Equities – ASX Settlement) settlement systems are used • Electronic dematerialised DvP settlement • Movement of securities in Austraclear will only occur once a message is received from RITS that the cash leg has settled across ESA accounts • Movement of equity securities in CHESS from delivering settlement Entrepot accounts to receiving Entrepot accounts will only occur after receipt of a message from RITS to ASX Settlement indicating that cash has settled across ESA accounts • See ASX Settlement Operating Rules Section 10 • See ASX Clear Operating Rules Section 12 • See Austraclear Regulations Sections 14, 15 and 16

PFMI Disclosure Framework | Principle 13

ASX

PRINCIPLE 13 – PARTICIPANT-DEFAULT RULES AND PROCEDURES:
An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 13 – KEY CONSIDERATION 1 An FMI should have default rules and procedures that enable the FMI to continue to meet its obligations in the event of a participant default and that address the replenishment of resources following a default *FSS 11.1*	↗ The ASX Operating Rules detail the powers and actions available to a SSF in the event of a default
PFMI 13 – KEY CONSIDERATION 2 An FMI should publicly disclose key aspects of its default rules and procedures *FSS 11.2*	↗ The ASX operating rule framework places an obligation on all ASX Settlement and Austraclear Participants to self-report to ASX if they become aware of any circumstances which may prevent them being able to continue their obligations as a settlement participant in those facilities ↗ ASX Settlement has issued guidance on participant suspensions and terminations ↗ A PIRC is called upon an incident with a Participant becoming apparent
PFMI 13 – KEY CONSIDERATION 3 An FMI should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules *FSS 11.3*	↗ The ASX Operating Rules detail the powers and actions available to a SSF in the event of a default

PFMI Disclosure Framework | Principle 13 | Principle 14

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 13 – KEY CONSIDERATION 4 An FMI should involve its participants and other stakeholders in the testing and review of the FMI's default procedures, including any close out procedures. Such testing and review should be conducted at least annually and following material changes to the rules and procedures to ensure that they are practical and effective *FSS 11.4*	↗ **Not applicable for the SSFs**
A SSF should demonstrate that its default management procedures take appropriate account of interests in relevant jurisdictions and, in particular, any implications for pricing, liquidity and stability in relevant financial markets *FSS 11.5*	↗ **Not applicable for the SSFs**

PRINCIPLE 14 – SEGREGATION AND PORTABILITY:
A CCP should have rules and procedures that enable the segregation and portability of positions of a participant's customers and the collateral provided to the CCP with respect to those positions

Not applicable to ASX's SSFs. No corresponding FSS for SSFs

PFMI Disclosure Framework | Principle 15

ASX

PRINCIPLE 15 – GENERAL BUSINESS RISK:
An FMI should identify, monitor and manage its general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialise. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 15 – KEY CONSIDERATION 1 An FMI should have robust management and control systems to identify, monitor and manage general business risks, including losses from poor execution of business strategy, negative cash flows or unexpected and excessively large operating expenses *FSS 12.1*	↗ ASX's SSFs have robust management and control systems to identify, monitor and manage their general business risks ↗ Business unit risk profiling is conducted twice yearly. Sources of business risk and their potential impact on operations and services are identified and assessed. Potential impacts on cash flow, liquidity and capital position are analysed ↗ Annual financial planning and budgeting processes are in place. Major loss analysis is undertaken periodically. Capital forecasting and cash flow sensitivity analysis is undertaken and presented to the Capital & Liquidity Committee (CALCO) every quarter
PFMI 15 – KEY CONSIDERATION 2 An FMI should hold liquid net assets funded by equity (such as common stock, disclosed reserves or other retained earnings) so that it can continue operations and services as a going concern if it incurs general business losses. The amount of liquid net assets funded by equity an FMI should hold should be determined by its general business risk profile and the length of time required to achieve a recovery or orderly wind-down, as appropriate, of its critical operations and services if such action is taken *FSS 12.2*	↗ ASX has set aside capital for operational and business risk across the two SSFs if they incur general business losses. Each SSF has a separate allocation - $112.1 million for ASX Settlements and $113.6 million for Austraclear - for business risk capital that is explicitly made available to the SSFs from ASX Limited ↗ In determining the sufficiency of the operational and business risk capital set aside for ASX's SSFs, ASX has adopted a methodology that applies a capital charge for operational and business risk to the value of securities held in the facility. The calculated percentage of required risk resources declines as the level of assets increases – recognising that a significant part of the risk resources required will represent a minimum fixed amount. At the ASX Limited level, the total capital held has been determined noting that the two facilities' are uncorrelated and so they will not both require their allocated risk funds at the same time ↗ ASX's SSF business/ operational risk capital is determined and reviewed by CALCO periodically and monitored quarterly ↗ Annual financial forecasts, budgets, major loss scenario assessments etc. are undertaken to ensure the SSFs have adequate liquid assets to continue as a going concern should business risks eventuate

PFMI Disclosure Framework | Principle 15

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 15 – KEY CONSIDERATION 3 An FMI should maintain a viable recovery or orderly wind-down plan and should hold sufficient liquid net assets funded by equity to implement this plan. At a minimum, an FMI should hold liquid net assets funded by equity equal to at least six months of current operating expenses. These assets are in addition to resources held to cover participant defaults or other risks covered under the financial resources principles. However, equity held under international risk-based capital standards can be included where relevant and appropriate to avoid duplicate capital requirements *FSS 12.3*	↗ The SSFs have developed recovery plans based on existing powers. The SSFs have commenced work to develop a more comprehensive recovery plan in line with forthcoming CPMI-IOSCO guidance on FMI recovery planning, released in October 2014 ↗ General business risk capital is held on behalf of the SSFs at the ASX Group level to ensure that it cannot be applied to meet losses caused by a participant default. A group-wide capital buffer provides protection to allocated business risk capital against potential losses sustained elsewhere in the group. This arrangement has been included in the ASX Group Support Agreement ↗ The amount of operational and business risk capital set aside for the SSFs has been estimated as the capital required to cover six months of current operating expenses, with an additional buffer to allow for future growth. These funds are also sufficient to cover the estimated largest general business loss that the SSFs may incur. Loss scenarios considered include closure due to external events such as pandemics, the fraudulent redirection of payments, or the unauthorised transfer of funds
PFMI 15 – KEY CONSIDERATION 4 Assets held to cover general business risk should be of high quality and sufficiently liquid in order to allow the FMI to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions *FSS 12.4*	↗ The assets held to cover general business risks are liquid net assets funded by equity and reserves ↗ The liquid net assets comprise at call and fixed term bank deposits, bank bills and negotiable certificates of deposits ↗ The ASX Investment Mandate sets out allowed asset types and liquidity limits. Compliance with the mandate is reviewed quarterly by CALCO and approved by the Board

PFMI Disclosure Framework | Principle 15

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 15 – KEY CONSIDERATION 5 An FMI should maintain a viable plan for raising additional equity should its equity fall close to or below the amount needed. This plan should be approved by the board of directors and updated regularly *FSS 12.5*	↗ **ASX Limited manages its operational and business risk capital at the group level. The ASX Limited Board monitors the ongoing capital adequacy of the ASX Group as part of its regular capital planning activities. The Board determines the most appropriate means of raising additional capital when needed, giving due consideration to prevailing market conditions and available alternative financing mechanisms. For example, in mid-2013 ASX Limited conducted a capital raising in the form of a $553 million share entitlement offer, with the bulk of the funds being used to increase the risk capital and default funds of the CS facilities. Recapitalisation processes will be reviewed and integrated with broader recovery planning arrangements following the release of CPMI-IOSCO guidance referenced in SSF Standard 12.3**

PFMI Disclosure Framework | Principle 16

ASX

PRINCIPLE 16 – CUSTODY AND INVESTMENT RISKS:

An FMI should safeguard its own and its participants' assets and minimise the risk of loss on and delay in access to these assets. An FMI's investments should be in instruments with minimal credit, market and liquidity risks

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 16 – KEY CONSIDERATION 1 An FMI should hold its own and its participants' assets at supervised and regulated entities that have robust accounting practices, safekeeping procedures and internal controls that fully protect these assets *FSS 13.1*	↗ Austraclear's cash assets are invested in accordance with the Austraclear Investment Mandate. It does not have non-cash assets ↗ ASX Settlement does not have cash or non-cash assets
PFMI 16 – KEY CONSIDERATION 2 An FMI should have prompt access to its assets and the assets provided by participants, when required *FSS 13.2*	↗ Austraclear's cash assets are invested in accordance with the Austraclear Investment Mandate which defines its liquidity requirements. It does not have non-cash assets ↗ Austraclear and ASX Settlement have no legal rights to access Participants' assets. They can, however, facilitate movements of Participants' assets through Austraclear and CHESS, if required
PFMI 16 – KEY CONSIDERATION 3 An FMI should evaluate and understand its exposures to its custodians, taking into account the full scope of its relationships with each *FSS 13.3*	↗ ASX's SSFs do not use the services of external custodians
PFMI 16 – KEY CONSIDERATION 4 An FMI's investment strategy should be consistent with its overall risk management strategy and fully disclosed to its participants, and investments should be secured by, or be claims on, high-quality obligors. These investments should allow for quick liquidation with little, if any, adverse price effect *FSS 13.4*	↗ Austraclear's cash assets are invested in accordance with the Austraclear Investment Mandate which defines its liquidity requirements. It does not have non-cash assets ↗ ASX Settlement does not have investments ↗ ASX Settlement does not have cash or non-cash assets

PFMI Disclosure Framework | Principle 17

ASX

PRINCIPLE 17 – OPERATIONAL RISK:
An FMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 17 – KEY CONSIDERATION 1 An FMI should establish a robust operational risk management framework with appropriate systems, policies, procedures and controls to identify, monitor and manage operational risks *FSS 14.1*	↗ ASX's SSFs adopt ASX's framework for risk management which is described in its Enterprise Risk Management Policy. This policy outlines the overall risk environment in the ASX Group; the objectives of risk management policies; the process by which risks are identified and assessed; the controls in place to detect and mitigate risks; and how risks are monitored and communicated. ASX's stated tolerance for financial, operational, legal and regulatory risks is 'very low' ↗ Specific policies are in place across key operational risks. Systems, procedures and controls are in place to support operational processes ↗ ASX's SSFs integrate commercial standards into their operational risk management frameworks. For instance, the risk management framework is regularly assessed against the international standard ISO 31000 Risk Management – Principles and Guidelines. The Business Continuity Framework has been prepared with reference to the Business Continuity Institute's Good Practice Guidelines, the British Standard BS, and ISO International Standard on business continuity. The ISO Information Security Management System (ISMS) standard has also been integrated into the technology risk management framework and an annual comparative assessment is completed. The ASX internal compliance framework has been benchmarked to the AS Australian Standard Compliance Program. The ASX Fraud Control Policy references AS Australian Standard on Fraud and Corruption Control
PFMI 17 – KEY CONSIDERATION 2 An FMI's board of directors should clearly define the roles and responsibilities for addressing operational risk and should endorse the FMI's operational risk management framework. Systems, operational policies, procedures and controls should be reviewed, audited and tested periodically and after significant changes *FSS 14.2*	↗ The ASX Board has endorsed the ASX Enterprise Risk Management Policy and framework which assigns specific risk responsibilities across the ASX Group, including to the ASX Limited Board of Directors, the Audit and Risk Committee, the Enterprise Risk Management Committee, the General Manager, Enterprise Risk and managers of individual departments. The Settlement Boards oversee the ASX SSF operational risks as per carve out in the ARC Charter ↗ The Enterprise Risk Management Committee, comprising executives from across the departments, is responsible for enterprise risk management policy and reviewing controls, processes and procedures to identify and manage risks. This committee is also responsible for formally approving significant operational risk policies prepared by individual departments ↗ Individual departments are responsible for: identifying business-specific risks; applying controls; maintaining risk management systems; reporting on the effectiveness of risk controls; and implementing enhancements and taking remedial action as appropriate. Each department is required to maintain a record of its risk profile, reviewing this on a six-monthly basis and updating as appropriate. Policies are formally reviewed periodically. More frequent reviews are undertaken where there are potential changes to technology, legal or regulatory requirements, or business drivers ↗ Policies and procedures are the subject of internal and external review. ASX's Internal Audit department routinely monitors compliance with operational policy, reporting to the Audit and Risk Committee on a quarterly basis. Audit findings may prompt a review of policy, which would be conducted in consultation with key stakeholders. Technology-related security policy is considered by external auditors annually

PFMI Disclosure Framework | Principle 17

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
	↗ The ASX Project Framework and separate Change Management Procedures include comprehensive checks to ensure changes are implemented effectively
PFMI 17 – KEY CONSIDERATION 3 An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives *FSS 14.3*	↗ Clearly defined operational objectives are in place. The monthly Key Indicators Report summaries performance against system availability targets and other measures such as critical system capacity and description of any incidents. The Monthly Critical System capacity report includes an assessment of the headroom remaining on peak values for each critical system ↗ The actual capacity and performance of SSF systems is tested on an on-going basis. A required level of redundant capacity is taken into account. There are tools/controls in place that are used to monitor, review and test the capacity and performance of the systems ↗ The system's performance is reported regularly to the CS Boards and to the RBA every quarter ↗ The SSFs' physical and information security policies are reviewed and assessed annually. The ASX Information System Security Policy recognises that employees, contractors and consultants have an obligation and a significant role to play in helping protect the information systems resources of ASX ↗ Availability targets are documented and defined formally for critical services. The SSF services are required to meet a minimum availability target of 99.8 per cent (99.9% for the Austraclear System as required under its Step-in and Service Agreement with the Reserve Bank)
PFMI 17 – KEY CONSIDERATION 4 An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives *NO CORRESPONDING FSS*	↗ ASX's SSFs are designed to have scalable capacity which is maintained at levels to support increasing volumes and service availability objectives. The guideline for target capacity is to maintain 50% over peak recorded daily volumes, with the ability to increase to 100% over peak within six months. Monthly reviews of current and projected capacity requirements are undertaken
PFMI 17 – KEY CONSIDERATION 5 An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats *NO CORRESPONDING FSS*	↗ The ASX Employee Physical Security Policy outlines the SSF requirements in regards to the protection of people, information and other assets and to ensure security risks from crime, activism and terrorism are minimised ↗ The ASX Information Security Policy Framework includes a range of policies designed to safeguard the SSFs technology environment against threats which may disable or affect its effectiveness. Policies and standards cover firewalls, encryption, virus protection, passwords, removable media, email, internet and other risks

PFMI Disclosure Framework | Principle 17

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 17 – KEY CONSIDERATION 6 An FMI should have a business continuity plan that addresses events posing a significant risk of disrupting operations, including events that could cause a wide-scale or major disruption. The plan should incorporate the use of a secondary site and should be designed to ensure that critical information technology systems can resume operations within two hours following disruptive events. The plan should be designed to enable the FMI to complete settlement by the end of the day of the disruption, even in case of extreme circumstances. The FMI should regularly test these arrangements *NO CORRESPONDING FSS*	↗ ASXs SSFs maintain business continuity plans detailing the operational responses to a facility disruption. The plans identify and address events that pose a significant risk of disrupting operations, e.g. events such as technology failure, staff unavailability, pandemic, greater CBD inaccessibility and primary site & systems unusable. These plans are updated annually ↗ ASX maintains both primary and backup data centres, and its business continuity arrangements are designed to achieve failover to the backup site data centre within two hours. Front-end servers handling communications with participants are configured to provide automatic failover across sites. Failover of the more critical data servers will generally take place within an hour under the control of management; however, the disruption to participants in such a case is reduced due to the high degree of redundancy in the front-end system components, which in most circumstances will maintain communications with external systems and queue transactions until the data servers are reactivated ↗ The SSFs regularly test their business continuity arrangements. Dual site operational teams across the primary and alternate secondary operations sites effectively test backup operational processes on a continuous basis. For those teams not located across both sites, connectivity and procedural testing of the backup secondary site are performed. Live tests, where clearing services are provided in real time from the alternate backup data centre site, have been conducted on a 1-2 year cycle and are moving to yearly ↗ Austraclear has alternative arrangements in place (for example, manual paper-based procedures) to allow for the processing of time-critical transactions in extreme circumstances, which have been tested and agreed with the RBA
A SSF should ensure that it can reliably access and utilise well-trained and competent personnel, as well as technical and other resources. These arrangements should be designed to ensure that all key systems are operated securely and reliably in all circumstances, including where a related body becomes subject to external administration *FSS 14.4*	↗ The SSFs employ sufficient well-qualified personnel. Appropriate human resource policies are implemented to mitigate the effects of high rates of staff turnover and key-person risk. Examples of policies in place are: Workplace Health & Safety, Recruitment, Secondment & Transfers, Ethics & Conduct and Security - Workplace Surveillance and Information Security ↗ Within the ASX group structure, most operational resources are provided by ASX Operations Limited, a subsidiary of ASX Limited, under a contractual Support Agreement. In the event that ASX Operations Limited became subject to external administration, to the extent permissible by law, provisions within the Support Agreement provide for the SSFs to retain the use of operational resources ↗ Major projects are overseen by the Enterprise Portfolio Steering Committee (EPSC), which is comprised of representatives of the Group Executive. The EPSC is tasked with ensuring that ASX has sufficient well-qualified project personnel. Project management of major projects is undertaken by the Project Management Office (PMO). For projects affecting core systems the PMO rates projects to ensure that they receive appropriate access to resources

PFMI Disclosure Framework | Principle 17

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 17 – KEY CONSIDERATION 7 An FMI should identify, monitor and manage the risks that key participants, other FMIs and service and utility providers might pose to its operations. In addition, an FMI should identify, monitor and manage the risks its operations might pose to other FMIs *FSS 14.5*	↗ SSF six monthly risk profiling considered the risk they pose to external parties and vice-versa ↗ The SSFs inform the RBA of major risks and dependencies as part of their active engagement programme
A participant of a SSF should have complementary operational and business continuity arrangements that are appropriate to the nature and size of the business undertaken by that participant. The SSF's rules and procedures should clearly specify operational requirements for participants *FSS 14.6*	↗ The SSFs consider BCP arrangements for their participants as part of the participant's admission and on-going operating rule requirements. The obligations are broadly similar across the SSFs, though may vary slightly (e.g. the BCP self-assessment form required to be completed as part of the admission process) given the differing nature of the facilities. Participants are required to have arrangements which are comparable to the nature and size of their business as a participant. As a guide, Participants should be in a position to be able to continue operating their settlement functions within 2-4 hours after a disruption ↗ The SSFs' Operating Rules have criteria for critical participants which specify operational requirements
A SSF should have a business continuity plan that addresses events posing a significant risk of disrupting operations, including events that could cause a wide-scale or major disruption. The plan should incorporate the use of a secondary site and should be designed to ensure that critical information technology systems can resume operations within two hours following disruptive events. Business continuity arrangements should provide appropriate redundancy of critical systems and appropriate mitigants for data loss. The business continuity plan should be designed to enable the SSF to facilitate settlement by the end of the day of the disruption, even in case of extreme circumstances. The SSF should regularly test these arrangements *FSS 14.7*	↗ SSF BCPs are in place, and include the recovery and resumption of critical operations within 2 hours following an incident. The BCPs identify and address events that pose a significant risk of disrupting operations, e.g. events such as technology failure, staff unavailability, pandemic, greater CBD inaccessibility and primary site and systems being unable to be used ↗ A 3-site model is in place with separate secondary sites for operations recovery and the data centre ↗ Technology recovery arrangements include inter- and intra-site system redundancy and data recovery ↗ Comprehensive BCM testing is conducted every 1-2 years ↗ Participants are involved in testing each time the SSFs roll out a major change or new system ↗ Connectivity testing with the clients is undertaken regularly. An external testing environment is in place

PFMI Disclosure Framework | Principle 17

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
A SSF should consider making contingency testing compulsory for the largest participants to ensure they are operationally reliable and have in place tested contingency arrangements to deal with a range of operational stress scenarios that may include impaired access to the SSF *FSS 14.8*	↗ The SSFs' Operating Rules include arrangements to ensure BCP arrangements are appropriate for the nature and size of the participants business. These are assessed at time of admission and periodically as part of ASX Compliance monitoring and enforcement procedures. The guidance issued by ASX Settlement on these obligations includes guidance that a participant should test its disaster recovery and business continuity arrangements at least once annually and as soon as practicable following a material change to its business or its disaster recovery business continuity arrangements
A SSF that relies upon, outsources some of its operations to, or has other dependencies with a related body, another FMI or a third-party service provider (for example, data processing and information systems management) should ensure that those operations meet the resilience, security and operational performance requirements of these SSF Standards and equivalent requirements of any other jurisdictions in which it operates *FSS 14.9*	↗ ASX has developed a set of standard clauses for inclusion in contracts with third-party critical service providers to the SSFs. The clauses seek to ensure that the agreements meet the resilience, security and operational performance requirements of the FSS ↗ In particular, the clauses allow the RBA to gather information from the service provider about the operation of critical functions and, in the event that the RBA concludes that the terms of the service provider agreement do not meet FSS requirements, the clauses require the service provider to negotiate acceptable new terms with ASX ↗ Furthermore, the standard clauses allow the RBA to take steps to remedy a breach to a contract with a critical service provider to the SSFs (or negotiate a replacement contract) if the contract may be terminated as a consequence of insolvency of an ASX entity ↗ ASX is applying these clauses to all new agreements with critical service providers, and has incorporated them into all of its key existing service agreements
All of a SSF's outsourcing or critical service provision arrangements should provide rights of access to the Reserve Bank to obtain sufficient information regarding the service provider's operation of any critical functions provided. A SSF should consult with the Reserve Bank prior to entering into an outsourcing or service provision arrangement for critical functions *FSS 14.10*	↗ ASX's standard clauses for agreements with critical service providers to the SSFs require the provider to grant reasonable access to the RBA in respect of information relating to its operation of a critical function. ASX is applying these clauses to all new agreements with critical service providers to the SSFs, and has incorporated them into agreements with key existing critical service providers to the SSFs

PFMI Disclosure Framework | Principle 17

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
A SSF should organise its operations, including any outsourcing or critical service provision arrangements, in such a way as to ensure continuity of service in a crisis and to facilitate effective crisis management actions by the Reserve Bank or other relevant authorities. These arrangements should be commensurate with the nature and scale of the SSF's operations *FSS 14.11*	↗ **Standard clauses in the SSF agreements with critical service providers require that those providers give the RBA notice of any intention to terminate the agreement as a consequence of SSF failure to pay fees, or in the event of the insolvency of a SSF or any other relevant ASX entity. This is intended to give the RBA an opportunity to take action to remedy the breach on behalf of the SSF or take other steps to ensure service provision** ↗ **The SSF's arrangements to ensure continuity of operations in the event of a crisis will be aligned to the new resolution regime for FMIs once introduced to Australian law**

PFMI Disclosure Framework | Principle 18

ASX

PRINCIPLE 18 – ACCESS AND PARTICIPATION REQUIREMENTS:

An FMI should have objective, risk-based and publicly disclosed criteria for participation, which permit fair and open access

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 18 – KEY CONSIDERATION 1 An FMI should allow for fair and open access to its services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk-related participation requirements *FSS 15.1*	↗ **In consultation with industry stakeholders and Australian regulators, ASX has developed a Code of Practice (the Code) for the clearing and settlement of cash equities (ASX Clear and ASX Settlement only) in Australia which commenced operation on 9 August 2013. Under the Code, ASX commits, among other things, to transparent and non-discriminatory terms of access to cash equities clearing and settlement services. Refer to section 4 of the Code for further details regarding standard access to these services** ↗ **The document: "A guide to becoming an ASX Participant" details the range of Participation choices available for prospective Participants, and can be found on the ASX website at: https://www.asxonline.com/intradoc-cgi/groups/public/documents/participantapplicationkitsfe/asx_022625.pdf** ↗ **Relevant Operating Rule oversight can be found at: www.asx.com.au/regulation/rules-guidance-notes-and-waivers.htm** • Refer ASX Settlement: » Section 4: Participation in the Settlement Facility » Section 6: Rights and Obligations of Participants • Refer Austraclear: » Regulations 2-5
PFMI 18 – KEY CONSIDERATION 2 An FMI's participation requirements should be justified in terms of the safety and efficiency of the FMI and the markets it serves, be tailored to and commensurate with the FMI's specific risks, and be publicly disclosed. Subject to maintaining acceptable risk control standards, an FMI should endeavour to set requirements that have the least restrictive impact on access that circumstances permit *FSS 15.2*	↗ **The document: "A guide to becoming an ASX Participant" details the range of Participation choices available for prospective Participants, and can be found on the ASX website at: https://www.asxonline.com/intradoc-cgi/groups/public/documents/participantapplicationkitsfe/asx_022625.pdf. Relevant Operating Rule oversight can be found at: www.asx.com.au/regulation/rules-guidance-notes-and-waivers.htm** • Refer ASX Settlement: » Section 4: Participation in the Settlement Facility » Section 6: Rights and Obligations of Participants • Refer Austraclear: » Regulations 2-5

PFMI Disclosure Framework | Principle 18

ASX

PFMI/FSS

PFMI 18 – KEY CONSIDERATION 3

An FMI should monitor compliance with its participation requirements on an ongoing basis and have clearly defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements

FSS 15.3

HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY

↗ **Relevant documents which are disclosed on the ASX website include:**

- Default Management:
  - » www.asx.com.au/documents/clearing/clearing-participant-default-an-overview.pdf
- Monitoring and Enforcing Compliance:
  - » Monitoring: www.asx.com.au/documents/about/operating-rules-monitoring.pdf
  - » Enforcing: www.asx.com.au/documents/about/operating-rules-enforcement.pdf

↗ **Relevant Operating Rule oversight can be found at: www.asx.com.au/regulation/rules-guidance-notes-and-waivers.htm**

- Refer ASX Settlement: Section 3
- Refer Austraclear: Regulation 6

PFMI Disclosure Framework | Principle 19

ASX

PRINCIPLE 19 – TIERED PARTICIPATION ARRANGEMENTS:

An FMI should identify, monitor and manage the material risks to the SSF arising from tiered participation arrangements

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 19 – KEY CONSIDERATION 1 An FMI should ensure that its rules, procedures and agreements allow it to gather basic information about indirect participation in order to identify, monitor and manage any material risks to the FMI arising from such tiered participation arrangements *FSS 16.1*	↗ The ASX operating rule framework allows ASX to request information on any activities covered under the ASX operating rule framework ↗ All non CCP related settlements between Participants in either ASX Settlement or Austraclear are on a bi-lateral basis (i.e. not novated to the SSF) and therefore there is no risk to either SSF
PFMI 19 – KEY CONSIDERATION 2 An FMI should identify material dependencies between direct and indirect participants that might affect the FMI *FSS 16.2*	↗ All non CCP related settlements between Participants in either ASX Settlement or Austraclear are on a bi-lateral basis (i.e. not novated to the SSF) and therefore, in the event of a default of one settlement participant, the transaction would be automatically cancelled
PFMI 19 – KEY CONSIDERATION 3 An FMI should identify indirect participants responsible for a significant proportion of transactions processed by the FMI and indirect participants whose transaction volumes or values are large relative to the capacity of the direct participants through which they access the FMI in order to manage the risks arising from these transactions *FSS 16.3*	↗ All non CCP related settlements between Participants in either ASX Settlement or Austraclear are on a bi-lateral basis (i.e. not novated to the SSF) and therefore, in the event of a default of one settlement participant, the transaction would be automatically cancelled

PFMI Disclosure Framework | Principle 19

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 19 – KEY CONSIDERATION 4 An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate *FSS 16.4*	↗ **All non CCP related settlements between Participants in either ASX Settlement or Austraclear are on a bi-lateral basis (i.e. not novated to the SSF) and therefore, in the event of a default of one settlement participant, the transaction would be automatically cancelled**

PFMI Disclosure Framework | Principle 20

ASX

PRINCIPLE 20 – FMI LINKS:

An FMI that establishes a link with one or more FMIs should identify, monitor and manage link-related risks

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 20 – KEY CONSIDERATION 1 Before entering into a link arrangement, and on an ongoing basis once the link is established, an FMI should identify, monitor and manage all potential sources of risk arising from the link arrangement. Link arrangements should be designed such that each FMI is able to observe the other PFMI *FSS 17.1*	↗ **ASX Settlement has a link to ASX Clear in order to settle novated cash equity market transactions. ASX Settlement is not exposed to financial risk through this link and the operational risk inherent in the link is managed under ASX's group-wide framework for operational risk management** ↗ **Austraclear maintains three links:** • ASX Clear, for settlement of cash margins; • ASX Clear (Futures), for settlement of cash margins, for lodgement of AUD-denominated non-cash collateral, and for settlement of 90-day bank bill futures; and, • Clearstream, in relation to Euro entitlements managed in Austraclear • In addition, Austraclear has links with ASX Collateral Management Services Pty Limited which has links with Clearstream, in relation to ASX's Collateral Management Service ↗ **Austraclear is not exposed to financial risk through these links and the operational risk inherent in the links is managed under ASX's group-wide framework for operational risk management**
PFMI 20 – KEY CONSIDERATION 2 A link should have a well-founded legal basis, in all relevant jurisdictions, that supports its design and provides adequate protection to the FMIs involved in the link *FSS 17.2*	↗ **The legal basis of the link is supported by contractual arrangements including, where applicable, the operating rules of the FMI**
PFMI 20 – KEY CONSIDERATION 3 Linked CSDs should measure, monitor, and manage the credit and liquidity risks arising from each other. Any credit extensions between CSDs should be covered fully with high-quality collateral and be subject to limits *NO CORRESPONDING FSS*	↗ **Not applicable – CSD arrangements do not involve credit or liquidity requirements**

PFMI Disclosure Framework | Principle 20

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 20 – KEY CONSIDERATION 4 Provisional transfers of securities between linked CSDs should be prohibited or, at a minimum, the retransfer of provisionally transferred securities should be prohibited prior to the transfer becoming final *NO CORRESPONDING FSS*	↗ **Not applicable – CSD arrangements do not involve the transfer of securities**
PFMI 20 – KEY CONSIDERATION 5 An investor CSD should only establish a link with an issuer CSD if the arrangement provides a high level of protection for the rights of the investor CSD's participants *NO CORRESPONDING FSS*	↗ **This obligation is not applicable to the SSFs**
PFMI 20 – KEY CONSIDERATION 6 An investor CSD that uses an intermediary to operate a link with an issuer CSD should measure, monitor, and manage the additional risks (including custody, credit, legal, and operational risks) arising from the use of the intermediary *NO CORRESPONDING FSS*	↗ **This obligation is not applicable to the SSFs**

PFMI Disclosure Framework | Principle 20

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
Where relevant to its operations in Australia, a SSF should consult with the Reserve Bank prior to entering into a link arrangement with another FMI *FSS 17.3*	↗ **The RBA has been involved in the consultation and design of ASX's collateral management service (which has expanded on links with Clearstream) which went live (technically) in July 2013**
A SSF operating a central securities depository that links to another central securities depository should measure, monitor and manage the credit and liquidity risks arising from such links. Any credit extended to the linked central securities depository should be covered fully with high-quality collateral and be subject to limits *FSS 17.4*	↗ **Not applicable – CSD arrangements do not involve credit or liquidity requirements**
Provisional transfers of securities between a SSF operating a central securities depository and another central securities depository should be prohibited or, at a minimum, the retransfer of provisionally transferred securities should be prohibited prior to the transfer becoming final *FSS 17.5*	↗ **Not applicable – CSD arrangements do not involve transfer if securities**

PFMI Disclosure Framework | Principle 20

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 20 – KEY CONSIDERATION 7 & 8 *NO CORRESPONDING FSS*	Applicable to CCPs only
PFMI 20 – KEY CONSIDERATION 9 *NO CORRESPONDING FSS*	Applicable to Trade Repositories only

PFMI Disclosure Framework | Principle 21

ASX

PRINCIPLE 21 – EFFICIENCY AND EFFECTIVENESS :

An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 21 – KEY CONSIDERATION 1 An FMI should be designed to meet the needs of its participants and the markets it serves, in particular, with regard to choice of a clearing and settlement arrangement; operating structure; scope of products cleared, settled, or recorded; and use of technology and procedures *NO CORRESPONDING FSS*	↗ ASX Settlement and Austraclear provide a range of participation choices to suit the market. They also tailor the application process and arrangements to the services available ↗ Information on becoming an ASX Settlement Participant is included in, "A Guide to Becoming an ASX Participant" on the ASX website ↗ Information on Austraclear admission and participation and on becoming an Austraclear Participant is included here: www.asx.com.au/settlement/asx-austraclear.htm
PFMI 21 – KEY CONSIDERATION 2 An FMI should have clearly defined goals and objectives that are measurable and achievable, such as in the areas of minimum service levels, risk management expectations, and business priorities *NO CORRESPONDING FSS*	↗ In terms of service level agreements, ASX Settlement has a minimum availability target of 99.8 per cent and a minimum capacity headroom target of 50 per cent of total capacity, while Austraclear has a 99.9 per cent minimum availability target stipulated in Austraclear's 'Step-in and Service Agreement' with the RBA ↗ In terms of risk management expectations, ASX Settlement and Austraclear are included in ASX Group's approach to enterprise-wide risk management ↗ In terms of business priorities, ASX Settlement and Austraclear are included in ASX Group's business plan/strategy
PFMI 21 – KEY CONSIDERATION 3 An FMI should have established mechanisms for the regular review of its efficiency and effectiveness *NO CORRESPONDING FSS*	↗ The business plan/strategy noted above is reviewed annually. Customer feedback – from regular customer engagement – also provides a regular review of ASX Settlement and Austraclear's efficiency and effectiveness. Finally, ASX Settlement and Austraclear are subject to annual review by both ASIC and the RBA

PFMI Disclosure Framework | Principle 22 & 23

ASX

PRINCIPLE 22 – COMMUNICATION PROCEDURES AND STANDARDS:

An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 22 – KEY CONSIDERATION 1 An FMI should use, or at a minimum accommodate, internationally accepted communication procedures and standards *NO CORRESPONDING FSS*	↗ **Austraclear uses internationally accepted standards (SWIFT); however, CHESS uses proprietary messaging protocols. While, CHESS may – dependent on customer feedback under the Code of Practice - be amended so that it also offers the use of SWIFT ISO 20022 standards, such a move needs to be balanced against the impact on the cash equity industry of moving away from CHESS messaging, which is embedded in brokers' back office systems**

PRINCIPLE 23 – DISCLOSURE OF RULES, KEY PROCEDURES AND MARKET DATA:

An FMI should have clear and comprehensive rules, policies and procedures and should provide sufficient information and data to enable participants to have an accurate understanding of the risks they incur by participating in the SSF. All relevant rules and key policies and procedures should be publicly disclosed

PFMI 23 – KEY CONSIDERATION 1 An FMI should adopt clear and comprehensive rules, policies and procedures that are fully disclosed to participants. Relevant rules and key policies and procedures should also be publicly disclosed *FSS 18.1*	↗ **Clear and comprehensive rules, policies and procedures are publicly disclosed in the following places:** www.asx.com.au/regulation/rules/asx-settlement-operating-rules.htm & www.asx.com.au/regulation/rules/austraclear-regulations.htm

PFMI Disclosure Framework | Principle 23

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 23 – KEY CONSIDERATION 2 An FMI should disclose clear descriptions of the system's design and operations, as well as the FMI's and participants' rights and obligations, so that participants can assess the risks they would incur by participating in the FMI *FSS 18.2*	↗ Clear descriptions of the SSFs' systems, operations and services, together with descriptions of participation in the SSFs are disclosed in the following places: www.asx.com.au/services/settlement/asx-settlement.htm & www.asx.com.au/services/settlement/austraclear.htm ↗ Refer also to "System design and operations" on page 8 of this document
PFMI 23 – KEY CONSIDERATION 3 An FMI should provide all necessary and appropriate documentation and training to facilitate participants' understanding of the FMI's rules, policies and procedures and the risks they face from participating in the FMI *FSS 18.3*	↗ As above
A SSF should provide all necessary and appropriate documentation and training to facilitate participants' understanding of the SSF's rules, policies and procedures and the risks they face from participating in the SSF *FSS 18.4*	↗ Regular forums and workshops are held with Participants to communicate current and upcoming developments ↗ ASX Operations provides a helpdesk for Participants, covering operational hours

PFMI Disclosure Framework | Principle 23

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
PFMI 23 – KEY CONSIDERATION 4 An FMI should publicly disclose its fees at the level of the individual services it offers as well as its policies on any available discounts. The FMI should provide clear descriptions of priced services for comparability purposes *NO CORRESPONDING FSS*	↗ Fees at the level of individual services offered are disclosed in the following places: https://www.asxonline.com/intradoc-cgi/groups/participant_services/documents/information/asx_015359.pdf www.asx.com.au/documents/settlement/Austraclear-Issue-Administration-Fee-Schedule.pdf www.asx.com.au/documents/professionals/fee_schedule_acsl.pdf www.asx.com.au/documents/professionals/fee_schedule_acsl.pdf
PFMI 23 – KEY CONSIDERATION 5 An FMI should complete regularly and disclose publicly responses to the CPMI-IOSCO Disclosure Framework for Financial Market Infrastructures. An FMI also should, at a minimum, disclose basic risk and activity data *FSS 18.5*	↗ ASX's response to the CPMI-IOSCO Disclosure Framework for Financial Market Infrastructures is updated periodically and available on the ASX website at: www.asx.com.au/documents/regulation/pfmi_disclosure_framework.pdf

DISCLOSURE OF MARKET DATA BY TRADE REPOSITORIES :

A TR should provide timely and accurate data to relevant authorities and the public in line with their respective needs

This PFMI is not applicable to ASX's SSFs

PFMI Disclosure Framework | FSS 19

ASX

FSS 19 – REGULATORY REPORTING:
A SSF should inform the Reserve Bank in a timely manner of any events or changes to its operations or circumstances that may materially impact its management of risks or ability to continue operations. A SSF should also regularly provide information to the Reserve Bank regarding its financial position and risk controls on a timely basis

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
A SSF should inform the Reserve Bank as soon as reasonably practicable if: a. (a) it breaches, or has reason to believe that it will breach: i. i. a SSF Standard; or ii. ii. its broader legislative obligation to do, to the extent that it is reasonably practicable to do so, all things necessary to reduce systemic risk; b. it becomes subject to external administration, or has reasonable grounds for suspecting that it will become subject to external administration; c. a related body to the SSF becomes subject to external administration, or if the SSF has reasonable grounds for suspecting that a related body will become subject to external administration; d. a participant becomes subject to external administration, or if the SSF has reasonable grounds for suspecting that a participant will become subject to external administration; e. a participant fails to meet its obligations under the SSF's risk control requirements or has its participation suspended or cancelled because of a failure to meet the SSF's risk control requirements; f. it fails to enforce any of its own risk control requirements; g. it plans to make significant changes to its risk control requirements or its rules, policies and procedures;	If any of these matters arose, ASX would notify the RBA as soon as reasonably practicable following an incident Identification and monitoring measures include: **a. Ongoing monitoring; formal semi-annual review of FSS compliance obligations** **b. The SSFs' financial position and activities are reviewed with the Settlement Boards every quarter. Externally audited Financial Statements are produced annually** **c. ASX Group, including related entities' financial position is reviewed quarterly by the ASXL Board and the ARC. Externally audited financial statements are produced annually** **d. A Participant Incident Response Committee (PIRC) will be convened and relevant information will be communicated to regulators. Updates will continue to be provided as further information becomes available** **e. A PIRC will be convened and relevant information will be communicated to regulators. Updates will continue to be provided as further information becomes available** **f. Breach of risk controls are escalated to senior risk and operational management. The severity of the breach will determine as to immediate or periodic reporting to regulators** **g. Discussion at the quarterly RBA Executive Liaison meeting and/or the RBA Operations meeting**

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
h. it or a service it relies on from a third party or outsourced provider experiences a significant operational disruption, including providing the conclusions of its post-incident review;	**h. Any incidents are escalated to senior operational and technical management. Incident reports may be provided to regulators. The severity of the disruption will determine as to immediate or periodic reporting to regulators**
i. any internal audits or independent external expert reviews are undertaken of its operations, risk management processes or internal control mechanisms, including providing the conclusions of such audits or reviews;	**i. Reviews are provided to regulators, upon request**
j. its operations or risk controls are affected, or are likely to be affected, by distress in financial markets;	**j. Breach, or the potential breach, of risk controls are escalated to senior risk and operational management. The severity will determine as to immediate or periodic reporting to regulators**
k. it has critical dependencies on utilities or service providers, including providing a description of the dependency and an update if the nature of this relationship changes;	**k. Discussion at the RBA quarterly liaison meeting and/or the RBA operational meeting**
l. it proposes to grant a security interest over its assets (other than a lien, right of retention or statutory charge that arises in the ordinary course of business);	**l. No such interests exist**
m. it proposes to incur or permit to subsist any loans from participants or members unless such loans are subordinated to the claims of all other creditors of the SSF; or	**m. No such arrangements exist**
n. any other matter arises which has or is likely to have a significant impact on its risk control arrangements (see also SSF Standards 1.6, 14.10 and 17.3)	**n. The severity will determine as to immediate or periodic reporting to regulators** • In addition to the above: » information is discussed with the RBA at the quarterly Austraclear meetings and ad hoc meetings and presentations, as required; and, » the RBA Austraclear Step-In Agreement and the Austraclear System Business Operations Plan contain certain provisions relating to regulatory reporting
FSS 19.1	

PFMI Disclosure Framework | FSS 19

ASX

PFMI/FSS	HOW ASX SECURITIES SETTLEMENT FACILITIES COMPLY
An SSF should also provide to the Reserve Bank, on a timely basis: a. (a) audited annual accounts; b. (b) management accounts on a regular basis, and at least quarterly; c. (c) risk management reports, including detailed information on margining and stress testing, on a regular basis, and at least quarterly; d. (d) periodic activity, risk and operational data, as agreed with the Reserve Bank; and, e. (e) any other information as specified by the Reserve Bank from time to time *FSS 19.2*	All of the required reports and data are on the deliverable lists of responsible executives within ASX **a. Annually audited licensed accounts for ASX Settlement and Austraclear are provided to the RBA** **b. Management accounts for ASX Settlement and Austraclear are provided to the RBA quarterly** **c. Not applicable to the SSFs** **d. FSS-related data is provided to the RBA quarterly** **e. Information is discussed with the RBA at the quarterly Executive Liaison meetings, quarterly Operations meetings, quarterly Austraclear meetings, and ad hoc meetings and presentations, as required**