

B2.2 Austraclear

Austraclear is a wholly owned subsidiary of ASX Settlement Corporation Limited, itself a wholly owned subsidiary of ASX Limited. It provides settlement and depository services for debt securities, and settlement services for derivatives traded on the ASX 24 market and for margin payments in ASX Clear and ASX Clear (Futures).

Standard 1: Legal basis

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

Rating: Observed

Austraclear is a separate legal entity within the ASX Group that solely provides settlement and related depository services (SSF Standard 1.1). Austraclear's legal basis is founded on clear and understandable rules that operate within the framework of relevant laws and regulations (SSF Standards 1.2, 1.3). The certainty of this legal basis in relevant jurisdictions is reinforced by supporting legislation, including Austraclear's protection as a real-time gross settlement (RTGS) system under the *Payment Systems and Netting Act 1998* (PSNA), and is subject to periodic review by ASX Legal (SSF Standards 1.2, 1.5). 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 (SSF Standard 1.4). ASX has not identified any material risks arising from potential conflicts of law relating to the operations of Austraclear.

Based on this information, the Reserve Bank's assessment is that Austraclear has observed the requirements of SSF Standard 1 during the 2012/13 Assessment period. The legal basis of Austraclear is described in further detail under the following sub-standards.

1.1 A securities settlement facility 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 securities settlement facility.

Austraclear is a wholly owned subsidiary of ASX Settlement Corporation Limited, which is itself a wholly owned subsidiary of ASX Limited. As a separate legal entity, Austraclear's securities settlement 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.

Austraclear's services are limited to settlement and related depository services for debt securities, and settlement services for derivatives traded on the ASX 24 market and for margin payments in ASX Clear and ASX Clear (Futures), in accordance with the Austraclear Regulations and Procedures. Accordingly, Austraclear does not provide any services that have a distinct profile from, or pose additional risks to, its activity of operating an SSF.

ASX Collateral

ASX Collateral Management Services Pty Limited (ASX Collateral), a related legal entity within the ASX Group and a wholly owned subsidiary of ASX Operations Pty Limited, launched a centralised collateral management service (CCMS) in July 2013. Exchange of title to debt securities under management occurs in Austraclear. The Austraclear Regulations were

amended in July to allow the offering of this service, and ASX Collateral is expected to be admitted as a Special Purpose Participant in September 2013.

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

Legal basis

Austraclear's settlement arrangements for transactions entered into by its participants require a high degree of legal certainty. Key components of the legal framework under which the SSF operates are:

- Austraclear 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.
- The legal basis for Austraclear's operations is set out in the Austraclear Regulations and Procedures. Under section 822B of the Corporations Act, these Regulations have effect as a contract under seal between: Austraclear and each of its participants; each participant and each other participant; and each participant and each issuer. The Regulations and Procedures set out the rights and obligations of participants and Austraclear, including in the event of default or suspension.
- The finality of settlements undertaken by Austraclear is protected by its approval, and the approval of the Reserve Bank Information and Transfer System (RITS), as an RTGS system under Part 2 of the PSNA (see SSF Standard 1.5).

The legal basis of Austraclear's activities is reviewed by ASX Legal whenever there are material amendments to the Regulations or Procedures.

ASX Collateral

The legal basis for the operation of the CCMS in Austraclear and the status of ASX Collateral as a Special Purpose Participant is set out in the Austraclear Regulations. Legal arrangements between ASX Collateral and customers of the CCMS (which must be Full Participants) are set out in standard-form Collateral Management Service Agreements (CMSAs). ASX has obtained a legal opinion in relation to the use of CMSAs that has identified no material legal risks.

The Austraclear Regulations have been amended to provide for settlement instructions to be submitted to Austraclear by a Collateral Manager admitted as a Special Purpose Participant and acting as agent for its customers, which must be admitted as Full Participants.

The amendments to the Regulations also introduce new account types to hold securities given as collateral in the CCMS. The new account types are Transferred Collateral Accounts, which hold securities given as collateral by way of outright transfer (e.g. under a repurchase agreement), and Secured Collateral Accounts, which hold securities given as collateral by way of granting a security interest. Each of the new account types is controlled by the Collateral Manager – securities can only be transferred into or out of Transferred Collateral Accounts and Secured Collateral Accounts by the Collateral Manager appointed by the account holder (and in certain circumstances, by Austraclear). Securities held in a Transferred Collateral Account by a collateral receiver may, nevertheless, be re-used within the Collateral Management System (unless re-use has been restricted by agreement of the collateral giver and collateral receiver). Since this structure seeks to preserve contractual rights contained in

bilateral Principal Agreements, CMSAs and Austraclear Regulations contemplate rights and obligations that may be triggered by an event of default under a Principal Agreement. Neither ASX Collateral nor Austraclear make any determination in that regard, but upon notification of an event of default, ASX Collateral would, in accordance with the CMSAs:

- in the case of a default by the collateral giver, act on instructions of the collateral receiver in respect of the relevant collateral
- in the case of a default by the collateral receiver, act on matched instructions of the collateral giver and the collateral receiver in respect of the relevant collateral.

As with any action that may take place under existing bilateral arrangements, Austraclear plays no part in the process. Nevertheless, the Austraclear Regulations provide an indemnity to Austraclear in respect of any loss or claim arising from actions taken under such circumstances.

In providing for the CCMS, a new routine method of settlement has been established in Austraclear: delivery-versus-delivery. Under this method, the completion of settlement of a collateral substitution is conditional on the delivery of both security legs of the substitution, thereby ensuring that principal risk is eliminated. This method of settlement did not require a change to Austraclear Regulations since settlement is defined in terms of the exchange of elements (which may be either cash or securities).

As a Special Purpose Participant of Austraclear, ASX Collateral is required to comply with requirements imposed on participants by the Regulations and Procedures. In addition, ASX Collateral is subject to specific requirements placed on Special Purpose Participants under the Austraclear Regulations, including in respect of operational resilience and the maintenance of documented step-in arrangements with the Bank.

The standard form CMSAs specify the nature of services that the Collateral Manager provides to users. For this purpose, ASX Collateral has obtained an Australian Financial Services Licence, permitting it to arrange dealings in securities. These agreements are between ASX Collateral and users of the collateral service; Austraclear is not a party to these contracts.

Rights and interests

The rights and interests of Austraclear, its participants and, where relevant, its participants' customers in securities deposited with Austraclear are defined in Austraclear's Regulations and Procedures (see SSF Standard 9).

1.3 A securities settlement facility 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 by rules and those which may be considered under the procedures. Rule changes are subject to a disallowance process.

Austraclear's Regulations and Procedures are supplemented with explanatory material, published on ASX's public website and ASX's restricted participant website, to facilitate understanding by participants and prospective participants of the risks they face through participation in the system. Publicly available material includes high-level descriptions of Austraclear's operations and settlement process, the Austraclear system (including test

system), business continuity arrangements, classes of Austraclear participant, technical documentation, and fees and charges.

There is a clear process for changing Austraclear's Regulations and Procedures. Proposed rule changes may be submitted informally to ASIC, which in consultation with the Bank will advise ASX of any regulatory concerns. Formal submission of the proposed changes to ASIC triggers a 28-day 'disallowance' period (referred to above), during which the Minister may choose to disallow the rule 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.

1.4 A securities settlement facility 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 Austraclear and the facility's protection as an approved RTGS system under the PSNA – see also SSF 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 the Principles (see SSF Standard 18.2).¹

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

For significant new services, Austraclear may seek independent legal opinions in respect of relevant aspects, or 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 the legal efficacy of new Regulations.

1.5 A securities settlement facility 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 securities settlement facility under such rules and procedures will not be voided, reversed or subject to stays, including in the event that the securities settlement facility enters into external administration or that one or more of its participants or a settlement bank defaults or is suspended.

Settlement finality

The finality of Austraclear's settlement process is protected by:

- its approval under Part 2 of the PSNA. This approval protects the finality of payments or securities settlements made through Austraclear in the event of a participant entering external administration (see SSF Standard 7.1).
- the approval of RITS as an RTGS system under Part 2 of the PSNA (see SSF Standard 8). This approval protects payments between participants that are 'Participating Banks' from being voided in the case of a Participating Bank entering external administration.

¹ Available at <http://www.asxgroup.com.au/media/pfmi_disclosure_framework.pdf>.

Enforceability of ASX rules while under external administration

ASX Legal has analysed the legal enforceability of Austraclear's Regulations upon the SSF's entry into external administration, and has identified no material legal risk to enforceability.

- 1.6 A securities settlement facility conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflicts of law across jurisdictions. A securities settlement facility 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 Austraclear include subsidiaries and branches of entities that are based in foreign countries, the Regulations are governed by Australian law and require that all participants of Austraclear submit to the exclusive jurisdiction of New South Wales courts. ASX Legal's analysis of potential conflicts of law across jurisdictions has identified no material legal risk.

Standard 2: Governance

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

Rating: Observed

Austraclear 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. Austraclear also acknowledges public policy objectives directed at financial market and payments system integrity, as well as the interests of customers and other stakeholders (SSF Standard 2.1). 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 (see 'ASX Group Structure' in Appendix B). Board and committee charters document Board roles and lines of responsibility and accountability (SSF 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 Austraclear Board includes directors appointed for their expertise in clearing and settlement matters (SSF 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 (SSF Standard 2.5). ASX maintains a clear and documented risk management framework subject to regular internal and external review (SSF 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 (SSF Standard 2.7). ASX utilises formal and informal consultation processes to ensure that the design and decisions of Austraclear reflect the interests of participants and other stakeholders (SSF 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, requiring staff and directors to act in the best interests of each facility as appropriate (SSF Standard 2.9). The Bank will continue to work with Austraclear to better understand these arrangements.

Based on this information, the Bank's assessment is that Austraclear has observed the requirements of SSF Standard 2 during the 2012/13 Assessment period. Details of Austraclear's governance arrangements are described under the following sub-standards.

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

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

Austraclear's objectives recognise the public interest. These objectives are laid out generally 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 (dealing with licensing of CS facilities). These include that Austraclear, to the extent that 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 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 financial 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.

Austraclear's 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 SSF Standard 2.8). Consultations and responses to consultations are made available on ASX's 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 securities settlement facility 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 Austraclear are documented on its public website. This documentation includes the Charters of the ASX Limited Board, the CS Boards (including that of Austraclear), 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 settlement facilities; namely the Managing Director and CEO, and the Executive responsible for settlement risk. Profiles of 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 *Principles for Financial Market Infrastructures* (Principles) developed by the Committee on Payment and Settlement Systems (CPSS) and the Technical Committee of the International Organization of Securities Commissions (IOSCO); group and business structure, including an organisational chart showing senior group executives; risk management policies (in summary form); and details of business units, including those within Risk.²

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 Austraclear, 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 securities settlement facility'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 the oversight of risks faced by Austraclear lies with the ASX Limited Board and the Austraclear Board. The ASX Limited Board is responsible for the overall business strategy of the ASX Group, and oversight of enterprise risk management policy. The ASX Limited Board Charter delegates certain responsibilities to the Austraclear Board, including the review and oversight of Austraclear's settlement-related risk, and its compliance with the FSS. The CS Boards' Charter elaborates on other roles and responsibilities of the Austraclear 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.

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 individual 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. If there is a change in a director's material personal interests, the director

² Risk is ASX's risk management area – see 'ASX Group Structure' in Appendix B.

must notify that change at the next meeting of the CS Boards. If there is a real and sensible possibility of a conflict of interest and duty on a matter being voted on 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).

The ASX Limited Board currently has nine members, comprising the ASX CEO and eight 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 Austraclear Board comprises one executive director (the ASX CEO) and seven non-executive directors. Four of the non-executive directors are also members of the ASX Limited Board, while the remaining three, including the Chairman, 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. The other CS Boards – ASX Clear, ASX Clear (Futures) and ASX Settlement – have the same directors as the Austraclear Board. The Austraclear Board meets regularly (six times in the Assessment period) and receives detailed reports on Austraclear's business and operations, risk management and financial performance.

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 ASX's 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 ASX's website.

Selection, succession planning and training for ASX Limited and CS 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 Austraclear 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 and the CS Boards at appropriate intervals. The ASX Limited Board reviews its fees regularly to ensure that 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 takes advice from an external remuneration consultant. The process involves benchmarking against a group of peer companies. The last fee review was effective 1 July 2008.

- 2.5 The roles and responsibilities of management should be clearly specified. A securities settlement facility'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 securities settlement facility. 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. This is 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 Executive General Manager, Operations (EGM, Operations). The Managing Director and CEO has responsibility for the overall operational and business management and profit performance of ASX, while the EGM, Operations is responsible for the overall settlement risk management of the CS facilities and for ensuring that the SSFs meet regulatory obligations placed on them. The EGM, Operations has a direct reporting line to the CS Boards.

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 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 delegated responsibility to the Committee for compensation arrangements and performance management processes relating to the CRO and the EGM, Operations. The CS Boards provide input on the setting of Key Performance Indicators and performance outcomes for senior management responsible for clearing and settlement risks.

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 People and Development 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 securities settlement facility'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 SSF 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. Board feedback is incorporated before risk policies and standards are approved.

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

- Detailed reporting to the CS Boards occurs on a quarterly basis on the implementation of 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. ASX is currently formalising its Settlement Risk Policy Framework in order to establish a consistent structure for the development, governance and review of settlement risk policies and standards. The formalised Framework is expected to be presented to the CS Boards for approval by the end of 2013, with existing policies and standards to be formally documented within that Framework following Board approval.
- 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 business units, 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 business units.
- Individual business units 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 business unit 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.

There are three functional units with at least some responsibility for settlement risk management: Clearing & Settlement Operations, Listings Operations and Participants Compliance. In addition there are a number of units which have input into managing settlement risk: Clearing Risk Management, Clearing Risk Policy, Internal Audit, Enterprise Risk, and Legal.

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.

2.7 A securities settlement facility's operations, risk management processes, internal control mechanisms and accounts should be subject to internal audit and, where appropriate, periodic independent expert reviews. 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 key operational and risk management processes, and internal control mechanisms 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 unit is a separate unit within ASX that reports to the CRO for administrative purposes, and the Audit and Risk Committee and Managing Director and CEO for audit purposes. Its 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 Internal Audit unit has a well-defined reporting structure, which includes reports to the CRO, the Audit and Risk Committee, and Managing Director and CEO. 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 unit 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 audit was carried out in 2011, with the next assessment scheduled for 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 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 securities settlement facility'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.**

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.

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 (see SSF Standard 2.1).

The views of participants and other stakeholders are sought through formal and informal means. Participants' views may be gathered through the induction program for new participants, as well as ongoing participant liaison and compliance checks. Austraclear routinely conducts stakeholder consultations when considering major changes to existing services or new service offerings, such as the introduction of ASX Collateral.

- 2.9 A securities settlement facility 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 securities settlement facility 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 securities settlement facility 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 the potential for shared directorships to create conflicts between ASX's group-wide commercial interests and the risk management function of the CS facilities to be low. 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 Bank intends to work with ASX to understand better the arrangements in place for conflict handling.

Standard 3: Framework for the comprehensive management of risks

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

Rating: 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 (SSF Standard 3.1). 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 (SSF Standards 3.2, 3.3). 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 (SSF Standard 3.4).

The Bank notes the following steps that Austraclear should take to strengthen its observance of SSF Standard 3:

- In order to meet the requirements of SSF Standard 3.5, which comes into effect on 31 March 2014, prepare an appropriate recovery plan based on addressing identified scenarios that may threaten Austraclear's ability to provide its critical services as a going concern. This plan should be consistent with forthcoming CPSS-IOSCO guidance on recovery planning.

Based on this information, and noting that SSF Standard 3.5 is not yet in force, the Bank's assessment is that Austraclear has observed the requirements of SSF Standard 3 during the 2012/13 Assessment period. Austraclear's risk management framework is described in further detail under the following sub-standards.

3.1 A securities settlement facility 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 securities settlement facility. This risk management framework should be subject to periodic review.

Identification of risk

ASX's high-level framework for risk management is outlined in its Enterprise Risk Management Policy. This policy divides risks identified by ASX into two broad groupings: 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 SSF 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

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.

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 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. The CS Boards (see 'ASX Group Structure' in Appendix B) have oversight of risk policies relating to settlement activities.

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 (see SSF Standard 3.1).

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 PWC in 2011.

To date, the Enterprise Risk Management Policy has been reviewed by the Audit and Risk Committee approximately every three years, with the committee informed of material changes in the interim. A review occurred in August and future reviews will then move to a two year cycle.

3.2 A securities settlement facility 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.

Austraclear does not place financial obligations on its participants. Austraclear is not a participant or guarantor to any transaction submitted for settlement through Austraclear and is not directly exposed to credit or liquidity risk. The delivery-versus-payment (DvP) model 1 settlement process does not expose participants to credit risk (see SSF Standard 10.2). Transactions that are not settled successfully on the day that they are submitted are removed from the settlement queue at close of business without penalty. Operational and other participation requirements placed on participants are discussed under SSF Standards 14.6 and 15.2.

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

Austraclear may apply sanctions to, or place additional requirements on, participants that fail to comply with its Regulations. Participants may ultimately be required to seek alternative settlement arrangements.

3.4 A securities settlement facility 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.

Austraclear 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 SSF Standard 3.1), and its processes for identifying risks associated with new activities. For the latter, 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 SSF Standards 12.1 and 14.4).

For instance, ASX has identified potential risks to its operational activities arising from participants outsourcing their back-office processing offshore. Austraclear has also identified interdependencies with service providers, notably Clearstream Banking S.A. (Clearstream) for key components of the ASX Collateral service. Austraclear's response to these interdependencies is outlined in SSF Standard 14.5.

Interdependencies with ASX Clear and ASX Clear (Futures) for the settlement of margin and other payment obligations are managed within the context of ASX Group's broader risk management framework.

- 3.5 A securities settlement facility 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 securities settlement facility should prepare appropriate plans for its recovery or orderly wind-down based on the results of that assessment. Where applicable, a securities settlement facility should also provide relevant authorities with the information needed for purposes of resolution planning.**

SSF Standard 3.5 comes into effect on 31 March 2014.

Austraclear has begun work to develop its recovery plans and intends to further articulate these plans following the release of final CPSS-IOSCO guidance on recovery planning, expected in late 2013.

Standard 4: Credit risk

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

Rating: Not applicable

Austraclear does not extend credit to participants or provide a settlement guarantee. Accordingly, Austraclear does not assume credit risk as principal.

Based on this information, the Bank has concluded that SSF Standard 4 does not apply to Austraclear.

- 4.1 A securities settlement facility should establish a robust framework to manage its credit exposures to its participants and the credit risks arising from its settlement processes. Credit exposures may arise from current exposures, potential future exposures, or both.**

Not applicable to Austraclear.

- 4.2 A securities settlement facility 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 securities settlement facility 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.

Not applicable to Austraclear.

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

Not applicable to Austraclear.

- 4.4 A securities settlement facility 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) securities settlement facility 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.**

Not applicable to Austraclear.

- 4.5 A securities settlement facility 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 securities settlement facility. These rules and procedures should address how potentially uncovered credit losses would be allocated, including the repayment of any funds a securities settlement facility may borrow from liquidity providers. These rules and procedures should also indicate the securities settlement facility's process to replenish any financial resources that the securities settlement facility may employ during a stress event, so that the securities settlement facility can continue to operate in a safe and sound manner.**

SSF Standard 4.5 comes into effect on 31 March 2014. The requirements of this sub-standard will not be applicable to Austraclear.

Standard 5: Collateral

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

Rating: Not applicable

Since Austraclear does not assume credit risk as principal (see SSF Standard 4), it does not collect collateral from participants.

Based on this information, the Bank has concluded that SSF Standard 5 does not apply to Austraclear.

- 5.1 A securities settlement facility should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity and market risks.**

Not applicable to Austraclear.

- 5.2** In determining its collateral policies, a securities settlement facility should take into consideration the broad effect of these policies on the market. As part of this, a securities settlement facility should consider allowing the use of collateral commonly accepted in the relevant jurisdictions in which it operates.
- Not applicable to Austraclear.
- 5.3** A securities settlement facility should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions.
- Not applicable to Austraclear.
- 5.4** In order to reduce the need for procyclical adjustments, a securities settlement facility should establish stable and conservative haircuts that are calibrated to include periods of stressed market conditions, to the extent practicable and prudent.
- Not applicable to Austraclear.
- 5.5** A securities settlement facility should avoid concentrated holdings of certain assets where this would significantly impair the ability to liquidate such assets quickly without significant adverse price effects.
- Not applicable to Austraclear.
- 5.6** A securities settlement facility 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.
- Not applicable to Austraclear.
- 5.7** A securities settlement facility should use a collateral management system that is well designed and operationally flexible.
- Not applicable to Austraclear.

Standard 6: Liquidity risk

A securities settlement facility should effectively measure, monitor and manage its liquidity risk. A securities settlement facility 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 securities settlement facility in extreme but plausible market conditions.

Rating: Observed

Austraclear settlements are conducted in real time on a DvP model 1 basis, minimising the liquidity risk exposure for its participants (SSF Standard 6.1). Austraclear does not assume liquidity risk as principal through its settlement process (SSF Standards 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8).

On the basis of this information, the Bank's assessment is that Austraclear has observed the requirements of SSF Standard 6 during the 2012/13 Assessment period.

- 6.1 A securities settlement facility 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.**

Austraclear conducts its securities settlements on a DvP model 1 basis in real time (see SSF Standard 10). By using such a settlement mechanism, Austraclear minimises the liquidity impact of a participant default on other participants. The direct liquidity impact of a participant default would affect only that participant's counterparties for trades struck bilaterally under over-the-counter (OTC) arrangements. Such counterparties are able to manage their liquidity risk within their bilateral framework for counterparty risk management.

- 6.2 A securities settlement facility 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.**

As Austraclear does not assume liquidity risk as principal, and its use of DvP model 1 settlement limits the liquidity impact of a participant default on non-defaulting participants, there are no relevant settlement and funding flows for Austraclear to measure and monitor.

- 6.3 A securities settlement facility 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.**

As Austraclear does not assume liquidity risk as principal it does not need to maintain liquid resources to cover payment obligations.

- 6.4 For the purpose of meeting its minimum liquid resource requirement, a securities settlement facility'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 securities settlement facility has access to routine credit at the central bank of issue, the securities settlement facility 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.**

As Austraclear does not assume liquidity risk as principal it does not maintain liquid resources to cover payment obligations in stressed scenarios (see SSF Standard 6.3).

- 6.5 A securities settlement facility may supplement its qualifying liquid resources with other forms of liquid resources. If the securities settlement facility 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 securities settlement facility 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 securities settlement facility should not assume the availability of emergency central bank credit as part of its liquidity plan.

As Austraclear does not assume liquidity risk as principal it does not maintain liquid resources to cover payment obligations in stressed scenarios (see SSF Standard 6.3).

- 6.6 A securities settlement facility 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 securities settlement facility 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 securities settlement facility should regularly test its procedures for accessing its liquid resources at a liquidity provider.**

As Austraclear does not assume liquidity risk as principal it does not maintain liquid resources to cover payment obligations in stressed scenarios (see SSF Standard 6.3).

- 6.7 A securities settlement facility with access to central bank accounts, payment services or securities services should use these services, where practical, to enhance its management of liquidity risk.**

Austraclear does not assume liquidity risk as principal.

- 6.8 A securities settlement facility should determine the amount and regularly test the sufficiency of its liquid resources through rigorous stress testing. A securities settlement facility should have clear procedures to report the results of its stress tests to appropriate decision-makers at the securities settlement facility and to use these results to evaluate the adequacy of, and adjust, its liquidity risk management framework. In conducting stress testing, a securities settlement facility 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 securities settlement facility, include all entities that might pose material liquidity risks to the securities settlement facility (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 securities settlement facility should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount and form of total liquid resources it maintains.**

As Austraclear does not assume liquidity risk as principal it does not maintain liquid resources to cover payment obligations in stressed scenarios (see SSF Standard 6.3).

- 6.9 A securities settlement facility should establish explicit rules and procedures that enable the securities settlement facility 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 securities settlement facility'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.

As Austraclear does not assume liquidity risk as principal, it does not need rules and procedures to address a liquidity shortfall.

Standard 7: Settlement finality

A securities settlement facility should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, a securities settlement facility should provide final settlement intraday or in real time.

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 (SSF Standard 7.1). Final settlement occurs on DvP (or equivalent simultaneous exchange of assets) model 1 basis in real time (SSF Standard 7.2). Austraclear defines clear cut-off times for the cancellation of payment or transfer instructions (SSF Standard 7.3).

Based on this information, the Bank's assessment is that Austraclear has observed the requirements of SSF Standard 7 during the 2012/13 Assessment period. Austraclear's arrangements for ensuring finality of settlements are described in further detail under the following sub-standards.

7.1 A securities settlement facility's rules and procedures should clearly define the point at which settlement is final.

The point at which settlement is final is defined in the Austraclear Regulations. In the case of transactions involving the transfer of a security, settlement is final when Austraclear has made the appropriate amendments to the security records of the participants involved in the transaction. In the case of transactions involving a cash payment, the cash element of the transaction is settled and may not be unwound when a message is received from RITS that the cash transfer has been made. Upon receipt of the RITS confirmation, Austraclear will update the cash record of the participant. The cash record is a record of the day's flow of debits and credits against each participant's nominated account that allows participants to limit the amount of their funds made available for settlement of transactions.⁵

The finality of Austraclear's settlement process is ensured by its approval under Part 2 of the PSNA. In addition, the payments between participants that are 'Participating Banks' are protected by virtue of the approval of RITS as an RTGS system under Part 2 of the PSNA. This approval protects payments from being voided in the case of a Participating Bank entering external administration.

⁵ The cash record starts at zero at the beginning of the day and records debit and credit cash movements through the day. A total debit limit may be set on the cash record by the participant. When a settlement instruction has been matched, the cash leg of each transaction is tested against the debit limit. If the debit limit is not exceeded, the transaction will be sent to RITS for settlement; otherwise, the transaction will remain in a pending state until sufficient funds are available (i.e. through another transaction that delivers cash or through the participant increasing the limit).

Since the protection of the PSNA covers any exchange of assets, it extends to delivery-versus-delivery settlement of substitutions generated by ASX Collateral. The point of finality in the case of collateral substitutions is identical to other obligations settled in Austraclear.

7.2 The securities settlement facility 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 securities settlement facility should consider adopting real-time gross settlement (RTGS) or multiple batch processing during the settlement day.

Settlement of securities transactions in Austraclear occurs on a DvP (or equivalent simultaneous exchange of assets) model 1 basis. This involves the simultaneous exchange of assets (cash and securities) between the buyer and seller on an item-by-item basis in real time. Austraclear additionally provides for one-way cash transfers between participants, which are also settled on an item-by-item basis. Although settlements occur in real time, transactions may be held pending during the settlement day (the value date) due to insufficient funds or securities. However, all settlements must occur by the end of the settlement day. Any instructions not ready at the end of the day are automatically moved to a ‘failed’ status and removed from Austraclear. Austraclear’s Regulations establish the basis for settlement of transactions entered into the system.

By volume, DvP settlements accounted for around 54 per cent of total settlements during the Assessment period, and one-way cash transfers account for around 46 per cent. There was also a small number of free-of-payment securities transfers – less than 1 per cent of total volumes. By value, however, DvP settlements predominate, accounting for 77 per cent of total transfers in the year to end June 2013.

7.3 A securities settlement facility should clearly define the point after which unsettled payments, transfer instructions or other obligations may not be revoked by a participant.

The cut-off times for cancelling payment or transfer instructions are in line with the daily Austraclear cycle. Some cut-off times vary according to whether participants are engaged in evening settlement operations in RITS. Key cut-off times are:

- 1.00 pm for automated re-generation of corporate action instructions (e.g. maturity and coupon payments to bond holders) if amendments are required. However, manual corrections can be processed after this time.
- 4.28 pm for the cancellation of DvP and cash transactions by participants that do not engage in evening operations.
- 6.32 pm AEST (8.32 pm AEDT) for the cancellation of transactions by participants engaging in evening operations.

No transaction can be cancelled once it is at ‘payment pending’ status in Austraclear, which occurs following matching of instructions from both participants involved in the transaction. In all cases, the above deadlines can be extended at the discretion of Austraclear, with extension of the last two deadlines requiring the Bank’s approval due to the implications for RITS.

Standard 8: Money settlements

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

Rating: Observed

Austraclear conducts its money settlements across the Exchange Settlement Accounts (ESAs) of Participating Banks at the Bank, via RITS (SSF Standard 8.1). 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 (SSF Standard 8.3).

Based on this information, the Bank's assessment is that Austraclear has observed the requirements of SSF Standard 8 during the 2012/13 Assessment period. Austraclear's money settlement arrangements are discussed under the following sub-standards.

8.1 A securities settlement facility should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks.

Austraclear's money settlements are all settled in central bank money. Payment obligations in Austraclear are settled on a real-time gross settlement (RTGS) basis across ESAs at the Bank, via RITS. This includes money settlements initiated by ASX Collateral; while it is expected that most collateral substitutions will involve the exchange of one security for another on a delivery-versus-delivery (DvD) basis, cash may be used as a last resort to effect collateral substitution.

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

Money settlements in Austraclear are effected using central bank money.

8.3 If a securities settlement facility 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 securities settlement facility 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 securities settlement facility 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.

Settlement is in central bank funds. Since not all Austraclear participants are eligible to hold an ESA, Austraclear rules provide for those participants to nominate a Participating Bank (an ESA holder that agrees to act on behalf of a participant as settlement agent). A Participating Bank in Austraclear must be approved by the Australian Prudential Regulation Authority (APRA) as an authorised deposit-taking institution (ADI) for the purpose of carrying out banking business within Australia, and be a member of RITS with an ESA. Participating Banks must also satisfy Austraclear's general participation requirements, which include that the participant must satisfy Austraclear with regard to operational capacity, financial standing, and business continuity arrangements (see SSF Standard 15).

Austraclear is not a party to arrangements between settlement participants and Participating Banks (which may also be Austraclear participants) and is not directly exposed to credit or liquidity risk. Participating Banks are obligated under Austraclear Regulations to meet money settlement obligations, arising from DvP settlement, of any participant that they represent in central bank money. Participating Banks do not receive title to any securities due from settlement. Title is delivered to the participant upon settlement in central bank money. Credit exposures, if any, between participants and Participating Banks are managed bilaterally on the same basis as any transactional banking arrangement.

8.4 If a securities settlement facility conducts money settlements on its own books, it should minimise and strictly control its credit and liquidity risks.

Austraclear does not conduct money settlements on its own books.

8.5 A securities settlement facility'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 securities settlement facility and its participants to manage credit and liquidity risks.

Austraclear does not use commercial bank money settlement agents. Participants' arrangements with Participating Banks to access central bank money settlement are conducted under legal agreements between the parties involved; Austraclear is not a party to these agreements.

Standard 9: Central securities depositories

A securities settlement facility operating a central securities depository 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 securities settlement facility operating a central securities depository should maintain securities in an immobilised or dematerialised form for their transfer by book entry.

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, which 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 are not subject to claims by Austraclear's creditors (SSF Standard 9.1). 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 (SSF Standards 9.2, 9.3). 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 (SSF Standard 9.4). Participant assets are segregated from Austraclear's own assets, and Austraclear supports the segregation of participant and client assets through optional sub-accounts (SSF Standard 9.5). Austraclear's provision of services to issuers is subject to operational risk controls (SSF Standard 9.6).

Based on this information, the Bank's assessment is that Austraclear has observed the requirements of SSF Standard 9 during the 2012/13 Assessment period. Austraclear's arrangements for its central securities depository activities are described in further detail under the following sub-standards.

- 9.1 A securities settlement facility operating a central securities depository 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.**

Austraclear employs a range of controls to ensure the integrity of securities it holds. It maintains dual redundancy and a synchronous data update model which ensures that securities holding data are consistent across primary and backup data centres (see SSF Standard 14). Austraclear produces a daily report that reconciles opening and closing balances of holdings to transactions. This report is used to identify if a holding has not been accurately updated.

Annual audits of Austraclear's system controls are conducted by an external auditor and the resulting report is published on ASX's website. These audits encompass testing control objectives over transaction processing, change management, security protocols, data system operations and disaster recovery planning. The auditor's opinion is provided under the Australian Government Auditing and Standards Board standard ASAE 3402 – Assurance Report on Controls at a Service Organisation. ASX Internal Audit performs an additional risk-based audit of key Austraclear functions on a rolling 3-year cycle.

Austraclear requires both the pledgor and pledgee to match a securities pledge request within the system. This places a lock on those securities until the pledgee accepts a request from the pledgor to release the lock.

These rules and procedures should:

- (a) identify the type of title or interest held by participants for particular securities, to the extent such title or interest is recognised by the facility's rules and procedures;**

Austraclear's Regulations identify title for three different classes of securities: dematerialised securities; non-paper securities and euroentitlements; and paper securities.

- Dematerialised securities are electronic securities that are registered in the Austraclear system rather than externally. They include electronic certificates of deposit, electronic promissory notes and electronic bank-accepted bills of exchange. A dematerialised security is held by a participant as a 'chose in action'. This legal structure imposes rights and obligations that replicate the rights and obligations of a negotiable instrument.
- Non-paper securities and euroentitlements are electronic securities that are not registered within the Austraclear system. Non-paper securities include Commonwealth Government securities (CGS), registrable state and semi-government securities, and corporate debt. Euroentitlements are claims to investment-grade AUD-denominated European securities that are deemed acceptable by Austraclear and are deposited in Austraclear's account at Clearstream. In the case of non-paper securities and euroentitlements, Austraclear holds title for the participant as nominee, while the participant retains beneficial title.

- Paper securities are negotiable instruments and include some certificates of deposit, promissory notes and bills of exchange. Austraclear holds these securities for the participant as bailee. The participant retains legal and beneficial title (see SSF Standard 9.1(b)).

The Austraclear Rules and Procedures provide the legal and operational basis for the transfer of title or interests between participants, including the timing of transfers and the role of pledges (encumbrances). Securities pledged in Austraclear require both the pledgor and pledgee to match a pledge request within the system. This places a lock on those securities until the pledgee accepts a request from the pledgor to release the lock.

ASX Collateral

Under the standard Austraclear account structure, participants can pledge securities to collateralise an exposure created outside the system without the transfer of title, or to exchange securities under repurchase agreements with the transfer of title. These securities may then be used by the collateral receiver without encumbrance (as long as the collateral giver has agreed that they may be re-used, which is standard practice).

The new account structure introduced in July 2013 to support the CCMS includes new Collateral Accounts to hold securities that have been given as collateral by way of outright transfer (Transferred Collateral Accounts) or security interest (Secured Collateral Accounts). These new accounts are used only by users of the CCMS (who must be Full Participants) and are controlled by the Collateral Manager as their agent. A collateral receiver may re-use securities held by it in a Transferred Collateral Account (unless re-use has been restricted by agreement between the collateral giver and collateral receiver), but only within the CCMS and through the Collateral Manager as its agent. The collateral receiver may also instruct the Collateral Manager to transfer the securities to another account for sale or repo outside of the Collateral Management System, but only on condition that equivalent replacement securities are transferred into the Collateral Account.

Settlement instructions for the CCMS are generated by the optimisation service operated by Clearstream based on exposure details provided by customers through a web interface. The settlement instructions are given to Austraclear by the Collateral Manager who is responsible for account and collateral management on behalf of its customers. The accounts remain within Austraclear and transfer of title occurs across these accounts, rather than offshore.

(b) clearly identify the way in which the transfer of (or any other forms of dealing with) securities and related payments can be effected through the facility; and

The transfer of title to securities in the Austraclear system is effected by electronic book entry. Transfers of dematerialised securities are transfers of contractual rights within the Austraclear system. Non-paper securities are transferred through the passing of beneficial title from the seller to the buyer. Paper securities are transferred through updates to participants' security records. Austraclear also uses 'allonges' which maintain the negotiability of paper securities. Austraclear retains legal title in the relevant registry. Settlement occurs via a DvP process in real time. The Austraclear Regulations and Procedures also provide for the transfer of securities free-of-payment, where required.

(c) ensure that, to the extent permissible by law, the creditors of the operator of the securities settlement facility have no claim over securities or other assets held, deposited or registered by participants in the facility.

In the event of Austraclear's insolvency, the rules and arrangements for title within Austraclear provide assurance that participants' securities would be immune from claims by Austraclear's creditors. Austraclear is not counterparty to any transactions settled in its system.

9.2 A securities settlement facility operating a central securities depository should prohibit overdrafts and debit balances in securities accounts.

Austraclear does not maintain cash accounts, removing the possibility of overdrafts or the extension of credit by Austraclear. All transactions are settled across the ESAs of Participating Banks.

Any instruction to move securities from a participant's securities account in Austraclear in excess of available securities remains in a 'not ready' status until sufficient securities are received into that account. If the instruction remains outstanding at the end of the day, it will move to a 'failed' status and automatically be removed from Austraclear. This removes the possibility of a debit balance in securities accounts.

9.3 A securities settlement facility operating a central securities depository should maintain securities in an immobilised or dematerialised form for their transfer by book entry. Where appropriate, a securities settlement facility operating a central securities depository should provide incentives to immobilise or dematerialise securities.

The securities maintained in Austraclear are either paper, non-paper or dematerialised (see SSF Standard 9.1(a)). Paper securities are immobilised and held by Austraclear as bailee for the holder.

9.4 A securities settlement facility operating a central securities depository should protect assets against custody risk through appropriate rules and procedures consistent with its legal framework.

Austraclear's Regulations require that Austraclear provide safe keeping for paper securities, and do all that is in its power to replace the security if it becomes lost, stolen, destroyed or damaged. If Austraclear is liable to a participant due to the loss or destruction of a paper security, it is only liable to indemnify the participant up to the face value of the security.

Austraclear has identified potential custody risks arising from negligence, misuse of assets, fraud, poor administration, or inadequate recordkeeping. Operational controls to mitigate these risks include segregation of duties, access restrictions and authorisation checks. Austraclear is covered by the ASX Group general and professional indemnity insurance policies for civil liabilities arising from its central securities depository activities. Where losses are the result of employee wrongdoing or a computer malfunction, Austraclear is covered by the ASX Group comprehensive crime policy. The Austraclear Rules also include specific warranties and indemnities limiting potential liabilities arising from custody risk.

9.5 A securities settlement facility operating a central securities depository 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, a securities settlement facility operating a central securities depository 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.

Austraclear segregates its own assets and securities from those of its participants. Participant holdings are legally and operationally segregated by participant accounts. Participants have the further option to segregate client holdings by adopting sub-accounts. Austraclear does not mandate the segregation of client holdings; however, this may be required by regulatory regimes governing participants.

- 9.6 A securities settlement facility operating a central securities depository 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.**

Austraclear offers paying agent services to issuers of debt securities. This service is governed under a service agreement and documented terms and conditions, which are available on ASX's public website. The service is subject to the same operational risk framework that is applied across all ASX facilities (see SSF Standard 14). Austraclear's liability from this activity is limited under the service agreement. Austraclear does not provide a centralised securities lending facility or act as a principal in securities lending transactions.

Standard 10: Exchange-of-value settlement systems

If a securities settlement facility settles transactions that comprise 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.

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 payment can be settled at the same time (SSF Standard 10.1). 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 are performed on a DvD basis, whereby linked securities transactions settle simultaneously, including where a chain of substitutions are being performed (SSF Standard 10.2).

Based on this information, the Bank's assessment is that Austraclear has observed the requirements of SSF Standard 10 during the 2012/13 Assessment period. Austraclear's arrangements for achieving exchange-of-value settlements are described in further detail under the following sub-standards.

- 10.1 A securities settlement facility 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 securities settlement facility settles on a gross or net basis and when finality occurs.**

Austraclear eliminates principal risk via settling its securities transactions on a DvP model 1 basis (see SSF Standard 10.2). This ensures that payment and securities obligations are settled if and only if both obligations can be settled simultaneously. Collateral substitutions instructed by ASX Collateral are settled on a DvD basis under the same arrangements as for transfer of cash and securities. Where cash is used as a last resort, settlement is on a DvP model 1 basis.

- 10.2 A securities settlement facility 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.**

Settlement of securities transactions in Austraclear is on a DvP model 1 basis. This entails that: there is a simultaneous transfer of cash and securities obligations between the buyer and seller on an item-by-item basis in real time; final settlement occurs if and only if both of the linked transfers are completed successfully; and if one transfer fails, the linked transfer will also be cancelled.

ASX Collateral

Substitution of collateral under the collateral management service launched in July 2013 is effected in such a way as to eliminate principal risk in the settlement process. Settlement instructions submitted to Austraclear by ASX Collateral are executed on an individual gross basis (as for securities transactions). In the case of collateral substitutions, the settlement mechanism requires that finality is achieved only when both linked securities deliveries have been successfully completed – that is, settlement occurs on a DvD basis. The system design further provides for the grouping of linked transactions to accommodate chains of substitutions where collateral has been re-used.

While this design protects against principal risk, multiple substitutions in a long re-use chain may have implications for timely completion of transactions at the end of the day. To mitigate this risk, and ensure that the potential for gridlock is no greater than under current non-centralised collateral arrangements, participants engaging in the re-use of collateral may allow cash as collateral of last resort. Substitutions involving the use of cash as collateral of last resort settle on a DvP model 1 basis, consistent with the settlement of other transactions exchanging securities for cash in Austraclear.

Standard 11: Participant default rules and procedures

A securities settlement facility 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 securities settlement facility can take timely action to contain losses and liquidity pressures and continue to meet its obligations.

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 (SSF Standards 11.1, 11.2). Participants are also required to report default events or an expected default to the SSF. Austraclear sets out its default management powers in its Regulations and Procedures (SSF Standard 11.3). Since Austraclear is not exposed to financial loss on a participant default, its handling of a default situation is largely procedural in nature (SSF Standard 11.4). Austraclear's default management arrangements are designed for the particular characteristics of its activities, and take into account potential impacts on relevant markets (SSF Standard 11.5).

Based on this information, the Bank's assessment is that Austraclear has observed the requirements of SSF Standard 11 during the 2012/13 Assessment period. Austraclear's default management arrangements are discussed in further detail under the following sub-standards.

- 11.1 A securities settlement facility should have default rules and procedures that enable the securities settlement facility to continue to meet its obligations in the event of a participant default and that address the replenishment of resources following a default. A securities settlement facility 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.**

The default of a participant in Austraclear does not require the SSF to meet obligations on its behalf; nor does it create additional obligations for non-defaulting participants. Steps taken by Austraclear to manage a participant default are therefore largely procedural in nature. Participant defaults may result from insolvency events or a failure to comply with the requirements of the Austraclear Regulations, and are dealt with under Regulations 3.10 to 3.14 and under the ASX Enforcement and Appeals Rulebook. Austraclear maintains an internal checklist setting out actions to be taken by relevant business units within ASX in managing a participant default. The default of an Austraclear participant would be managed by the Participant Incident Response Committee (PIRC). The PIRC is chaired by the EGM, Operations, and is made up of senior staff from operational, risk management, compliance and legal units.

ASX Collateral

The introduction of the collateral management service does not alter existing default rules and procedures under the Austraclear Regulations. In the normal course, an event of default in Austraclear involves suspension or termination of the defaulting participant in accordance with Austraclear Regulations. For the collateral management service, the intent is to preserve contractual default arrangements set out in Principal Agreements. These arrangements entitle the collateral receiver to treat collateral held as owned on an outright basis, and include clauses permitting either counterparty to terminate a future obligation to return collateral or cash where the counterparty has suffered an event of default.

Upon notification of a default under a Principal Agreement, ASX Collateral would act as the collateral receiver's agent and, upon instructions from the collateral receiver, instruct Austraclear to transfer collateral held from the receiver's Collateral Account to its Source Account or Austraclear trading account.

A collateral receiver would issue such instructions through a notice of default to ASX Collateral. The default notice must be signed by two authorised signatories of the collateral receiver. The notice would be in two parts.

- Part 1 would notify ASX Collateral of the default and identify the specific account, contract and exposure that are the subject of the default. Upon receipt of this part, ASX Collateral would effectively freeze the account. Until Clearstream's Collateral Management Exchange (CmaX) is updated with the account status, any recommended settlement instructions from CmaX relating to that account would not be executed.
- Part 2 of the default notice would authorise ASX Collateral to instruct Austraclear to transfer the collateral securities to an account controlled and operated by the collateral receiver.

Nothing in the arrangements requires ASX Collateral to enquire into the validity of any matters in connection with Principal Agreements, including in relation to actions taken in a default event. Any dispute over actions taken is a matter for parties to the Principal Agreement. ASX Collateral is not a party to the Principal Agreement and its role as agent is strictly limited. Equally, Austraclear is not party to the Principal Agreement; Austraclear's role in the process is to act on the instructions of ASX Collateral. Nevertheless, the Austraclear Regulations provide an indemnity to Austraclear against any loss or claim arising from its actions in accordance with instructions from ASX Collateral.

11.2 A securities settlement facility 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 securities settlement facility 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 securities settlement facility; and
- (b) allow for the cancellation or suspension of a participant or commercial settlement bank from the securities settlement facility:
 - (i) if the participant or commercial settlement bank is in external administration; or
 - (ii) if there is a reasonable suspicion that the participant or commercial settlement bank may become subject to external administration; and
- (c) allow participant users of a commercial settlement bank which becomes subject to external administration, or which is reasonably likely to become subject to external administration, to quickly nominate a new commercial settlement bank.

Austraclear's Regulations and Procedures allow it to cancel or suspend the participation of a participant or a Participating Bank that becomes subject to external administration, or if it reasonably suspects that this may occur. A participant or a Participating Bank is also required to notify Austraclear if it becomes subject to external administration or where it reasonably suspects that this may occur.

There is no restriction within the Austraclear Regulations and Procedures on a participant changing its Participating Bank, including the case where that Participating Bank is insolvent.

11.3 A securities settlement facility should publicly disclose key aspects of its default rules and procedures. Where a securities settlement facility settles via a multilateral net batch, arrangements for dealing with any unsettled trades of a defaulting participant that are not guaranteed by a central counterparty, such as reconstituting the multilateral net batch excluding the settlement obligations of the defaulting participant, should be clear to all its participants and should be capable of being executed in a timely manner.

Austraclear's Regulations and Procedures are published on ASX's public website. These include requirements for participants to give notice of insolvency or the reasonable possibility of insolvency and the rights of Austraclear to suspend or terminate participant status in a default event.

- 11.4 A securities settlement facility should involve its participants and other stakeholders in the testing and review of the securities settlement facility's default 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.**

ASX conducts regular in-house default management 'fire drills' to test default procedures as they would apply to participants across one or more of the ASX CS facilities. While the focus of the fire drills is on the more complex scenario of a clearing participant default, procedures for managing the default of an Austraclear participant are also tested to the extent that clearing participants also participate in Austraclear. As neither Austraclear nor its participants is exposed to financial obligations created by the default of a participant in respect of Austraclear transactions (a participant may be impacted by the default of another participant if it has outstanding unsettled bilateral transactions with the defaulting participant), the management of a settlement-only participant default situation is generally procedural in nature. Austraclear has on occasion had need to employ its default management procedures, most recently to address the appointment of an external administrator to a participant in July 2013.

- 11.5 A securities settlement facility 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.**

All products settled by Austraclear are AUD-denominated (including Euroentitlements) and Austraclear's operations are conducted domestically. Key participants generally have a significant domestic presence; for example, Participating Banks must be domestically licensed ADIs with an ESA at the Bank. As Austraclear's default management procedures do not place financial obligations on participants, there would be expected to be minimal potential impacts on market pricing, liquidity and stability stemming from these procedures.

Standard 12: General business risk

A securities settlement facility 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

Austraclear identifies, monitors and manages its general business risks in the context of its overall Enterprise Risk Management Policy (SSF Standard 12.1). It has access to sufficient funds held at group level, and invested in high-quality and sufficiently liquid assets to continue operations as a going concern if it incurs general business losses, and plans to enhance the legal basis of such access through a new clause in the ASX Group Support Agreement (SSF Standards 12.2, 12.4). ASX maintains viable arrangements to raise additional equity for its CS facilities as required. This was demonstrated by ASX's \$533 million capital raising during the Assessment period (SSF Standard 12.5).

The Bank notes the following steps that Austraclear should take in order to fully observe SSF Standard 12:

- In order to meet the requirements of SSF Standard 12.2, implement plans to enhance intragroup legal agreements to explicitly reflect the allocation and availability of business risk capital to Austraclear.

- In order to meet the requirements of SSF Standard 12.3, which comes into effect on 31 March 2014, Austraclear should develop and maintain a viable recovery plan and ensure that the capital it holds under SSF Standard 12.2 is sufficient to fund this plan. The plan should be consistent with forthcoming CPSS-IOSCO guidance on recovery planning. As Austraclear develops its recovery plan, it should also review and integrate the recapitalisation processes described under SSF Standard 12.5 with its broader recovery planning arrangements.

Based on this information, and noting that SSF Standard 12.3 is not yet in force, the Bank's assessment is that Austraclear has broadly observed the requirements of SSF Standard 12 during the 2012/13 Assessment period. Austraclear's management of general business risk is described in further detail under the following sub-standards.

12.1 A securities settlement facility 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 SSF 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 currency 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 general business activities arises in the collection of receivables, which principally comprises 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 is mitigated by prudent liquidity management, with forward planning and forecasting of liquidity requirements.
- 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 which the ASX strategic risk environment is analysed. This analysis is used to identify new strategic business initiatives, such as the projects that delivered the ASX Collateral and OTC derivatives clearing services. New projects identified through this process 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 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 SSF Standard 14.4). 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. ASX will typically conduct a series of workshops involving project staff to discuss risks associated with the planned service. Prior to the project being approved for launch/production, ASX prepares an operational readiness summary and conducts a final workshop to discuss risks that may be 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 business unit risk profiles that are prepared by business unit management every six months. CALCO also monitors actual and forecast capital and liquidity requirements on a quarterly basis, including the impact of new projects.

- 12.2 A securities settlement facility 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 securities settlement facility 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.**

In 2012/13, ASX revised its approach to business risk capital to take into account the requirements of this standard and requirements arising from its own strategic projects; in particular, the introduction of the OTC derivatives clearing service. A capital raising in June 2013 contributed to an increase in ASX's total capital allocations for operational and business risk from \$50 million to \$225 million across the ASX Group. ASX Group has also historically held surplus capital of \$200 to \$250 million, and a little over half of the increase in capital allocated to operational and business risk represents a specific allocation from that surplus. This formalises ASX's previous approach to business risk capital, under which business losses would be met by the surplus capital held. Capital allocations for general business risk across the group, including for each CS facility, are published twice a year by ASX.

Of the \$225 million allocation, \$140 million has been attributed specifically to operational and business risks across both Austraclear and ASX Settlement. Since ASX has identified constraints to making business risk capital bankruptcy remote within the SSFs, this capital is held 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. While ASX considers that its existing framework provides a sufficient legal basis for the use of funds allocated to Austraclear at the group level to cover a business risk loss, ASX will further enhance the legal basis for this arrangement through a new clause in the ASX Group Support Agreement. This clause will clarify the allocation and availability of business risk capital to the CS facilities to support their obligations under the FSS.

In determining the sufficiency of the \$140 million in operational and business risk capital set aside for Austraclear and ASX Settlement, ASX first calculated risk amounts for the individual SSFs. This was based on a methodology in use at other settlement facilities, fund managers and custodians that applies a capital charge for operational and business risk to the value of securities held in the facility. The correlation is modelled on a percentage basis, with the percentage of required risk resources declining as the level of assets increases – recognising that a significant part of the risk resources required will represent a fixed cost. ASX's

application of this methodology results in a 0.79 basis points charge on around \$1.3 trillion of securities held in each SSF, giving a required value of risk resources of around \$100 million for each of Austraclear and ASX Settlement. ASX assumes that the two facilities will not both require their full risk funds at the same time, using a ‘square root of the sum of squares’ formula to arrive at the figure of \$140 million to cover the operational and business risk exposure of both settlement facilities. This reflects that the custodial and operational risks that this capital is calibrated to cover are unlikely to result in simultaneous peak losses in both SSFs. The business risk capital held in respect of the SSFs is sufficient to ensure that, even if one SSF were to utilise its full capital allocation of \$100 million, sufficient funds would be available to fund the other SSF’s recovery plan and meet the single largest uninsured business loss event for that facility. In addition, ASX’s general capital buffer is sufficient to ensure that it would remain able to provide \$100 million to second SSF in the event that this was required. The proposed enhancements to the ASX Group Support Agreement will clarify ASX’s obligations to provide these funds in accordance with the SSF’s obligations under the SSF Standards.

- 12.3 A securities settlement facility 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 securities settlement facility 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 SSF Standard 4 on credit risk and SSF Standard 6 on liquidity risk. However, equity held under international risk-based capital standards can be included where relevant and appropriate to avoid duplicate capital requirements.**

SSF Standard 12.3 comes into effect on 31 March 2014.

Austraclear intends to articulate its recovery plans following the release of finalised CPSS-IOSCO guidance on recovery planning, expected in late 2013. The capital that Austraclear would use to fund operations during implementation of a recovery plan is described under SSF Standard 12.2.

- 12.4 Assets held to cover general business risk should be of high quality and sufficiently liquid in order to allow the securities settlement facility 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; CGS; 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.

- 12.5 A securities settlement facility 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 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 in the form of a \$553 million share entitlement offer, with the bulk of the funds being used to increase the risk capital and financial resources of the CS facilities. Recapitalisation processes should be reviewed and integrated with broader recovery planning arrangements following the forthcoming release of CPSS-IOSCO guidance referenced in SSF Standard 12.3.

Standard 13: Custody and investment risks

A securities settlement facility should safeguard its own and its participants' assets and minimise the risk of loss on and delay in access to these assets. A securities settlement facility's investments should be in instruments with minimal credit, market and liquidity 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 (SSF Standards 13.1, 13.2). Austraclear controls investment risk by limiting its approved counterparties to large Australian banks, and investing predominantly in cash (SSF Standard 13.4).

Based on this information, the Bank's assessment is that Austraclear has observed the requirements of SSF Standard 13 during the 2012/13 Assessment period. Austraclear's arrangements for managing custody and investment risks are described in further detail under the following sub-standards.

13.1 A securities settlement facility 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.

Austraclear has funds from retained earnings that are invested in cash or other high-quality liquid assets; it does not use custodians to invest these funds (see SSF Standard 13.4).

ASX Collateral does not create custody risk for Austraclear. While the Collateral Manager has control over new collateral accounts for the purposes of submitting settlement instructions on behalf of service users, title of securities remains at all times with the service users.

Austraclear has custody of participants' securities deposited in the Austraclear system. For details of these custodial arrangements and arrangements to safeguard the integrity of securities held in Austraclear, see SSF Standard 9. Austraclear does not hold other assets of participants.

13.2 A securities settlement facility should have prompt access to its assets and the assets provided by participants, when required.

Under the terms of the Austraclear Investment Mandate, funds held by Austraclear must be invested in cash, or bank bills or certificates of deposit issued by APRA-regulated ADIs. As these assets are highly liquid and invested with large Australian banks, Austraclear has prompt access to its assets when required. Austraclear does not use custodians to hold its assets or participants' assets.

- 13.3 A securities settlement facility should evaluate and understand its exposures to its custodians, taking into account the full scope of its relationships with each.**

Austraclear does not use custodians to hold its assets or the assets provided by participants.

- 13.4 A securities settlement facility'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.**

Austraclear is exposed to investment risk on funds from contributions and retained earnings. These funds, currently around \$10 million, are small relative to the total funds held by ASX Limited at the group level to cover general business risk and are invested predominantly in cash. The Investment Mandate for Austraclear funds requires that liquidity be maintained so that it can meet its liabilities in a timely fashion. Investment products are limited to a small set of low risk and highly liquid AUD-denominated products, with large Australian banks as counterparties. Hard limits are set on maximum instrument maturity (180 days) and weighted average maturity (60 days).

Standard 14: Operational risk

A securities settlement facility 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 securities settlement facility's obligations, including in the event of a wide-scale or major disruption.

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 (SSF Standard 14.1). Responsibility for approving and reviewing operational risk management policy is shared between the ASX Limited and CS Boards, the Audit and Risk Committee and business units, the last of which are responsible for implementing operational risk controls (SSF Standard 14.2). 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 over the Assessment period (SSF Standard 14.3). Austraclear maintains sufficient well-trained and competent personnel and other resources to operate EXIGO, and ASX has taken steps to ensure business development work did not risk the availability of these resources for key systems during the Assessment period (SSF Standard 14.4).

Austraclear manages operational interdependencies with participants and Austraclear through its participant monitoring processes and group-wide risk management framework (SSF Standard 14.5). Its dependencies on service providers and utilities are subject to ongoing monitoring and contingency arrangements where appropriate. During the Assessment period, Austraclear strengthened its arrangements with key outsourcing and critical service providers through additional clauses added to legal agreements that support the providers' compliance with FSS requirements, access to information for the Bank, and notice to the Bank in the case of termination (SSF Standards 14.9, 14.10, 14.11).

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 (SSF Standard 14.7). Participants are required to maintain appropriate operational and business continuity arrangements that complement Austraclear's own arrangements, and are appropriate to the nature and size of their business. Austraclear monitors participants' compliance with these requirements, and broader operational performance, on an ongoing basis (SSF Standards 14.6, 14.8).

The Bank notes the following steps that Austraclear should take to strengthen its observance of SSF Standard 14:

- In order to meet the requirements of SSF Standard 14.11, which comes into effect on 31 March 2014, review its operational arrangements in light of the proposed Australian financial market infrastructure (FMI) resolution regime to ensure that they are consistent with the form of the proposed regime once finalised.

On the basis of this information, and noting that SSF Standard 14.11 is not yet in force, the Bank's assessment is that Austraclear has observed the requirements of SSF Standard 14 during the 2012/13 Assessment period. Austraclear's arrangements for managing operational risks are described in further detail under the following sub-standards.

Identifying and managing operational risk

14.1 A securities settlement facility 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 SSF Standard 3.1). Under this framework, the ASX Limited Board is responsible for reviewing and overseeing the group's risk management systems (see SSF 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 business units, 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 business units. Individual business units 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.

14.2 A securities settlement facility's board of directors should clearly define the roles and responsibilities for addressing operational risk and should endorse the securities settlement facility'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 clearly 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 executive Enterprise Risk Management Committee and individual business units.

Policies and procedures are the subject of internal and external review. ASX's Internal Audit unit 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 reviewed by external auditors twice a year.

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

- The business continuity framework is benchmarked against the Business Continuity Institute's Good Practice Guidelines 2010, 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.
- The compliance framework is benchmarked to the AS 3806-2006: Australian Standard Compliance Program.
- The ASX Fraud Control Policy is benchmarked against AS 8000-2008: Fraud and Corruption Control.

In addition, Austraclear's operational risk controls and reliability objectives are designed to meet operational standards imposed on Austraclear by the Bank as part of its 'Step-in and Service Agreement'. As a feeder system to RITS, and as a systemically important system, Austraclear's system architecture is required under these standards to be equivalently operationally robust to that of RITS.

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. Austraclear operates a separate test environment for its core system (EXIGO) and has a formal, documented change management process. There are also defined procedures for communicating with participants and vendors around technology upgrade releases, which include regular notices to participants of upcoming changes.

ASX Collateral does not alter Austraclear's operational risk management framework. The CS Boards' Charter sets out Austraclear's objectives, roles and responsibilities, which include a mandate to focus on risk management issues and consider operational matters. In support of this, ASX has comprehensive policies, procedures and controls, which are subject to external and internal audit.

- 14.3 A securities settlement facility 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. EXIGO is required under its Step-in and Service Agreement with the Bank to meet a minimum availability target of 99.9 per cent; over the 2012/13 Assessment period EXIGO 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 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. Average capacity utilisation of EXIGO over the Assessment period was 22 per cent, while peak utilisation was 32 per cent. Austraclear maintains sufficient technical and human resources to operate EXIGO during peak periods, including in the event of operational incidents or system failure.

Information security policy is implemented using a risk-based decision process, based on AS 4360, 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, cost of controls, and richness and flexibility of services. 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 late 2012.

Testing of information security policy is carried out against production infrastructure where possible. This includes penetration testing against the ASX perimeter and vulnerability testing within the perimeter. Austraclear performs EXIGO security testing on a quarterly basis. ASX operates a suite of controls designed to prevent a successful cyber attack 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.

Physical access is controlled at both an enterprise and business unit level. The key systems supporting ASX's clearing and settlement processes are operated within a secure building. Settlement 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 significant technology-based operational incidents are reported to senior management and issues are tracked through to resolution via regular updates to management.

- 14.4 A securities settlement facility 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

Austraclear has arrangements in place to ensure that it has well-trained and competent personnel operating EXIGO. 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. Austraclear has a formal succession planning and management process in place for key staff.

To facilitate rapid recovery in the event of an operational disruption, ASX intends to increase the number of operational staff based at its secondary operations site (which is also the primary data centre), to around 30 per cent from the current 17 per cent. In case of a disruption to staffing arrangements at the primary site for staff, the secondary operations centre has capacity to house 65 per cent of all operational staff.⁶

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. In the event that ASX Operations Limited became subject to external administration, Austraclear and the other clearing and settlement corporate entities would be able to retain use of resources under provisions within the written support agreement (to the extent permissible by law).

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 (including EXIGO), the PMO rates projects to ensure 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.

During the Assessment period, ASX undertook work on over 30 projects, including major projects such as the OTC derivatives clearing service in ASX Clear (Futures) and the ASX Collateral service (see Section 4). 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

⁶ 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.

capacity of ASX's existing resources, although targeted deadlines for key projects have 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, such as Clearstream for the ASX Collateral service. In relation to the 'insourcing' of support for EXIGO from a third-party vendor, Austraclear has managed the additional resource implications through the recruitment of additional developers and the secondment of a senior developer from the vendor (see SSF Standard 14.5). ASX's resource management is discussed further in Section 3.5.5 of the Assessment report.

- 14.5 A securities settlement facility should identify, monitor and manage the risks that key participants, other FMIs and service and utility providers might pose to its operations. A securities settlement facility should inform the Reserve Bank of any critical dependencies on utilities or service providers. In addition, a securities settlement facility should identify, monitor and manage the risks its operations might pose to its participants and other FMIs. Where a securities settlement facility 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 SSF Standard 3.1); as part of its assessments of project-related risks (see SSF Standard 14.1); and through its general monitoring of risks as part of its risk management framework (see SSF Standard 3.1). For Austraclear, ASX has identified risks relating to its operational activities arising from participants outsourcing their back-office processing offshore.

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 possible lack of local market knowledge. Such factors, if improperly mitigated, could increase operational risk. ASX is examining options to mitigate these risks. As part of this, ASX Compliance has initiated a spot review on participants' outsourcing arrangements that will benchmark participants against a number of standards, including APRA's outsourcing prudential standard CPS 231.

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 and provide the Bank with a list of critical outsourcing arrangements on an annual basis. Issues regarding key arrangements are reported to relevant committees and boards as required.

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.⁷ Contractual arrangements with critical service providers require the approval of Austraclear before the service provider can itself outsource material elements of its service.

Austraclear is reliant on interactions with SWIFT, and would revert to manual processing of SWIFT payments in the event of a SWIFT failure. The failure of RITS would potentially prevent settlement in EXIGO, although ASX has prepared business plans that contemplate EXIGO continuing to operate independently.

Austraclear also has interdependencies with ASX Collateral. Particularly since access to securities held in collateral accounts in Austraclear would be impaired in the event of an operational disruption to ASX Collateral services, the Bank expects the design and operation of ASX Collateral to deliver an equivalent standard of resilience to that of Austraclear. This extends to the outsourced services provided by Clearstream. In terms of architecture, system capacity, recovery time, and availability targets, ASX Collateral and Clearstream are designed to operate to a similar standard to that of Austraclear. In addition, the Service Level Agreement between ASX Operations Pty Limited and Clearstream requires that Clearstream provide ‘round the clock’ operational and technical support via its network of operational centres, with the support during Australian operational hours provided primarily by Clearstream’s Singapore centre.

All other Austraclear operational functions are performed within ASX. However, external suppliers are used for utilities, hardware maintenance, operating system and product maintenance and support, 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.
- 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), and incident escalation procedures and contacts.

Austraclear has a key dependence on a third-party vendor for IT licensing, support and maintenance services for its core EXIGO system. During 2011/12, Austraclear commenced an insourcing project to take over EXIGO’s third-level operational and software support (requiring expert knowledge of the core system) from the third-party vendor. This project has the potential to significantly reduce operational risk by giving Austraclear control over future

⁷ 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.

development of the system in terms of both the nature and timing of future enhancements. The project will improve operational risk by significantly simplifying the system through the removal of unused components. It should also improve the timeliness of Austraclear's responses to operational incidents, given the current reliance on 24-hour support across different time zones for highly technical matters. ASX has recruited developers for this project and a senior developer from the third-party vendor has been seconded to Sydney during the development phase. As a contingency, ASX also has the option to extend existing support arrangements for as long as required. The project is due for completion in 2014.

Disclosure

The nature and scope of Austraclear's dependencies on critical service providers are disclosed to participants through: Regulations; Guidance Notes; Notices and Bulletins; technical documentation available on ASX's website for participants; 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.

- 14.6 A participant of a securities settlement facility should have complementary operational and business continuity arrangements that are appropriate to the nature and size of the business undertaken by that participant. The securities settlement facility's rules and procedures should clearly specify operational requirements for participants.**

The Austraclear Regulations and Procedures require participants, including Collateral Managers that are Special Purpose Participants, to maintain adequate business continuity arrangements (see SSF Standard 14.8) to allow the recovery of usual operations within two hours following a contingency event. If a participant fails to do so, 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 been experiencing operational problems. These spot checks examine the participant's governance and processes surrounding resilience and business continuity.

The Regulations 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 operational concerns 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. Alternatively, ASX may impose conditions on participation, or require that the participant appoint an independent expert to assist with the remediation task.

To further strengthen the Bank's influence over ASX Collateral (and, by extension, Clearstream), or any future Collateral Manager, the Bank has worked with ASIC to develop additional operational resilience requirements for Special Purpose Participants of Austraclear that provide collateral management services. These requirements, which are based on the operational standards imposed on Austraclear by the Bank as part of its Step-in and Service Agreement, include conditions on operational hours, system availability and capacity, outage reporting, business continuity arrangements, and IT governance and security.

Business continuity arrangements

- 14.7 A securities settlement facility 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 securities settlement facility to complete settlement by the end of the day of the disruption, even in case of extreme circumstances. The securities settlement facility should regularly test these arrangements.**

Austraclear 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. Austraclear policy requires that failover to the backup data centre should occur within two hours.

Austraclear 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 a primary and a backup data centre, with broadly equivalent operational requirements. Key plant and equipment at the primary data centre are designed to the Uptime Institute Tier 3 standard of concurrent maintainability.⁸ 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 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 integrity of transactions is ensured by queuing messages until they can 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 data centres. Furthermore, in the event that a significant part of a system or an operational site fails, Austraclear has contingency arrangements to activate an additional tier of 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.

Austraclear 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. ASX maintains a major incident management team that includes senior representatives of the core business activities, as well as facilities management, business

⁸ 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.

continuity, and media and communications. The procedures identify responsibilities, including for internal communication and external communication to emergency services, the market, industry and media.

Austraclear 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. Live technology tests, where settlement 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. Under the terms of Austraclear's Step-in and Service Agreement with the Bank, Austraclear is also required to take part in annual connectivity tests between the Austraclear and RITS systems.

14.8 A securities settlement facility 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 securities settlement facility.

The Austraclear Regulations 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 Regulations specify that participants must have arrangements that allow for the recovery of usual operations within two hours following a contingency event. 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 Austraclear's 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. Austraclear conducts regular connectivity tests and maintains an external testing environment for system changes.

As a major participant of Austraclear, any testing of large participants to ensure operational reliability is expected to include ASX Collateral. However, separate to its requirements as a participant, ASX Operations Pty Limited already plans to conduct contingency testing of ASX Collateral as a critical ASX system. As part of this testing, ASX would apply some of the contingency scenarios defined in its service level agreement with Clearstream.

Outsourcing and other dependencies

- 14.9 A securities settlement facility 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.**

ASX has developed a set of standard clauses for inclusion in contracts with third-party service providers for provision of critical services to Austraclear. Similar clauses are also included in the Support Agreement between Austraclear 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. In particular, the clauses allow the Bank to gather information from the service provider about the operation of critical functions (see SSF Standard 14.10). In the event that the Bank concluded that the terms of the service provider agreement did not meet FSS requirements, the clauses require the service provider to negotiate acceptable new terms with ASX in good faith. Furthermore, if Austraclear were to become insolvent, the clauses give the Bank an opportunity to negotiate with the service provider to continue service provision (see SSF Standard 14.11). ASX is applying these clauses to all new agreements with service providers, and has incorporated them into all of its key existing service agreements.

The resilience, security and operational performance of SWIFT, which Austraclear relies upon for messaging, is primarily overseen by the SWIFT Oversight Group (OG), comprising the G10 central banks and chaired by the National Bank of Belgium. In 2012, the OG set up the SWIFT Oversight Forum (SOF) to include 12 additional central banks, including the Bank, in the oversight process. Through its membership of the SOF, the Bank is able to access information relevant to SWIFT oversight. To support its oversight activities, the OG has set proprietary minimum standards – the High-level Expectations (HLEs) – against which SWIFT is assessed. In its capacity as a member of the SOF, the Bank receives SWIFT’s annual self-assessment against the HLEs.

ASX Collateral

Given the interdependencies between Austraclear and ASX Collateral, it is important that ASX Collateral is held to equivalent standards of operational robustness.

ASX Collateral employs the same risk management framework for operational risk and operational procedures as those adopted for the Austraclear EXIGO system. ASX applies to ASX Collateral the same reliability targets and security measures that it applies to Austraclear: availability of 99.9 per cent, as specified in Austraclear’s Step-in and Service Agreement with the Bank, and a minimum capacity headroom target of 50 per cent of total capacity.

ASX Collateral Management Services Pty Limited will have access to other ASX Group personnel as required to carry out its operations under the ASX Group Support Agreement with ASX Operations Pty Limited. This agreement aims to allow for access to resources in the event of external administration of ASX Operations Pty Limited – to the extent permissible by law.

ASX operates its CCMS as a critical system, such that business continuity arrangements are consistent with those for the Austraclear EXIGO system. Contingency plans detail the

appropriate operational response to a disruption, including the various lines of authority, means of communication, and procedures to respond to failures. The CCMS is replicated at the backup data centre, with failover to occur within one to two hours, depending on the nature of the contingency event. A high degree of redundancy is built into the CCMS – both across the primary and backup data centres and within each centre. Business continuity procedures will be reviewed regularly for the CCMS as part of broader reviews of Austraclear's operational risk policy. In the case of a significant outage of the CCMS, critical collateral transfers may be conducted as 'Austraclear assisted transactions', consistent with existing Austraclear functionality.

Resilience requirements imposed on ASX Collateral apply equally to ASX Collateral's outsourced arrangements with Clearstream. Clearstream's reliability targets for CmaX are broadly equivalent to those of Austraclear. Specifically, they require 99.8 per cent availability and capacity utilisation of no more than 20 per cent. Clearstream can scale its service to cover 15 times the current average production load by the straightforward upgrade of existing hardware, and additional capacity can be obtained by adding servers and tuning software.

Further comfort may be gained from Clearstream's role as a provider of critical collateral management, settlement and custodial services to key markets in Europe and internationally. Clearstream employs a robust operational risk management framework, which is publicly documented on its website. It has been certified against International Standards Organisation (ISO) standards for quality management and information technology service management. Its resilience standards are broadly equivalent to those of Austraclear, including the use of geographically separated underground data centres with security huts, managed firewalls, anti-virus and anti-malware protection for email, and data encryption.

Clearstream is subject to oversight under several regimes. In particular, the Central Bank of Luxembourg performs periodic assessments of Clearstream against international standards, with an assessment against the Principles scheduled to be carried out in late 2013. These assessments evaluate Clearstream's operational risk management framework for its collateral management service (i.e. not specifically the ASX iteration). Assessments encompass Clearstream's optimisation functionality within the CmaX system. Additional assessments, from the point of view of user requirements, are carried out by the Eurosystem on a near-annual basis. None of these various assessments have identified significant issues with Clearstream's operation of its services. Clearstream is also subject to periodic examination by international assessors.

- 14.10 All of a securities settlement facility'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 securities settlement facility 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 Austraclear. ASX is applying these clauses to all new agreements with service providers, and has incorporated them into all of its key existing service agreements.

ASX Collateral

ASX Collateral and Clearstream provide critical services that are interdependent with Austraclear.

Rights of access for the Bank are provided by overlapping requirements established under AFSL conditions imposed on ASX Collateral, intragroup contractual arrangements, and additional requirements on Special Purpose Austraclear Participants that are Collateral Managers. Rights of access to the Bank in respect of CCMS services provided by Clearstream are provided by the Master Framework Agreement between ASX Operations Pty Limited and Clearstream.

- 14.11 A securities settlement facility 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 securities settlement facility's operations.**

SSF Standard 14.11 comes into effect on 31 March 2014.

Austraclear has begun to take steps to ensure that it will be able to comply with this standard once it comes into effect. Standard clauses in its agreements with service providers, including Clearstream for the CmaX system, require that providers give the Bank notice of any intention to terminate the agreement as a consequence of Austraclear's failure to pay fees, or in the event of the insolvency of Austraclear or any other ASX entity (see SSF Standards 14.9 and 14.10). This is intended to give the Bank an opportunity to take action to remedy the breach or otherwise ensure continued service provision.

Austraclear's arrangements to ensure continuity of operations in the event of a crisis will be shaped by the proposed introduction into Australian law of a resolution regime for FMs. This was foreshadowed in consultations undertaken by the Council of Financial Regulators and Treasury in 2011 and 2012. Austraclear will need to ensure that its arrangements to support continuity of operations in a crisis are appropriately adapted to the proposed FMI resolution regime.

Standard 15: Access and participation requirements

A securities settlement facility should have objective, risk-based and publicly disclosed criteria for participation, which permit fair and open access.

Rating: Observed

Austraclear has objective and transparent participation requirements set out in its Regulations and Procedures (SSF Standard 15.1). These requirements include minimum capital and other financial requirements, as well as operational arrangements that are tailored to the specific activities of Austraclear, including additional requirements for special purpose participants that are collateral managers (SSF Standard 15.2). 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 (SSF Standard 15.3).

Based on this information, the Bank's assessment is that Austraclear has observed the requirements of SSF Standard 15 during the 2012/13 Assessment period. Austraclear's access and participation requirements are described in further detail under the following sub-standards.

- 15.1 A securities settlement facility should allow for fair and open access to its services, including by direct and, where relevant, indirect participants and other FMs, based on reasonable risk-related participation requirements.**

Austraclear has objective and transparent participation requirements, which are publicly available and form part of its Regulations and Procedures. The Regulations and Procedures provide for an appeals process should an application for participation be rejected or a participant's access be terminated.

The CCMS's access to Austraclear is via a non-exclusive 'Special Purpose Participant (Collateral Manager)' category of participation. There are no provisions in the Austraclear Regulations that prevent fair and open access to other entities that may seek to offer their services as a Collateral Manager.

At the end of June 2013, Austraclear had 786 participants.

- 15.2 A securities settlement facility's participation requirements should be justified in terms of the safety of the securities settlement facility and the markets it serves, be tailored to and commensurate with the securities settlement facility's specific risks, and be publicly disclosed. Subject to maintaining acceptable risk control standards, a securities settlement facility should endeavour to set requirements that have the least restrictive impact on access that circumstances permit.**

Austraclear's participation requirements are designed to promote the safety and integrity of the SSF. They cover operational capacity, financial standing and business continuity arrangements.

Participation requirements for Special Purpose Participants that are Collateral Managers are based on requirements for other categories of participants and may be justified in terms of the safety of Austraclear and the market it serves. Specific business continuity requirements for Collateral Managers reflect the potential critical functionality of such infrastructure.

Under the Regulations and Procedures, Austraclear 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 enable it to meet its ongoing obligations. In addition, an applicant for special purpose participation as a Collateral Manager is required to have an Australian Financial Services Licence covering the activities that it will conduct as a Collateral Manager.

- 15.3 A securities settlement facility 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.**

Austraclear has wideranging powers to sanction its participants in order to preserve the integrity of the SSF. Austraclear may suspend or terminate a participant's authority to settle transactions in the event of a default, or in the event of a breach of the Regulations and Procedures that may have an adverse effect on the SSF. The action taken in the event of a breach will depend on a number of factors, including the participant's history of compliance and whether the breach implies negligence, incompetence or dishonesty. Where a breach has been identified and the participant has taken appropriate steps to rectify it, Austraclear will typically continue to monitor the participant closely for a period of time. Breaches are also referred to ASIC and, in most cases, are investigated by the Executive Office of ASX Compliance. Disciplinary action relating to rule breaches is brought before the ASX Compliance Officer.

Standard 16: Tiered participation arrangements

A securities settlement facility should identify, monitor and manage the material risks to the securities settlement facility arising from tiered participation arrangements.

Rating: Observed

In managing the risks associated with tiered arrangements, Austraclear is able to gather basic information on indirect participation (SSF Standard 16.1 and 16.2). 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 (SSF Standard 16.3).

Based on this information, the Bank's assessment is that Austraclear has observed the requirements of SSF Standard 16 during the 2012/13 Assessment period. Austraclear's approach to tiered participation arrangements is described in further detail under the following sub-standards.

- 16.1 A securities settlement facility 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 securities settlement facility arising from such tiered participation arrangements.**

As Austraclear does not undertake credit or liquidity risk as principal, the primary risks that may arise from indirect participation are operational. In particular, indirect participation arrangements that concentrated settlement activity within a few direct participants could concentrate operational risk to the facility. However, the nature of the wholesale OTC market in debt securities that it settles means that participation in Austraclear is generally direct. Nevertheless, any significant activity associated with indirect participation is likely to be recorded in sub-accounts within the accounts of participants that Austraclear is able to monitor. Austraclear currently considers the risks from concentration of indirect participants to be low.

- 16.2 A securities settlement facility should identify material dependencies between direct and indirect participants that might affect the securities settlement facility.**

Austraclear monitors dependencies arising from tiered participation indirectly through a variety of means, including 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 and Austraclear's broader array of monitoring activities. Based on this information, Austraclear has not identified any material dependencies between direct and indirect participants that might affect its operations.

- 16.3 A securities settlement facility should identify indirect participants responsible for a significant proportion of transactions processed by the securities settlement facility and indirect participants whose transaction volumes or values are large relative to the capacity of the direct participants through which they access the securities settlement facility in order to manage the risks arising from these transactions.**

In general, participation in Austraclear is direct, reflecting the wholesale OTC debt market that it serves. At end June 2013 there were 786 direct Austraclear participants.

ASX encourages participants to develop appropriate risk control measures in managing their relationships with clients, including any substantial indirect participants. ASX does not set

thresholds, either formal or informal, at which it would encourage direct participation by an indirect participant. In general, ASX's approach to managing risks associated with participants' business activities is based on a robust risk management framework with the flexibility to detect and react to new risks as they arise, rather than setting firm *ex ante* activity limits.

16.4 A securities settlement facility should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.

Austraclear is not exposed to financial risks from indirect participation, and its exposure to operational risks from indirect participants is limited by the bilateral nature of settlement between its participants and its relatively broad participation base. Austraclear would only be expected to face material risks from indirect participation were the nature of its participation base or activities to change significantly.

Standard 17: FMI links

A securities settlement facility that establishes a link with one or more FMIs should identify, monitor and manage link-related risks.

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 financial risks associated with these links but Austraclear is exposed to operational risks, which are managed in the context of the sound operational risk management practices of each FMI (SSF Standard 17.1). The legal basis of each link is supported by finality legislation, and link arrangements have been discussed with the Bank (SSF Standards 17.2, 17.3). Austraclear's link with Clearstream does not involve the extension of credit, provisional transfers of securities or the use of custodians (SSF Standards 17.4, 17.5, 17.6).

Based on this information, the Bank's assessment is that Austraclear has observed the requirements of SSF Standard 17 during the 2012/13 Assessment period. Austraclear's management of link-related risks is described in further detail under the following sub-standards.

17.1 Before entering into a link arrangement, and on an ongoing basis once the link is established, a securities settlement facility should identify, monitor and manage all potential sources of risk arising from the link arrangement. Link arrangements should be designed such that the securities settlement facility is able to comply with these SSF Standards.

Identifying link-related risks

Austraclear maintains three links to 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, regardless of the complexity or otherwise of the link and whether it is directly with the FMI or through an intermediary.

- There is a link with ASX Clear for funds transfers related to margin payments. Cash transfers are entered into Austraclear by ASX Clear, and then matched in Austraclear against the respective clearing participants' cash settlement instructions. Regular margin collections, which make up the majority of cash transfers in ASX Clear, are submitted to Austraclear by ASX Clear's margin and collateral systems, while intraday margin collections are entered manually.
- There is a link with 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. As for ASX Clear, 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 which needs to be received by ASX Clear (Futures) the day prior to the collateral being needed to cover margin, with the security being transferred to ASX Clear (Futures) via a free-of-payment trade in Austraclear. Settlement of 90-day bank bill futures takes place in Austraclear according to procedures set out in ASX 24's Operating Rules and Procedures. Sellers and buyers who are not full participants of Austraclear must appoint a full participant to act as their settlement agent.
- There is a link with Clearstream, in relation to Euroentitlements managed in Austraclear (see SSF Standard 9.1). Austraclear is a participant in Clearstream. A participant that has a Eurobond holding in Clearstream can choose to lodge that security in Austraclear, by transfer to Austraclear's Clearstream account. Participants with Eurobond holdings in Euroclear may also transfer securities to Austraclear's Clearstream account via a separate link maintained between Euroclear and Clearstream. Once available in the Austraclear system, arrangements for sales and purchases of the security are as for other debt securities. Withdrawals of the Euroentitlements from the Austraclear system are processed in a similar way to deposits, with Austraclear on request transferring the securities from its account in Clearstream to the participant's account with either Clearstream or Euroclear.

Managing operational risk

All links are subject to the same operational risk management framework that applies for all the ASX CS facilities, which addresses operational risks associated with software, infrastructure or network failures and manual processing errors. Incident reports are prepared for each significant technical or operational incident, with 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. Clearstream's operational risk management arrangements are overseen by the Central Bank of Luxembourg (Banque Centrale du Luxembourg), which performs periodic assessments of Clearstream against international standards, with an assessment against the Principles scheduled to be carried out in late 2013.

Managing financial risk

Austraclear does not assume any financial risks by virtue of its links to other FMIs.

- 17.2 A link should have a well-founded legal basis, in all relevant jurisdictions, that supports its design and provides adequate protection to the securities settlement facility and other FMIs involved in the link.**

Austraclear's links to ASX Clear and ASX Clear (Futures) have their legal basis in the Regulations, Operating Rules and Procedures of the three facilities. The finality of settlements made via these links is protected by an approval of Austraclear under Part 2 of the PSNA (see SSF Standard 1.5).

Austraclear's link to Clearstream has a legal basis in a contract between the two FMIs, and the system rules of Clearstream's international central securities depository. As noted under SSF Standard 17.1, Clearstream is regulated by the Banque Centrale du Luxembourg in accordance with international standards.

- 17.3 Where relevant to its operations in Australia, a securities settlement facility should consult with the Reserve Bank prior to entering into a link arrangement with another FMI.**

Austraclear has discussed its current link arrangements with the Bank. Austraclear did not enter into any new link arrangements during the Assessment period.

- 17.4 A securities settlement facility 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.**

Austraclear does not extend credit to Clearstream.

- 17.5 Provisional transfers of securities between a securities settlement facility 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.**

Euroentitlements are not made available to participants in Austraclear until title has been confirmed by deposit in Austraclear's account at Clearstream. Provisional transfers of securities cannot arise under the link between the two central securities depositories.

- 17.6 A securities settlement facility operating an investor central securities depository that uses an intermediary to operate a link with an issuer central securities depository should measure, monitor and manage the additional risks (including custody, credit, legal and operational risks) arising from the use of the intermediary.**

Austraclear does not use custodians or other intermediaries in its link with Clearstream.

Standard 18: Disclosure of rules, key policies and procedures, and market data

A securities settlement facility 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 securities settlement facility. All relevant rules and key policies and procedures should be publicly disclosed.

Rating: Broadly observed

Austraclear fully discloses its Regulations and Procedures to participants, and publicly discloses its rules and a range of additional relevant information on its risk management procedures (SSF Standard 18.1). This includes information regarding the general descriptions of system design and the roles of Austraclear and its participants (SSF Standards 18.2, 18.3). 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 (SSF Standard 20.4). ASX has published a high-level Disclosure Framework document, but will be expected to expand on this over the next Assessment period (SSF Standard 18.5).

The Bank notes the following steps that Austraclear should take to fully observe SSF Standard 18:

- Publish an expanded Disclosure Framework document, in a form consistent with that prescribed by CPSS-IOSCO, setting out in detail how Austraclear meets the requirements of each of the Principles (SSF Standard 18.5).

Austraclear is also encouraged to provide a central location on the ASX website linking to all information that is subject to disclosure requirements under the FSS. Currently this information is spread across a range of pages.

Based on this information, the Bank's assessment is that Austraclear has broadly observed the requirements of SSF Standard 18 during the 2012/13 Assessment period. Austraclear's disclosure of rules, key policies and procedures, and market data is described in further detail under the following sub-standards.

18.1 A securities settlement facility 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 SSF Standards 1.4, 2.2, 11.3, 13.4, 15.2 and 15.3).

Austraclear's Regulations and Procedures form the basis of all material aspects of the SSF's service to participants. The Regulations and Procedures are disclosed on ASX's public website.⁹

To assist participants in their understanding of the risks of participating in Austraclear, and for the information of other interested stakeholders, ASX publishes a range of additional material on its public website. Information specific to Austraclear includes information about participant requirements, SWIFT message protocols, trade and settlement monitoring systems, known software release issues and change requests, 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.

Specific disclosure requirements are dealt with under SSF Standards 1.4, 2.2, 11.3, 13.4, 15.2 and 15.3.

⁹ Available at <<http://www.asxgroup.com.au/asx-settlement-operating-rules-guidance-notes-and-waivers.htm>>.

- 18.2 A securities settlement facility should disclose clear descriptions of the system's design and operations, as well as the securities settlement facility's and participants' rights and obligations, so that participants can assess the risks they would incur by participating in the securities settlement facility (see SSF Standards 2.8 and 8.5).**

General descriptions of Austraclear's system designs and operations are detailed in the PFMI 'Disclosure Framework' document, available on ASX's public website (see SSF Standard 20.5).¹⁰ This 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 high-level overview of steps taken by ASX to ensure compliance with the Principles and the corresponding FSS. ASX's public website also provides introductory information, including high-level descriptions of systems and operations, for each CS facility.

- 18.3 A securities settlement facility should provide all necessary and appropriate documentation and training to facilitate participants' understanding of the securities settlement facility's rules, policies and procedures and the risks they face from participating in the securities settlement facility.**

All applicants for participation in Austraclear are provided with a comprehensive application pack, which includes information regarding key requirements of the facilities. Applicants are provided with access to the Regulations, Procedures and Guidance Notes via the ASX website, as well as publicly available information about the facilities, services and participation requirements. When Austraclear has completed an initial assessment of an application, the applicant is also invited to attend formal 'on boarding' meetings with the Compliance and Operations units to discuss key areas of importance for participants.

As part of the formal admission process, the applicant must provide supporting evidence demonstrating its capacity to comply with the rules. This is reviewed and discussed with the applicant prior to approving admission. When reviewing the submissions, ASX will make enquiries of participants about their risk assessments, the design of the controls to mitigate those risks, and the applicable supervisory arrangements.

Where ASX becomes aware of a participant demonstrating a lack of understanding of the Regulations 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 normal risk monitoring activities or through its regular discussions with participants (see SSF Standard 14.5). An example of a matter that might raise concerns would be if a participant had a high frequency of technical connectivity issues. If the matter is serious, ASX may require that the participant remediate the weakness. Alternatively, ASX may impose conditions on participation, or require that the participant appoint an independent expert to assist with the remediation task.

- 18.4 A securities settlement facility should complete regularly and disclose publicly responses to the CPSS-IOSCO *Disclosure Framework for Financial Market Infrastructures*. A securities settlement facility also should, at a minimum, disclose basic risk and activity data, as directed by the Reserve Bank from time to time.**

ASX has published a Disclosure Framework document that describes its approach to meeting the disclosure framework, including a summary of ASX's self-assessment of how its CS facilities

¹⁰ Available at <http://www.asxgroup.com.au/media/pfmi_disclosure_framework.pdf>.

meet the applicable principles. ASX will update this document to reflect information provided to the Bank through the annual Assessment process. This update will add more detail as to how the CS facilities meet the Principles and corresponding FSS. ASX plans to update the document at least annually or as necessary. The Bank will be monitoring how ASX elaborates on this disclosure document over the forthcoming Assessment period.

Standard 19: Regulatory reporting

A securities settlement facility 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 securities settlement facility 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 Austraclear to discuss matters relevant to its compliance with the FSS, and related aspects of its risk management and operational arrangements, and has been kept informed of relevant developments during the Assessment period (SSF Standard 19.1). Austraclear provides the Bank with financial, activity and operational data and reports on a regular and timely basis (SSF Standard 19.2).

The Bank's assessment is that Austraclear has observed the requirements of SSF Standard 19 during the 2012/13 Assessment period. Austraclear's regulatory reporting arrangements with the Bank are described under the following sub-standards.

19.1 A securities settlement facility should inform the Reserve Bank as soon as reasonably practicable if:

- (a) it breaches, or has reason to believe that it will breach:
 - (i) an SSF 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 securities settlement facility becomes subject to external administration, or if the securities settlement facility 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 securities settlement facility has reasonable grounds for suspecting that a participant will become subject to external administration;
- (e) a participant fails to meet its obligations under the securities settlement facility's risk control requirements or has its participation suspended or cancelled because of a failure to meet the securities settlement facility'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 securities settlement facility; or
- (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).

Three routine quarterly meetings are held between the Bank and ASX:

- 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
- 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 Executive General Manager, Operations, and other members of the management team responsible for implementation of operational strategy, management of operational risk and business continuity planning.

In addition, the Bank, ASIC and ASX hold a monthly meeting to discuss matters of common interest, including proposed rule changes and regulatory developments. 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 Austraclear's risk exposure; for example, if there was an operational outage or a participant entered external administration. 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 2012/13 Assessment period, ASX kept the Bank up to date with the status of important project milestones, including the rollout of ASX Collateral. The Bank is satisfied with its level of communication with ASX over this period.

19.2 A securities settlement facility 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 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.

The Bank conducts a quarterly review of ASX's adherence to the FSS, focusing on any material developments in its risk management activities. As part of this review process, ASX provides detailed activity, risk and operational data. Data provided quarterly to the Bank include settlement values and volumes, and data on system availability and capacity utilisation. Quarterly operations meetings between the Bank and ASX provide a forum for discussion of developments.

From time to time the Bank will request additional information from Austraclear on topics of interest, particularly in regard to any operational incidents or the status of projects with significant risk implications.

During the second half of 2013, the Bank will be conducting a review of the data it collects from ASX to better support its assessment of the CS facilities against the requirements of the FSS.