

Oversight, Supervision and Regulation of Financial Market Infrastructures

Financial market infrastructures (FMIs) are institutions that facilitate the clearing, settlement and recording of monetary and other financial transactions. The Reserve Bank has a role in overseeing and supervising three types of FMIs: central counterparties (CCPs) and securities settlement facilities (SSFs)¹⁵ – together referred to as clearing and settlement (CS) facilities – as well as systemically important payment systems.

The Reserve Bank's Regulatory Regime for FMIs

The *Corporations Act 2001* assigns to the Bank a number of powers and functions related to the supervision and oversight of CS facilities. Under the *Reserve Bank Act 1959*, the Payments System Board is responsible for ensuring that these powers and functions are exercised in a way that will best contribute to the overall stability of the financial system.

In accordance with the Reserve Bank Act, the Payments System Board also plays a role in the governance of the Bank's oversight of systemically important payments systems.

CS facilities

CS facilities that operate in Australia are required to be licensed or exempted under Part 7.3 of the Corporations Act. The requirement to be licensed applies to both domestic and overseas facilities. Under this act, the Bank and the Australian Securities and Investments Commission (ASIC) have separate, but complementary, regulatory responsibilities for the supervision of CS facilities.

The Corporations Act assigns to the Bank a number of powers and functions related to the supervision and oversight of CS facilities; in particular, the Bank is responsible for:

- providing advice to the Minister regarding applications for CS facilities, variations to or imposition of conditions on licenses, or the suspension or cancellation of licences
- determining standards (the Financial Stability Standards) for the purposes of ensuring that CS facility licensees conduct their affairs in a way that causes or promotes overall stability in the Australian financial system
- assessing how well a licensee is complying with these standards and its obligation under the Corporations Act, to the extent that it is reasonably practicable to do so, to do all other things necessary to reduce systemic risk.

Under the Reserve Bank Act, the Payments System Board is responsible for ensuring that the Bank exercises these powers and functions in a way that will best contribute to the overall stability of the financial system.

¹⁵ Referred to internationally as securities settlement systems.

Financial Stability Standards

The Bank has determined two sets of Financial Stability Standards – one for CCPs and one for SSFs.^{16,17} It is an obligation of each licensed CS facility that it meets the relevant set of Standards.

The objectives of the Standards are to ensure that CS facility licensees identify and properly control risks associated with the operation of the CS facility, and conduct their affairs in accordance with the Standards in order to promote overall stability of the Australian financial system. The Standards set principles-based requirements and regulatory expectations, rather than prescribing detailed rules and obligations.

In developing these Standards, the Bank has given close regard to the internationally agreed standards for FMI set out in the *Principles for Financial Market Infrastructure* (PFMI). The PFMI are designed to ensure that the FMIs supporting global financial markets are robust and well placed to withstand financial shocks. The overall objective is to ensure that FMIs promote stability and efficiency in the financial system.

The consistency of the Bank's Standards with the PFMI has been verified through a peer review conducted in 2015 by the Committee on Payments and Market Infrastructures (CPMI) and the Technical Committee of the International Organization of Securities Commissions (IOSCO), the standard-setting bodies that developed the PFMI.¹⁸

No new Standards were determined in 2016/17.

The application of additional PFMI guidance to CS facilities

In recent years CPMI and IOSCO have developed additional guidance on a number of aspects of the PFMI. This guidance seeks to enhance FMI risk management practices by providing further clarity and detail on the existing requirements within the PFMI. The guidance covers, for example, areas of emerging risk or areas in which CPMI and IOSCO had been identified that there were inconsistencies in how particular standards in the PFMI had been interpreted or adopted. The guidance encourages FMIs to adopt best practices and seeks to foster international consistency, where that is appropriate. Specifically:

- In February 2016 CPMI and IOSCO published a *Statement on Clearing of Deliverable FX Instruments* (the FX Statement) which provides further explanation on considerations such as the management of liquidity risk and ensuring certainty of settlement.¹⁹
- In June 2016, CPMI and IOSCO published the *Guidance on Cyber Resilience for Financial Market Infrastructures* (the Cyber Resilience Guidance).²⁰
- In July 2017, CPMI and IOSCO published *Resilience of Central Counterparties (CCPs): Further Guidance on the PFMI*, which seeks to clarify and elaborate on existing requirements in the PFMI related to CCP resilience.²¹ For further details see 'Policy Development' below.
- Also in July 2017, CPMI and IOSCO published revised guidance on recovery of FMIs, in the report *Recovery of financial market infrastructures*.²²

16 Available at <<https://www.rba.gov.au/payments-and-infrastructure/financial-market-infrastructure/clearing-and-settlement-facilities/standards/securities-settlement-facilities/2012/>>.

17 Available at <<https://www.rba.gov.au/payments-and-infrastructure/financial-market-infrastructure/clearing-and-settlement-facilities/standards/central-counterparties/2012/>>.

18 CPMI-IOSCO, *Implementation monitoring of PFMI: Level 2 Assessment Report for Australia*, December 2015. Available at <<http://www.bis.org/cpmi/publ/d140.pdf>>.

19 Available at <<http://www.bis.org/cpmi/publ/d143.htm>>.

20 Available at <<http://www.bis.org/cpmi/publ/d146.htm>>.

21 Available at <<http://www.bis.org/cpmi/publ/d163.htm>>.

22 Available at <<http://www.bis.org/cpmi/publ/d162.htm>>.

The Bank intends to apply this additional guidance in interpreting the relevant Financial Stability Standards. In 2016/17 it commenced assessments of domestic CS facilities against the Cyber Resilience Guidance. In 2017/18 the Bank intends to assess domestic CCPs against guidance on CCP resilience and review the implications of the revised recovery guidance. Currently, no CCP is licensed to clear deliverable foreign exchange (FX) instruments in Australia. However, should this change, the Bank will have regard to the FX Statement in interpreting the relevant CCP Standards.

Licensed CS facilities

At present there are seven CS facilities licensed to operate in Australia:

- The four ASX Group facilities – ASX Clear Pty Limited (ASX Clear), ASX Clear (Futures) Pty Limited (ASX Clear (Futures)), ASX Settlement Pty Limited (ASX Settlement) and Austraclear Limited (Austraclear) – which are domiciled in Australia.
- IMB Limited, an Australian building society, which operates a market for trading in its own shares by its members, and an associated SSF to settle these trades.
- The United Kingdom-based LCH Limited (LCH Ltd).
- The US-based Chicago Mercantile Exchange Inc. (CME).

There were no new CS facility licences granted in 2016/17; there was, however, a cancellation of LCH Ltd's licence to clear for the Financial and Energy Exchange (FEX) facility. LCH Ltd retains its licence to operate the SwapClear service in Australia.

Assessments

As part of its obligations under the Corporations Act, the Bank must periodically assess how well a

CS facility licensee is complying with the Financial Stability Standards and doing all other things necessary to reduce systemic risk.²³ The Bank also assesses prospective licensees against these standards at the time of their licence application.

The Bank has set out in policy statements its broad approach to assessments, and also the frequency with which it will conduct assessments.^{24,25} These policy statements are summarised below; there were no changes to these policy statements in 2016/17.

Consistent with the CPMI–IOSCO assessment methodology, which encourages greater transparency regarding the activities of FMIs, the Bank publishes its assessments of CS facilities.²⁶

Approach to assessments

For all licensed CS facilities, there are general information provision requirements that apply:

- All CS facilities are required to provide timely information to the Bank of material developments.
- All CS facilities must provide the Bank with periodic regulatory reports and regular activity, risk and operational data.

In other respects, the Bank's approach depends on whether a CS facility is an Australian-based facility or its primary place of business is overseas.

For domestic facilities, when undertaking assessments of a domestic CS facility's

²³ The exception is IMB Limited, which is currently exempt from the Financial Stability Standards owing to its small size.

²⁴ 'The Reserve Bank's Approach to Assessing Clearing and Settlement Facility Licensees', available at <<https://www.rba.gov.au/payments-and-infrastructure/financial-market-infrastructure/clearing-and-settlement-facilities/standards/assess-csf-licensees.html>>.

²⁵ 'Frequency and Scope of Regulatory Assessments of Licensed Clearing and Settlement Facilities', available at <<https://www.rba.gov.au/payments-and-infrastructure/payments-system-regulation/frequency-of-assessments.html>>.

²⁶ CPMI–IOSCO, *Principles for Financial Market Infrastructures: Disclosure framework and assessment methodology*, December 2012. Available at <<http://www.bis.org/cpmi/publ/d106.htm>>.

compliance with the standards, the Bank's methodology is guided by CPMI-IOSCO's assessment methodology for the PFMI, which provides a framework for assessing and monitoring observance of the PFMI.

The Bank complements the periodic information it receives with in-person meetings with CS facility personnel, including: semi-annual senior executive-level discussions of strategy and relevant market developments; quarterly meetings with executives/senior management to discuss developments relevant to compliance with the standards and other material developments; quarterly meetings with management/staff to discuss developments in financial and operational risk management; and other ad hoc meetings are held as needed.

The Bank's assessment reports of a domestic CS facility's compliance with the standards typically comprise: an assessment of progress in addressing recommendations and stated regulatory priorities identified in previous assessments; a discussion of material changes in the operation of the facility and their implications for compliance with the standards; a more comprehensive and detailed 'deep dive' assessment against a subset of the standards; and a review of how the CS facility's arrangements address each of the standards.

The Bank's supervisory approach to overseas CS facilities depends on a number of factors:

- whether the supervisory regime in an overseas CS facility's home jurisdiction is sufficiently equivalent to that in Australia
- whether satisfactory information sharing and regulatory cooperation arrangements have been established between the Bank and the relevant overseas authorities.

Where these conditions are met, the Bank will in general look to rely on the CS facility's

primary regulator, rather than undertake direct supervision. Given that the Bank and many other jurisdictions have incorporated the PFMI into their regulatory regimes, the Bank would in general expect this to be the case for most overseas CS facilities looking to operate in Australia. However, there may still be some differences in detail between the Bank's standards and the overseas regime that mean the Bank undertakes a direct assessment of the facility's compliance with these aspects of the standards. In practice, these differences are typically where the standards specify Australian-specific regulatory reporting and notification requirements and/or measures to enhance Australian regulatory influence over cross-border facilities.

For all overseas CS facility licensees the Bank reserves the right to gather information through a range of interactions with the licensee to aid its understanding of material developments affecting the licensee or to assess progress against stated regulatory priorities, including participation in supervisory 'colleges' organised by the primary regulator.

In accordance with the above information sharing expectations, the Bank is party to a number of bilateral and multilateral agreements that are relevant to the Bank's oversight of the two overseas CS facility licensees that operate in Australia.

- Bilateral Memoranda of Understanding (MoU) are in place with the Bank of England (with respect to oversight of LCH Ltd) and with the United States (US) Commodity Futures Trading Commission (with respect to oversight of CME). These MoUs establish cooperation arrangements and the exchange of information between the Bank and the relevant overseas regulators.
- The Bank is also a member of two international multilateral cooperative

arrangements as part of its oversight of LCH Ltd: the Multilateral Arrangement for Regulatory, Supervisory and Oversight Cooperation on LCH Ltd (LCH Ltd Global College), which is a forum of LCH Ltd's international regulators; and the LCH Ltd Crisis Management Group, which was formed to create arrangements between international regulators to undertake recovery and resolution planning for LCH Ltd.

Frequency and scope of assessments

The frequency of assessment against the relevant standards is considered with reference to whether: (i) a facility is systemically important in Australia, and/or (ii) has a strong domestic connection. The Bank has determined that the four domestic ASX Group CS facility licensees (ASX Clear, ASX Clear (Futures), ASX Settlement and Austraclear) meet these criteria and therefore are assessed annually. In addition, the Bank has determined that one overseas facility (LCH Ltd) should also be assessed annually.

Assessments of other CS facilities will typically be undertaken at a reduced level of detail and may be carried out on a less frequent basis. In the case of overseas facilities, the assessment cycle of the home regulator will be a relevant consideration. Furthermore, depending on the nature and scope of a CS facility's activities in Australia, detailed assessments against all parts of the standards may not be necessary. Where the Bank has set regulatory priorities, however, an update on progress against these would be expected to be carried out. These arrangements currently apply in the case of CME.

Systemically important payment systems

A key element of the Payments System Board's responsibility for the safety and stability of the payments system in Australia is the oversight of systemically important payment systems.

The only domestic payment system that the Bank regards as systemically important, and hence for which an assessment against international principles is necessary, is the Reserve Bank Information and Transfer System (RITS).²⁷ Consistent with the criteria for systemic importance outlined in the PFMI, this view reflects the fact that RITS:

- is the principal domestic payment system in terms of the aggregate value of payments
- mainly handles time-critical, high-value payments
- is used to effect settlement of payment instructions arising in other systemically important FMI.

Effective oversight of RITS is assured through internal governance arrangements within the Bank that separate operational and oversight functions, as well as by transparent assessments against the PFMI. To this end, since 2013 the Bank has published annual assessments of RITS against the PFMI.²⁸ These assessments are reviewed by the Board, which also reviews any material developments occurring between assessments.

CLS Bank International (CLS) is an international payment system for settling foreign exchange trades in 18 currencies, including the Australian Dollar (AUD). Since CLS settles a significant, and growing, value of AUD-denominated foreign exchange-related payments, the Bank has identified CLS as a systemically important international payment system. CLS is regulated, supervised and overseen by the Federal Reserve, in cooperation with an oversight committee that includes the Bank and a number of other

²⁷ In conducting these assessments the Bank has regard to relevant guidance issued by CPMI and IOSCO. In particular, from 2016/17 the Bank has been applying the June 2016 Guidance on Cyber Resilience for Financial Market Infrastructures.

²⁸ Between 2015 and 2017 the Bank changed the time of year that it conducts its assessment of RITS resulting in a longer gap between these two assessments.

overseas central banks. Through this forum the Bank is involved in overseeing how well CLS meets the requirements of the PFMI. CLS is also required to publish a disclosure describing its operations and approach to observing the applicable principles.

While SWIFT is not a payment system, it provides critical communications services to both RITS and CLS, as well as other FMIs and market participants in Australia and overseas. SWIFT is primarily overseen by the SWIFT Oversight Group (OG), of which the G10 central banks are members. Since SWIFT is incorporated in Belgium, the OG is chaired by the National Bank of Belgium. The Bank is a member of the SWIFT Oversight Forum, a separate group established to support information sharing and dialogue on oversight matters among a broader set of central banks. The SWIFT Oversight Forum gives these central banks an opportunity to input into the OG's oversight priorities. Oversight of SWIFT is supported by a set of standards – the High-level Expectations – which are consistent with standards for critical service providers in the PFMI.

The Bank also monitors developments in the payments landscape periodically to consider whether any other payment systems should also be subject to ongoing oversight and assessments against the PFMI.

The Reserve Bank's FMI Oversight and Supervision Activities

Day-to-day oversight and supervision of FMIs is undertaken by the Bank's Payments Policy Department, in accordance with the approach to assessments discussed above. In carrying out these activities, the Bank works closely with ASIC as appropriate.

The Bank's oversight and supervision activity is overseen by an internal body of the Bank, the FMI Review Committee, which was established by,

and reports to, the Bank's Executive Committee; the FMI Review Committee's annual report is also provided to the Payments System Board. This committee is chaired by the Assistant Governor (Financial System), who is also Deputy Chair of the Payments System Board. Other members include the heads of the Payments Policy, Payments Settlements and Domestic Markets departments, as well as two senior staff members with expertise in FMI-related matters but who are not currently directly involved in the Bank's oversight and supervision of FMIs. A core part of the committee's role is to ensure that oversight activities are carried out in a manner that is consistent with policies established by the Board. The committee meets quarterly, approximately six weeks before Payments System Board meetings, as well as dealing with matters by written procedure as needed. Senior staff of Payments Policy Department provide direct reports to the Payments System Board on the Bank's oversight and supervisory activities.

The following summarises activity and material developments over 2016/17 for the six CS facilities and the systemically important payment systems overseen and supervised by the Bank.

ASX

All four domestic CS facility licensees required to meet the standards are part of the ASX Group (see the chapter on 'Trends in Payments, Clearing and Settlement Systems'). In September 2017, the Bank published the 2016/17 assessment of these facilities.²⁹ This assessment concluded that, except for ASX Clear (Futures), the CS facilities 'observed' all relevant requirements under the Standards; ASX Clear (Futures) 'observed' or 'broadly observed' all relevant requirements

²⁹ The Bank's 2016/17 Assessment of ASX Clearing and Settlement Facilities is available at <<https://www.rba.gov.au/payments-and-infrastructure/financial-market-infrastructure/clearing-and-settlement-facilities/assessments/2016-2017/>>.

in the Financial Stability Standards. The steps taken by ASX to address the Bank's regulatory priorities during 2016/17, as well as other material developments, are set out below.

Investment risk

The 2014/15 Assessment of the ASX CS facilities clarified the Bank's expectations for the credit and liquidity risk profile of the ASX CCPs' treasury investments. These expectations were set in light of concerns that the ASX CCPs' treasury investment policy allowed relatively large and concentrated unsecured exposures to the four large domestic banks. After a multi-year transition period, from July 2017 ASX has implemented changes to its treasury investment policy that fully address the Bank's recommendation. From this time, over half of the CCPs' investment portfolio has been invested in government or semi-government bonds, or reverse repurchase agreements secured by such bonds. The remainder of the portfolio is invested in securities issued by authorised deposit-taking institutions (ADIs), or held in deposits with ADIs. Individual unsecured exposures to non-government-related issuers or counterparties are limited to the level of business risk capital held across the two CCPs (currently \$75 million). Reflecting these changes, the Bank has raised the ASX CCPs' rating to 'observed' for the Custody and Investment Risk standard.

Liquidity risk management

Consistent with the Bank's regulatory priorities, ASX made a number of enhancements to its liquidity risk management framework over 2016/17. These include:

- restricting the assets in its investment portfolio which can count towards its minimum liquid resource requirement to cash held in accounts at central banks or creditworthy commercial banks, and securities issued by

the Australian or State Governments or the New Zealand Government

- refining its liquidity-specific stress scenarios, which measure the CCPs' payment obligations in extreme but plausible circumstances, and developing a framework for stress testing foreign currency liquidity exposures
- testing to ensure that the CCPs are able to liquidate their investments and non-cash collateral, and conducting due diligence around ASX Clear's ability to access its committed liquidity facility.

Default management

In 2015/16 the Bank conducted a detailed assessment of the ASX CS facilities' default management arrangements against the relevant requirements in the Standards. While the Bank assessed that all the CS facilities observed the standard on default management rules and procedures at that time, the Bank made a number of recommendations outlining some additional steps the ASX CS facilities should take to fully meet expectations. Consistent with these recommendations, the SSFs significantly enhanced the documentation supporting their default management frameworks (DMFs), and ASX published additional information on particular aspects of the CS facilities' DMFs. The facilities have also established a multi-year plan to enhance the scope of their default management fire-drills, which the Bank will monitor in the coming assessment periods.

Cyber resilience

A key regulatory priority over 2016/17 has been in the area of cyber resilience. To this end, the Bank, in cooperation, with ASIC, conducted a detailed assessment of the CS facilities' governance arrangements relevant to cyber resilience against the governance chapter in the Cyber Resilience Guidance. ASX is conducting a self-assessment

against the remaining chapters of the guidance, which will draw in part from an external review against industry standards, both of which the Bank intends to review during the next assessment period.

Consistent with the Cyber Guidance, ASX has also developed a concrete plan to improve its capabilities to recover from a cyber attack, which builds on ASX's existing cyber security plan and strategy.

Operational review

Following a number of operational disruptions in 2016/17 across both its trading and CS facilities, ASX, at the instigation of the Bank and ASIC, has commissioned an external assessment of its operational risk management arrangements.³⁰ The review will consider ASX's current technology governance, operational risk practices and control mechanisms. The Bank and ASIC will review the results of the report in 2017/18 and ASX's response to any recommendations made in the review.

CHES replacement

During 2017 ASX continued its development work on its project to replace the CHES clearing and settlement system. This is an important element of ensuring that ASX's core infrastructure for the cash equities market meets international best practice, and that its performance, resilience, security and functionality continue to meet the needs of its users. ASX is working with a vendor, Digital Asset Holdings, to develop a potential CHES replacement based on a permissioned, private distributed ledger technology (DLT) system. ASX intends to make a final decision on whether to implement the DLT solution or use an

alternative technology to replace CHES towards the end of 2017.

LCH Limited

LCH Ltd is licensed in Australia to provide CCP services for over-the-counter (OTC) interest rate derivatives (IRD) and inflation rate derivatives (see the chapter on 'Trends in Payments, Clearing and Settlement Systems').³¹ In June, LCH Ltd's licence to clear trades executed on the FEX market, which is not yet operational, was cancelled at LCH Ltd's request.

In December 2016, the Bank published the *2015/16 Assessment of LCH.Clearnet Limited's SwapClear Service*.³² This assessment concluded that LCH Ltd met the CCP Standards and either met or made progress towards meeting the Bank's regulatory priorities. Steps taken so far by LCH Ltd to address these priorities, as well as other material developments, are set out below.

Operating hours in Australia

LCH Ltd has continued its work to extend the operating hours of the SwapClear service, while ensuring the safety and resilience of its operations. Currently, the SwapClear service is closed for much of the Australian business day, and trades executed during that time are not cleared by SwapClear until the Australian afternoon when the SwapClear service opens. In February, LCH Ltd extended its operating hours for the SwapClear service, opening it from one hour earlier when possible. The official opening time remains at 6 am London time. LCH Ltd expects to have the technical capability of extending SwapClear's operating hours to

³⁰ For instance, in September there was a major disruption to the operation of ASX's equity trading system and in February there was an incident affecting Austraclear following a power outage.

³¹ In December 2016, the legal name of 'LCH.Clearnet Limited' was changed to 'LCH Limited' in the UK.

³² The Bank's *2015/16 Assessment of LCH.Clearnet Limited's SwapClear Service* is available at <<https://www.rba.gov.au/payments-and-infrastructure/financial-market-infrastructure/clearing-and-settlement-facilities/assessments/lch/2016/pdf/lch-assess-2016-12.pdf>>.

close to 24/5 after a major system upgrade, but it will need to undertake additional work following the upgrade to implement this extension.

Protected Payments System arrangements in Australia

The Bank has requested that LCH Ltd complete its implementation of its Protected Payments System (PPS) arrangements in Australia to facilitate payments to and from its Australian clearing participants. The four major Australian banks are required to use the Australian PPS arrangements to settle their AUD obligations directly with LCH Ltd using their exchange settlement accounts at the Bank. Three of the four major banks are now meeting this requirement. LCH Ltd is working with the remaining major bank to determine a technical solution to enable it to use the Australian PPS arrangements.

Chicago Mercantile Exchange Inc.

CME is licensed to provide CCP services for OTC IRD, and non AUD IRD traded on the CME market or the Chicago Board of Trade market for which CME permits portfolio margining with OTC IRD. In March, the Bank published its 2017 assessment of CME, which concluded that CME had either met or made progress towards meeting the regulatory priorities identified by the Bank in its previous Assessment. The key priorities and progress made by CME are described below.

Given the nature and scope of CME's current activities in Australia, the Bank did not consider it necessary to conduct a detailed assessment of CME against all of the CCP Standards. Once CME has material direct Australia-based clearing participation or there is a material increase in CME's provision of services in Australian-related products, the Bank will expect CME to ensure that CME's operational and governance

arrangements promote stability in the Australian financial system.

Recovery and wind-down plan

The March 2016 assessment set a priority that CME should complete its work to implement appropriate recovery and wind-down plans. In 2016, CME developed or enhanced the recovery and wind-down plans for its three clearing services, including implementing rule changes for its Base clearing service. Where applicable, the Bank anticipates CME will make conforming changes to the 'end of waterfall' rules for the OTC IRD and CDS services in 2017. The Bank will review CME's recovery and wind-down plans once they are finalised.

Investment risk

Over the past year, CME has worked towards expanding the number of investment counterparties it has, including opening accounts at the Federal Reserve Bank of Chicago and the Bank of Canada. This has enabled CME to further reduce the size and concentration of unsecured investments of cash collateral with non-government obligors, and so address the priority set out in the March 2016 assessment.

Reserve Bank Information and Transfer System

RITS is Australia's high value payments system that is used by banks and other financial institutions to settle their payment obligations (see the chapter on 'Trends in Payments, Clearing and Settlement Systems'). The most recent assessment of RITS against the PFMI was endorsed by the Board and published in May.³³ The assessment concluded that RITS had observed all of the relevant principles. The assessment also noted that the

³³ The 2017 Assessment of the Reserve Bank Information and Transfer System is available at <<https://www.rba.gov.au/payments-and-infrastructure/rits/self-assessments/2017/>>.

recommendations from the previous assessment in November 2015, relating to cyber resilience and the RITS Regulations, had all been addressed. The key priorities and steps taken by the Bank to address these are set out below.

Cyber resilience

During the assessment period, the Bank completed a series of reviews of RITS cyber resilience arrangements. The reviews concluded that RITS has strong cyber defences overall. Nevertheless some recommendations were made based on these reviews to further strengthen RITS cyber resilience. All high priority recommendations, representing findings requiring prompt clarification or where material risk had been identified, have been implemented. Work is underway to complete lower-priority recommendations and the Bank's Payments Policy Department will review progress through its ongoing oversight of RITS.

RITS was also assessed against the Cyber Resilience Guidance. No significant issues were identified. The assessment concluded that RITS has met the expectation that FMIs develop concrete plans to improve their capabilities to meet the two-hour recovery time objective. In particular, there are concrete plans to implement enhanced monitoring capacities to identify cyber attacks and enhance systems and processes to enable recovery of accurate data following a breach. There are also processes in place to ensure that the Bank evaluates current and emerging technology that could lead to further enhancements to the ability to recover from cyber attacks in a timely manner.

RITS regulations

A new set of RITS regulations was implemented on 27 March. Since the commencement of RITS in 1998, changes in its functionality and activity had resulted in an increasingly complex set of

documents governing its operations. The main objective of re-writing these regulations was to improve their clarity. The new regulations also provided an opportunity to move to the 2011 Global Master Repurchase Agreement (GMRA), which (amongst other things) improves upon the 2000 GMRA processes for dealing with a counterparty default.

CLS Bank International

Over 2016/17 CLS progressed plans to develop a stand-alone CCP Service to settle centrally cleared deliverable FX products, with Eurex and LCH Ltd both interested in using the service. CLS's CCP Service will provide net settlement of centrally cleared FX obligations, which will minimise the liquidity risk faced by CCPs using the service. CLS has also announced plans to launch a bilateral payment netting service, which will net payment obligations in more than 140 currencies. The latter is part of plans by CLS to diversify its operations beyond providing FX settlement services.

SWIFT

During 2016/17, cyber resilience remained an important focus of SWIFT and its overseers. In mid 2016, SWIFT introduced a Customer Security Programme, which aims to improve information sharing on threats and emerging best security practices, as well as to enhance security guidelines and provide audit frameworks for users of the SWIFT network. Of particular note, in April 2017, SWIFT formally published a core set of security controls that all customers must meet for their local SWIFT-related infrastructure. SWIFT customers will need to provide a self-attestation against the mandatory controls by the start of 2018, and on an annual basis thereafter.

Policy Development

The Bank works with other regulators (both domestically and abroad) on issues relevant to the regulation and oversight of FMI. In Australia, much of this work has been coordinated by the Council of Financial Regulators (CFR) and, internationally, the Bank engages with relevant international standard-setting bodies. Where relevant to the Board's responsibilities, the Board has been kept updated on developments and members' input and guidance have been sought.

In light of the international implementation of mandatory CCP clearing for OTC derivatives, the resilience of CCPs remains a strong focus of the global standard-setting bodies. These bodies have established a joint CCP workplan to examine potential risks to stability arising from the increasingly prominent role of CCPs, and to consider the need for additional policy guidance.

The Bank has been closely engaged in this international work, given its relevance to domestic regulatory standards. Domestically, the Bank has also contributed to CFR-led work to develop a special resolution regime for FMI, as well as continued work on competition in the clearing and settlement of cash equities in Australia.

International

CCP workplan

In light of the increasing systemic importance of CCPs, a focus of international policy work on FMI over recent years has been on CCP resilience, recovery and resolution. This work is being conducted under a joint CCP workplan developed by CPMI, the Financial Stability Board (FSB), IOSCO and the Basel Committee on Banking Supervision.³⁴ The Bank has been closely

involved in two of the main components of the CCP workplan:

- *CCP resilience and recovery measures.* As discussed earlier, CPMI and IOSCO recently published additional guidance that seeks to clarify and elaborate on existing requirements in the PFMI related to CCP resilience. The additional guidance, which has been informed by work on monitoring implementation across countries, addresses a number of aspects of CCPs' risk frameworks, including stress test and margin practices and associated governance arrangements. At the same time, CPMI–IOSCO also published revised guidance on recovery of FMI.
- *CCP resolution.* The FSB recently published guidance on the design of effective strategies and plans for the resolution of CCPs.³⁵ The guidance also covers cooperation between authorities regarding the resolution of CCPs that are systemically important in more than one jurisdiction, including the establishment of crisis management groups. This work builds on an FMI-specific annex to the FSB's *Key Attributes of Effective Resolution Regimes for Financial Institutions*. Over the coming period, the FSB will conduct further work on the adequacy of financial resources for CCP resolution and the treatment of CCP equity in resolution.

Implementation monitoring

The CPMI–IOSCO Implementation Monitoring Steering Group is monitoring the international implementation of the PFMI. Payments Policy Department contributed to four implementation monitoring reports in 2016/17. Two reports were recently published on the extent to which the legal, regulatory and oversight frameworks

³⁴ The workplan and an update on implementation as of July 2017 are available at <<http://www.bis.org/cpmi/publ/d165.pdf>>.

³⁵ *Guidance on Central Counterparty Resolution and Resolution Planning.* Available at <<http://www.fsb.org/wp-content/uploads/P050717-1.pdf>>.

that apply to systemically important FMI in Hong Kong and Singapore, respectively, are consistent with the PFMI. In July, the fourth update examining whether jurisdictions have made regulatory changes reflecting the Principles and Responsibilities was published. Payments Policy is also contributing to a targeted follow-up to a report published in August 2016, which considered the consistency in outcomes achieved in the implementation of the PFMI by ten derivatives CCPs. The scope of both the August 2016 report, as well as the targeted follow-up, included three CCPs that are licensed in Australia: ASX Clear (Futures), LCH Ltd and CME. The follow-up report is expected to be published later in 2017.

Domestic

In developing domestic policy for FMI, the Bank works with the other regulatory entities constituting the CFR, the coordinating body for Australia's main financial regulatory agencies. During 2016/17, the focus of the CFR's work on FMI has been on FMI resolution and competition in clearing and settlement of equities.

A resolution regime for FMI in Australia

During the past year, the CFR agencies have continued work to develop a special resolution regime for FMI.³⁶ Alongside this, the CFR will also work with the Government to draft legislation to amend the approach Australian authorities take in assessing whether an overseas CS facility should be subject to regulation in Australia. The proposal, which was consulted on in 2015, rests on a test of the materiality of a CS facility's connection to the Australian financial system, and stakeholders have expressed support for

³⁶ The CFR consulted on the resolution regime in early 2015 and released a response to consultation later that year. For more information, see *Resolution Regime for Financial Market Infrastructures: Response to Consultation*. Available at <<https://www.cfr.gov.au/publications/cfr-publications/2015/resolution-regime-financial-market/pdf/report.pdf>>.

the proposed criteria as well as the need to be flexible.³⁷

Competition in clearing and settlement of cash equities in Australia

In March 2016, the government endorsed the recommendations of a review of competition in clearing cash equities in Australia carried out by the CFR and the Australian Competition and Consumer Commission (ACCC). The conclusions from that review were set out in the report, *Review of Competition in Clearing Australian Cash Equities: Conclusions* (the Conclusions).³⁸ The Government's endorsement of the recommendations from the review confirmed its policy stance of openness to competition, subject to controls being in place to support the safety and effectiveness of such competition, should it emerge.

The CFR consequently released two policy statements in October 2016:

- *Regulatory Expectations for Conduct in Operating Cash Equity Clearing and Settlement Services in Australia* – which set expectations regarding ASX's conduct in operating its cash equity clearing and settlement services until such time as a competitor emerges and address matters relating to governance, pricing and access.
- *Minimum Conditions for Safe and Effective Competition in Cash Equity Clearing in Australia* – which aim to mitigate any adverse implications for financial system stability and

³⁷ *Overseas Clearing and Settlement Facilities: The Australian Licensing Regime - Response to Consultation*. Available at <<https://www.cfr.gov.au/publications/cfr-publications/2015/ocsf-aus-licensing-regime/>>.

³⁸ The Conclusions and the Government's response is available at <<http://www.treasury.gov.au/ConsultationsandReviews/Consultations/2015/Review-of-competition-in-clearing-Australian-cash-equities>>.

the effective functioning of markets should competition emerge.³⁹

The review of competition in clearing was conducted under the assumption that the prevailing market structure in settlement – in which there is a sole provider of settlement services – would continue for the foreseeable future. However, recent technological developments have challenged that assumption. Accordingly, in March 2017 the CFR and ACCC released a consultation paper *Safe and Effective Competition in Cash Equity Settlement in Australia*.⁴⁰ The paper sought feedback on the prospect of competition in equities settlement, and the possible need for policy guidance to support safe and effective competition, should it emerge. The agencies subsequently considered the responses received, with a view to advising the government in the second half of 2017 on the need for additional policy guidance.

An additional element of work underway by the CFR and ACCC is to address some aspects of the policy framework around competition for cash equities clearing and settlement services which are not enforceable under the existing regulatory regime. Accordingly, the agencies will work with government to implement legislative changes in order to fully implement these policy documents.

39 The Minimum Conditions (Clearing) is available at <<https://www.cfr.gov.au/publications/cfr-publications/2016/minimum-conditions-safe-effective-cash-equity/pdf/policy-statement.pdf>>; The Regulatory Expectations are available at <<https://www.cfr.gov.au/publications/cfr-publications/2016/regulatory-expectations-policy-statement/pdf/policy-statement.pdf>>.

40 The Consultation paper is available at <<https://www.cfr.gov.au/publications/consultations/safe-and-effective-competition-in-cash-equity-settlement-in-australia/pdf/consultation-paper.pdf>>.

