

Report on the Australian OTC Derivatives Market

OCTOBER 2012

Australian Prudential Regulation Authority
Australian Securities and Investments Commission
Reserve Bank of Australia



APRA



ASIC

Australian Securities & Investments Commission



RESERVE BANK
OF AUSTRALIA

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1. Introduction and Executive Summary

The Australian Prudential Regulation Authority (APRA), the Australian Securities and Investments Commission (ASIC) and the Reserve Bank of Australia (RBA) (together, the regulators) have been considering for some time the desirability of reforms to the functioning of domestic over-the-counter (OTC) derivatives markets. The regulators' ongoing interest in these markets reflects their various mandates regarding market and participant supervision, as well as broader financial stability and prudential considerations. This interest encompasses the structure and functioning of markets, the infrastructure that supports these markets, and the nature and behaviour of participants.

A key question for the regulators has been whether there is a need for direct regulatory intervention to drive additional reforms in the Australian market. The regulators have a number of existing regulatory tools available, mainly with respect to conduct and prudential requirements applying to licensed market participants. Additionally, the Australian Government has introduced into Parliament the Corporations Legislation Amendment (Derivative Transactions) Bill 2012 (Derivative Transactions Bill). This Bill proposes amendments to the *Corporations Act 2001* to create additional regulatory tools to implement reforms in OTC derivatives markets. In particular, mandatory trade reporting, central clearing or trade execution obligations could be imposed for specified classes of products and participants. The Bill requires that the regulators be consulted when any such obligations are proposed or implemented.

The regulators recognise that the efficiency, integrity and stability of domestic OTC derivatives markets can be enhanced through the use of centralised infrastructure such as trade repositories, central counterparties (CCPs) and trading platforms. In promoting a transition to such an environment, the regulators also recognise the importance of retaining the benefits of OTC derivatives markets wherever possible. Accordingly, the regulators would therefore seek to promote the adoption of centralised infrastructure in a flexible manner to permit an industry-led transition as appropriate. The regulators also recognise that not all products and participants are amenable to a transition to centralised infrastructure; in such cases, however, it is important to ensure other risk management measures are rigorously applied.

The regulators will also take into account whether imposing mandatory central clearing, trade reporting or trade execution requirements would support the recognition of Australia's regulatory regime as comparable or equivalent to those of key overseas jurisdictions. This would enable Australian participants and financial market infrastructure to avoid a duplicated regulatory burden, with Australian entities being primarily regulated in Australia where sufficient equivalence or substituted compliance tests are met.

The Australian regulators have consulted widely in recent years to understand better how the benefits of centralised market infrastructure might be realised in the Australian OTC derivatives market. To provide an additional empirical basis for further exploring these issues, in July 2012 the regulators undertook a voluntary survey of more active market participants, covering large domestic and international banking groups, smaller

authorised deposit-taking institutions (ADIs), fund managers, government borrowing authorities, corporate treasuries and electricity companies.

Based on an assessment of the state of play in the domestic OTC derivatives market, the regulators make the following recommendations around infrastructure usage and risk management:

Trade reporting

In the view of the regulators, having as many OTC derivatives transactions as possible reported to trade repositories would enhance the efficiency, integrity and stability of the Australian financial system.

The regulators recommend that the government consider a broad-based mandatory trade reporting obligation for OTC derivatives should the Derivative Transactions Bill be passed.

The parameters of a trade reporting mandate, including the specific products and participants subject to the mandate and the data reported, could be addressed in regulations or rules. Trade reporting requirements could be introduced under appropriate phasing arrangements, taking into account the relative importance of particular instrument classes and categories of reporting entity, as well as the availability of licensed trade repositories.

Central clearing

The regulators are of the view that central clearing of the Australian dollar-denominated interest rate derivatives market would bring substantial benefits to the efficiency, integrity and stability of the Australian financial system. This benefit would be most immediately realised if larger market participants, such as the large Australian-based banks, were to participate in central clearing.

The available evidence suggests that a migration of these participants towards central clearing is underway; larger foreign financial institutions are already (or will soon be) participating in central clearing for these instruments. Once a licensed CCP that clears these products is available in Australia, the regulators would expect that a transition to central clearing should accelerate.

Given this, at this stage additional regulatory intervention does not appear warranted in order to achieve a substantial uptake of central clearing in this market.

The regulators recommend that a mandatory clearing obligation for Australian dollar-denominated interest rate derivatives is not necessary at this time. However, should substantial industry progress towards central clearing in this class of derivatives not be evident in the near future, the regulators would revisit this recommendation.

There could also be some merit in exploring mandatory obligations further if it was considered that having these in place was a net benefit to Australia, such as by reducing the cost of Australian- or foreign-based market participants engaging in cross-border transactions, or by providing greater certainty to participants as to how they may satisfy their regulatory obligations. Additionally, the regulators would be concerned if, by adopting a flexible approach, opportunities for regulatory arbitrage emerged between the Australian regime and those in effect in other jurisdictions.

The regulators will continue to assess market developments, with a view to considering where central clearing for other products might be warranted. While there are strong in-principle benefits from central clearing in product classes such as cross-currency swaps, foreign exchange (FX) and credit derivatives, at present no viable central clearing solution exists for these.

Risk management for non-centrally cleared trades

In reviewing market participants' risk management practices, a number of issues were identified where further attention from participants or regulators would seem warranted. In particular:

Participants should ensure that adequate credit support arrangements are in place for all OTC derivatives transactions.

The regulators consider that for large and more active market participants, daily collateralisation of exposures should be adopted as best practice in the market where possible. It is recognised that this needs to be balanced against the operational costs and liquidity risks that this may create for some types of counterparties.

Market participants should understand the increased counterparty exposure generated by posting collateral over and above mark-to-market (variation margin) requirements, and ensure that the resultant risks are adequately managed.

The regulators see increased benefits in there being a more coordinated market-wide approach to the usage of trade compression services. The regulators call on the industry to consider how this may be achieved.

Although there has been some increase in the use of portfolio reconciliation services, the regulators consider that a greater utilisation of these services should be pursued by the industry.

In addition to industry-led changes to the use of credit support for non-centrally cleared transactions, international standard setters are considering principles for margin requirements applicable to such transactions. The regulators will continue to monitor these developments and provide advice to the government as appropriate.

The results of the survey also indicate shortcomings in the counterparty credit risk management practices of some participants in the OTC electricity derivatives market, relative to other OTC derivatives markets. The regulators consider that further work should be undertaken to explore these issues.

Trade execution

The regulators see in-principle benefits in a greater utilisation of trading platforms in the Australian OTC derivatives market. However, further analysis is required to identify where or how these benefits might be best realised, and therefore at this stage the regulators do not propose to make any specific recommendations as to possible trade execution obligations.

The remainder of the report is structured as follows:

- Chapter 2 provides more context to the policy concerns around OTC derivatives markets, discusses regulatory responses and the merits of centralised infrastructure in these markets, and relevant aspects of the Australian regulatory framework
- Chapter 3 discusses domestic and international regulatory developments regarding OTC derivatives markets, and industry work that is complementing these
- Chapter 4 sets out key characteristics of the Australian OTC derivatives market, using information collected through the regulators' survey as well as a variety of other data sources

- Chapter 5 discusses developments in risk management practices in the Australian market, including participants' use of financial market infrastructure
- Chapter 6 discusses more fully the regulators' recommendations around centralised infrastructure and risk management, drawing on the discussions in earlier chapters
- Chapter 7 concludes and sets out some next steps.

2. Background

2.1 Introduction

Risks inherent in OTC derivatives markets have long been recognised, and regulatory efforts to promote risk mitigants have been underway for a number of years.¹ There is now an international policy consensus that embedding centralised infrastructure – trade repositories, CCPs and trading platforms – in OTC derivatives markets is the most effective mechanism for addressing many of the concerns of regulators and market participants. Regulatory reform efforts in a number of jurisdictions are now underway to implement a transition to this market structure.

The Australian financial regulators have consulted widely in recent years to understand better how the benefits of centralised market infrastructure might be realised in the Australian OTC derivatives market. In 2009 the regulators made a number of recommendations to market participants around risk management enhancements for the Australian OTC derivatives market.² Since then there has been ongoing industry consultation and engagement to both pursue these recommendations and to explore the implications of international reform efforts for this market.

A number of regulatory tools are currently available to Australian regulators to implement reforms to the Australian OTC derivatives market. The government has proposed additional tools through amendments to the Corporations Act (discussed below). The existing and prospective Australian regulatory framework does not presuppose the use of a particular regulatory tool in shaping reforms to the OTC derivatives market. In some instances it may be that regulatory intervention will not be required, to the extent that desired reforms are being effectively implemented by market participants themselves. In other areas, there may be a stronger case for action by regulators – for instance, where existing incentives or coordination problems are not conducive to the desired changes. Additionally, it is desirable for Australia to have in place regulatory requirements equivalent to those in force in other jurisdictions to foster a globally harmonised regulatory approach to OTC derivatives.

2.2 Policy Concerns around OTC Derivatives Markets

The availability of OTC derivatives contracts provides important benefits to the Australian financial system. The more flexible nature of these markets, in comparison to exchange-traded markets, creates greater scope for counterparties to negotiate contracts that are tailored to hedge specific risks or generate specific exposures.

¹ See, for instance, CPSS (2007), *New Developments in Clearing and Settlement Arrangements for OTC Derivatives*, Bank for International Settlements, March. Available at <<http://www.bis.org/publ/cpss77.pdf>>. Also, Counterparty Risk Management Policy Group (2005), *Toward Greater Financial Stability: A Private Sector Perspective*, July. Available at <<http://www.crmpolicygroup.org/crm/pg2/docs/CRMPG-II.pdf>>.

² APRA, ASIC and RBA (2009), *Survey of the OTC Derivatives Market in Australia*, May. Available at <<http://www.apra.gov.au/Media-Releases/upload/Survey-of-the-OTC-Derivatives-Market-in-Australia-report.pdf>>.

Reflecting these advantages, there has been very strong growth in these markets in recent decades, and OTC derivatives markets now play a core role in the global financial system.

Given the importance of these markets, regulators have sought to enhance the resilience, transparency and operational efficiency of these markets where possible. The bilateral nature of these markets is not only the source of many of their advantages, but also the source of risks to the broader financial system.

Much of the underlying demand for OTC derivatives comes from smaller financial and non-financial market participants looking to hedge risks relating to real economic activity. This demand is generally intermediated by dealers (typically larger financial institutions), who may have only a relatively small exposure to any one of these counterparties. In order to hedge risks from making markets to service client demand, dealers often execute offsetting trades with other dealers. Over time, these interdealer exposures result in a complex web of bilateral, and often long-lived, exposures. With market participants directly and indirectly exposed to the effectiveness of the operational and credit risk management practices of their counterparties, should one large participant experience financial or operational difficulties, this could quickly be transmitted to the wider market.

With details of OTC derivatives transactions generally held only at individual counterparties, it is difficult for market participants or regulators to readily monitor market developments. This lack of transparency has the potential to undermine market confidence, particularly in times of heightened market stress. Regulators are also less able to identify the build-up of concentration risk or understand linkages between participants.

Due to the bilateral nature of these markets, over time many individual participants' operational systems and processes have evolved in an ad hoc manner. This lack of industry standardisation reduces the prospects for interoperability between systems, in turn limiting the scope for operational improvements to better support market activity and reduce operational risks.

2.3 OTC Derivatives Market Infrastructure

Centralised market infrastructure can be a very effective mechanism to address many of the concerns outlined above. For some time, therefore, both market participants and regulators have been exploring how these might be incorporated into OTC derivatives markets. As a complement to this, risk management and operational enhancements adopted by individual market participants could also result in system-wide benefits.

2.3.1 Trade reporting

A trade repository provides a centralised registry that maintains an electronic database of records of transactions. Trade information is submitted to a repository by one or both trade counterparties, and typically covers information such as transaction maturity, price, reference entity and counterparty. In the absence of trade repositories, transaction data are widely dispersed among market participants and various service providers (e.g. dealers, CCPs, trading platforms and asset custodians), and are often stored in incompatible proprietary systems.

Regulators can use the information held in trade repositories when carrying out responsibilities such as:

- risk assessments
- market surveillance and enforcement
- participant supervision
- recovery and resolution activities.

To the extent that trade reporting enhances the risk management capacities of individual market participants, this further supports financial system stability. The centralisation of trade data may assist institutions in understanding their own risks and exposures, while access to standardised data could allow internal and external auditors and risk management personnel to more effectively verify and track transactions and exposures. Through trade repositories, aggregate market data could be made publicly available on a regular basis as an enhancement to market transparency and functioning, further enhancing market integrity.

Trade repositories' use of standardised reporting formats could also enhance the efficiency of the financial system, by facilitating increased operational efficiencies in post-trade processing. The standardised information held in trade repositories could be used to support asset servicing, payment settlements, trade novation and affirmation, portfolio compression and reconciliation, and collateral management activities.

2.3.2 Central clearing

The use of CCPs is a highly effective way to enhance the efficiency, integrity and stability of financial markets. Key to central clearing is that, through a legal process known as novation, the numerous bilateral exposures of a market participant can be substituted for a single net exposure to a CCP. The resulting multilateral netting has the potential to substantially reduce the size of individual counterparties' outstanding obligations relative to bilateral arrangements, which could reduce market-wide collateral needs. By acting as a central hub for market participants, CCPs can improve the effectiveness of default management arrangements, as well as coordinate operational improvements and efficiencies. For instance, CCPs can bring standardisation of legal frameworks, streamlined day-to-day payment flows and calculations, and reduced collateral management complexities. They can also provide a focal point for regulation and oversight of market-wide risk management, while reducing information asymmetries in the market more generally.

In order for a CCP to clear a certain class of products safely and reliably, a number of preconditions must be satisfied:

- the product class must have a robust valuation methodology for that product, so that the CCP can confidently determine margin and default fund requirements
- there must be sufficient liquidity in the market to allow for close-out and/or hedging of outstanding positions in a default scenario
- there must be sufficient transaction activity and participation so that the fixed and variable costs of clearing the transaction are covered
- there must be some standardisation of contracts, to facilitate the CCP's trade processing arrangements.

For traditional exchange-traded instruments, these tests are typically quite straightforward. In contrast, they may be more difficult for some OTC derivatives products, particularly those with highly bespoke contract terms or difficult-to-model price movements. In these situations, it is arguably not appropriate for these products to be centrally cleared. Nonetheless, there are numerous classes of OTC derivatives that are actively traded in quite standardised forms, suggesting that the preconditions for central clearing are potentially met.

Notwithstanding the substantial benefits of central clearing, a CCP is a single point of failure for the participants and markets it serves. It is therefore crucial that the financial and operational risk management of the CCP be held to an extremely high standard.

2.3.3 Trade execution

Centralised trading venues can be highly effective in promoting market efficiency and integrity. They provide a single location for buyers and sellers to meet, reducing search costs and promoting pricing competition and market confidence through pre- and post-trade transparency. They can also contribute to the stability of the financial system through facilitating more resilient and liquid markets. Electronic trading venues can provide a host of additional operational benefits, such as verification of trade information through electronic confirmations, and facilitation of straight-through processing to CCPs and other transaction processing systems.

However, as with CCPs, there are certain preconditions for products to be successfully traded through a centralised venue. Chief among these are that products be sufficiently standardised and liquid. There are many factors that affect market liquidity, such as:

- trading volume
- product characteristics
- transaction size
- transaction frequency
- market participant characteristics.

Where markets are liquid, buyers and sellers are able to enter and exit their positions without concern that their transactions will unduly change market prices. However, where there are fewer buyers and sellers for a product, transparency around a participant's trading intentions could move market prices in anticipation of a trade being executed. This has the potential to reduce a participant's willingness to proceed with the transaction, in which case price transparency could result in a reduction in market liquidity. However, a range of OTC derivatives transactions are actively traded in standardised forms, indicating that at least some of the preconditions for viable centralised trading venues are in place for these products.

In some instances, the availability of central clearing for a particular product class can further enhance the viability of centralised trading venues. A CCP can standardise operational arrangements and ensure robust counterparty risk management across all market participants, thereby removing some of the impediments for multilateral trading.

2.3.4 Other risk management tools

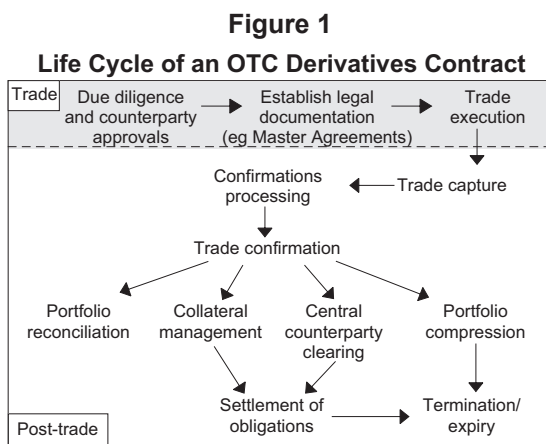
While trade repositories could, in principle, operate for all product classes, trade execution and central clearing is generally only appropriate where markets are already quite standardised and liquid. Recognising that there are, and will likely continue to be, significant components of the market in which these conditions do not hold, regulators are also keen to ensure that transactions that remain bilateral are appropriately risk managed.

To manage counterparty credit risk, the chief tools that are generally used in bilateral arrangements include:

- due diligence and counterparty approvals
- agreement of robust legal documentation
- collateralisation of exposures.

In addition to the centralised infrastructure discussed above, proprietary and third-party systems have been developed to further support and streamline risk management throughout the life cycle of OTC derivatives transactions (Figure 1).

- Electronic *trade capture* and *trade confirmation* allow for the immediate and comprehensive recording of mutually agreed contract terms, and can reduce the potential for human error associated with manual processes.
- To further ensure counterparties have the same information regarding bilateral exposures, and to avoid or resolve disputes over collateral obligations or contract valuations, *portfolio reconciliations* can be undertaken.
- *Collateral management* systems can streamline processes for posting and receiving cash and securities collateral, as well as marking-to-market underlying counterparty positions and the collateral posted against these.
- Where gross bilateral positions are higher than net bilateral positions due to the build-up of economically redundant transactions, this can result in a disproportionate operational and counterparty risk management burden. *Portfolio compression* services allow for redundant trades to be terminated and replaced with a smaller set of trades that result in economically equivalent counterparty exposures.



Many of these tools only achieve their full effectiveness where they are used by a large number of market participants. There is therefore also a case for regulators to promote the market-wide usage of many of these tools.

2.4 International Policy Response

Given the benefits discussed above, there is now an international policy consensus that greater utilisation of centralised infrastructure can be the most effective mechanism to address many of the risks inherent in OTC derivatives markets. Reflecting this international consensus, in 2009 the leaders of the G-20 made several commitments to institute reforms to OTC derivatives markets. This was most recently reaffirmed at the June 2012 leaders' summit in Los Cabos, Mexico:

We reaffirm our commitment that all standardized OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties by end-2012, OTC derivative contracts should be reported to trade repositories and non-centrally cleared

contracts should be subject to higher capital requirements ... We acknowledge the progress made to develop the key principles to promote internationally consistent minimum standards for the margining of non-centrally cleared derivatives and encourage international standard setters to finalize the proposed global margin standards by the end of this year ...³

In October 2010 the Financial Stability Board (FSB) published a set of recommendations to assist jurisdictions in implementing the G-20 commitments.⁴ The FSB has been monitoring progress towards meeting these commitments, with a third progress report published in June 2012 (a fourth report is currently in development).⁵

A large number of jurisdictions are in the process of implementing regulatory reforms to give effect to these commitments; these reforms are discussed further in Section 3.4.

2.5 Australian Stakeholder Engagement

In recent years the Australian regulators have undertaken a number of studies to better understand risks in Australian OTC derivatives markets practices, and explore the benefits of the various types of market infrastructure discussed above.

2.5.1 May 2009 survey

In May 2009, APRA, ASIC and the RBA reported on a survey they had undertaken of the OTC derivatives market in Australia. This survey sought to understand the legal and operational infrastructure in use in the Australian market, and discussed in more detail some of the measures available to market participants in mitigating risks in bilateral transactions (such as those described in Section 2.3.4).

The survey found that the overall level of activity in Australia, while large in a domestic context, was low relative to major offshore markets. Within the local market, trading was dominated by interest rate and FX derivatives, with only small amounts of activity in equity, commodity and credit derivatives. Moreover, the types of products and the nature of participants and their use of derivatives were fairly straightforward compared with some offshore markets.

Although no immediate concerns were identified, the regulators noted that there was some scope for improvements in market practices, and highlighted additional measures that the local industry should consider. The recommendations of this report were that the local industry should:

- promote market transparency
- ensure continued progress in the timely negotiation of industry-standard legal documentation
- expand the use of collateral to manage counterparty credit risks
- promote Australian access to CCPs for OTC derivatives products
- expand the use of automated facilities for confirmations processing
- expand the use of multilateral portfolio compression and reconciliation tools
- increase Australian influence in international industry forums.

3 G-20 Summit, Los Cabos, 19 June 2012, Leaders' Declaration (Article 39). Available at <http://www.g20mexico.org/images/stories/docs/g20/conclu/G20_Leaders_Declaration_2012.pdf>.

4 FSB (2010), *Implementing OTC Derivatives Market Reforms*, October. Available at <http://www.financialstabilityboard.org/publications/r_101025.pdf>.

5 FSB (2012), *OTC Derivatives Market Reforms: Third Progress Report on Implementation*, June. Available at <http://www.financialstabilityboard.org/publications/r_120615.pdf>.

2.5.2 2011 discussion paper

One of the key recommendations of the 2009 survey was that the Australian industry should explore how central clearing might be adopted in the domestic market. In the period after this report was released, the international policy community firmly backed a greater uptake of central clearing of OTC derivatives, as seen in the 2009 G-20 commitment and work of the FSB.

In June 2011 the Council of Financial Regulators (the Council) issued a discussion paper on how central clearing of OTC derivatives might be adopted in Australia, to better understand the implications of this international push, and to explore some of the issues emerging from ongoing dialogue between the regulators and market participants resulting from the 2009 survey.⁶ This paper set out a number of considerations that the regulators wished to explore with interested stakeholders, including:

- the availability of central clearing services to Australian-based market participants
- the cross-border nature of the Australian OTC derivatives market
- implications of central clearing for financial stability
- the effect of central clearing on market efficiency and functioning.

To help focus discussion around these issues, the Council paper put forward four propositions:

- that in the absence of Australian regulatory action, domestic CCP solutions may not emerge
- that where a market is of systemic importance to Australia, a move to offshore central clearing might introduce risks to the Australian financial system that do not currently exist
- that the Council agencies considered the market for Australian-dollar interest rate swaps to be systemically important within Australia
- that in light of this, the Council agencies were considering the case for a requirement that those instruments be centrally cleared, and as part of that were considering whether such clearing should take place domestically.

These were very much preliminary propositions rather than conclusions, and the Council agencies sought to canvass a wide range of views. Around 30 written submissions were received in response to this discussion paper. Meetings were held with Australian and foreign-owned banks, credit unions and building societies, market infrastructure providers, fund managers and institutional investors, non-financial corporations, government borrowing authorities and industry associations.

This paper further noted that central clearing was only likely to be effective in markets that were already fairly standardised and liquid. While this was expected to be the case for the main classes of Australian-dollar interest rate derivatives, it was recognised that other derivatives may not be so amenable to central clearing. In these cases, more weight might instead be given to other risk mitigation tools.

2.5.3 2012 report on policy considerations and consultation paper

Based on the discussions held in response to the 2011 paper, as well as other stakeholder discussions and reviews of international developments held over recent years, the Council provided a report to the

⁶ Council of Financial Regulators (2011), *Central Clearing of OTC Derivatives in Australia*, June. Available at <<http://www.rba.gov.au/publications/consultations/201106-otc-derivatives/index.html>>.

government in March 2012.⁷ This report outlined various recommendations that might be taken into account when considering reform proposals in the OTC derivatives market, particularly around the use of centralised infrastructure such as trade repositories, CCPs and trading platforms.

The report recommended that, in the first instance, industry-led solutions should be the preferred route to increasing the use of centralised infrastructure within the Australian OTC derivatives market. Underpinning this recommendation was the expectation that various regulatory and commercial incentives would have the effect of driving the market towards centralised arrangements. However, given the systemic risks inherent in existing bilateral arrangements, slow progress in the uptake of centralised arrangements was undesirable. The report therefore recommended the development of a capacity to mandate outcomes in this area.

The report also recommended that market participants' choices regarding whether to clear OTC derivatives through domestic or offshore CCPs should not be unduly constrained. In part, however, the Council agencies' comfort around this was contingent on the satisfactory outcome of a number of domestic and international regulatory developments in train (see Chapter 3 for more detail on these).

Building on these recommendations, in April 2012 the Treasury released a consultation paper setting out proposals that would allow mandatory reporting, clearing and trading obligations to be imposed.⁸ Following a period of stakeholder consultation, in July the Treasury released an exposure draft of a bill that would give effect to these proposals through amendments to the Corporations Act. The government has now introduced this bill into the Australian Parliament, outlined in Section 2.6.2 below.

2.6 Australian Regulatory Framework and Approach

For the reasons discussed above, the starting proposition of the Australian regulators is that the efficiency, integrity and stability of domestic OTC derivatives markets can be enhanced through the use of centralised infrastructure. However, in promoting a transition to this environment, the regulators are concerned to retain where possible the existing benefits of OTC derivatives markets. They would also seek to promote the adoption of centralised infrastructure in a flexible manner to permit an industry-led transition as appropriate.

2.6.1 Existing regulatory tools

In the first instance, the regulators are keen to engage in debate and discussion with stakeholders, promoting industry best practice and voluntary changes by market participants. This engagement has been underway for a number of years, beginning with the regulators' May 2009 report on the Australian OTC derivatives market.

The Australian regulators can also impose specific requirements on a range of market participants active in OTC derivatives markets. APRA issues prudential standards for many of the largest OTC derivatives market participants – ADIs, insurers and superannuation funds – covering governance, capital and liquidity requirements, and operational risks. ASIC also sets requirements for holders of Australian Financial Services Licences (AFSLs). These include risk management requirements and financial resources requirements for licensees that are not regulated by APRA.

Requirements can also be imposed on licensed financial market infrastructures (FMIs) – exchanges, other trading platforms and clearing and settlement (CS) facilities – by ASIC, the RBA and the relevant Minister.

⁷ Council of Financial Regulators (2012), *OTC Derivatives Market Reform Considerations*, March. Available at <<http://www.rba.gov.au/payments-system/clearing-settlement/otc-derivatives/201203-otc-der-mkt-ref-con/index.html>>.

⁸ Treasury (2012), *Implementation of a Framework for Australia's G20 Over-the-counter Derivatives Commitments*, April. Available at <<http://www.treasury.gov.au/ConsultationsandReviews/Submissions/2012/Over-the-counter-derivatives-commitments-consultation-paper>>.

However, given the OTC derivatives market has typically operated outside of centralised infrastructure such as these, the effectiveness of such requirements will only be effective to the extent that OTC derivatives markets have migrated to such infrastructure.

In considering requirements for OTC derivatives market participants and FMIs, Australian regulators are guided by recommendations of international standard-setting bodies; relevant work by these bodies is discussed further in Chapter 3.

2.6.2 Proposed amendments to the Corporations Act

The Derivative Transactions Bill is currently before the Australian Parliament.⁹ The Bill proposes amendments to the Corporations Act to establish a framework to implement reforms in OTC derivatives markets. Under the proposed framework, a Minister may determine certain classes of derivatives as being subject to derivative transaction rules (DTRs) that can implement mandatory obligations relating to the use of trade repositories, CCPs and/or trading platforms. A determination would not in itself create mandatory obligations; this would go into effect only after ASIC had made DTRs setting out the details of such mandatory requirements. The processes of issuing a determination and making DTRs would be subject to consultation, and any decisions would be required to have regard to:

- the likely effect on the Australian economy, and on the efficiency, integrity and stability of the Australian financial system of imposing a mandatory obligation
- the likely regulatory impact of imposing a mandatory obligation.

The Bill would also establish a licensing regime for trade repositories; responsibility for regulating these facilities would sit primarily with ASIC.

2.6.3 Considerations in implementing OTC derivatives market reforms

The regulators recognise that the costs and benefits of using centralised infrastructure (and related risk management requirements) may differ across types of product classes and participants. It is also recognised that many of these reforms represent a significant change to existing market practices and organisation. Many market participants will need to make modifications to their legal and operational arrangements. Changes in collateralisation practices may affect some market participants' balance sheets, and may also affect wider conditions in the market for eligible collateral assets.

Recognising the potential magnitude of some of these changes, the regulators would encourage industry-led reforms where possible, to allow arrangements to evolve in response to the commercial considerations of market participants and infrastructure providers.

As discussed later in this report, it is expected that many market participants will face incentives (such as price signals and network effects) that will strongly encourage a transition to central clearing in particular. However, it is also recognised that the magnitude of the changes necessary may result in some participants moving at a slower-than-desirable pace. Notwithstanding the expected effect of incentives, some market participants might still only respond if a mandatory obligation is in place. The certainty of a mandatory obligation might also reduce coordination problems among stakeholders.

⁹ The text of the Bill as first introduced to Parliament is available at <[http://parlinfo.aph.gov.au/parlInfo/download/legislation/bills/r4879_first-reps/toc_pdf/12149b01.pdf;fileType=application%2Fpdf#search=%22legislation/bills/r4879_first-reps/0000%22](http://parlinfo.aph.gov.au/parlInfo/download/legislation/bills/r4879_first-reps/toc_pdf/12149b01.pdf;fileType=application%2Fpdf#search=%22legislation/bills/r4879_first-reps/0000%22>http://parlinfo.aph.gov.au/parlInfo/download/legislation/bills/r4879_first-reps/toc_pdf/12149b01.pdf;fileType=application%2Fpdf#search=%22legislation/bills/r4879_first-reps/0000%22)>.

The existence of mandatory obligations may also, in some circumstances, result in a reduced compliance burden for domestic market participants trading with offshore counterparties. In particular, there may be some merit in exploring mandatory obligations further if it was considered that having these in place was a net benefit to Australia, such as by reducing the cost of Australian- or foreign-based market participants engaging in cross-border transactions, or by providing greater certainty to participants as to how they may satisfy their regulatory obligations.

Additionally, Australian regulators would be concerned if, by adopting a flexible approach, opportunities for regulatory arbitrage emerged between the Australian regime and those in effect in other jurisdictions. Australian regulators fully expect to realise OTC derivatives reform outcomes that are closely aligned with those in other jurisdictions. Mandatory obligations might therefore be warranted to ensure that opportunities for regulatory arbitrage were minimised.

3. Regulatory and Industry Developments

3.1 Introduction

The global drive for increased usage of centralised infrastructure, as well as other reforms to OTC derivatives markets, has been associated with a large number of international and national regulatory efforts. International standard-setting bodies have developed or revised standards and recommendations for OTC derivatives regulators, market participants and infrastructure providers in support of this transition. Reflecting this, the Australian financial regulators have recently undertaken a substantial volume of domestic policy reviews.

Many other jurisdictions are in the process of implementing regulatory requirements in support of their policies regarding OTC derivatives market reforms. Overseas requirements are having some influence on the Australian market, due to the cross-border nature of participation in the Australian OTC derivatives market. This means it is important to understand how the interaction of the domestic and overseas regulatory regimes may affect Australian market activity into the future.

In adapting to these national and international regulatory developments, global OTC derivatives market participants have recognised the benefits of international industry coordination in a number of areas. Industry groups have therefore been working on ways to increase standardisation and promote best practice.

3.2 International Standards and Initiatives

3.2.1 G-20 commitments

The international policy consensus regarding OTC derivatives market infrastructure has been most prominently articulated by the G-20 leaders. The key statement in this regard was made at the September 2009 summit in Pittsburgh:

All standardized OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties by end-2012 at the latest. OTC derivative contracts should be reported to trade repositories. Non-centrally cleared contracts should be subject to higher capital requirements. We ask the FSB and its relevant members to assess regularly implementation and whether it is sufficient to improve transparency in the derivatives markets, mitigate systemic risk, and protect against market abuse.¹⁰

Subsequent G-20 meetings have endorsed continued progress on OTC derivatives reforms and initiatives, such as margining requirements for non-centrally cleared transactions and the development of a global Legal Entity Identifier (LEI) framework; these initiatives are discussed further below.

¹⁰ G-20 Summit, Pittsburgh, 24–25 September 2009, Leaders' Statement (Article 11). Available at <<http://www.g8.utoronto.ca/g20/2009/2009communique0925.html>>.

3.2.2 Financial Stability Board

The FSB continues to play a coordinating role in the global implementation of reforms to OTC derivatives markets. Following a request by the G-20 leaders, the FSB has been monitoring individual jurisdictions' progress in implementing the G-20 commitments. To this end, the FSB has to date published three progress reports: in April 2011, October 2011 and June 2012; a fourth report is currently in development. These reports have sought to facilitate the consistent, effective and timely implementation of reforms to OTC derivatives markets. Importantly, they have also served as a forum for discussion of the practical challenges faced by jurisdictions – both individually and collectively – in implementing the reforms.

The FSB has sought to understand the risks that may arise from the migration to centralised infrastructure under the reforms. In January 2012 the FSB established the OTC Derivatives Coordination Group (ODCG), comprising the chairs of the FSB and relevant international regulatory and central bank groups:

- Basel Committee on Banking Supervision (BCBS)
- Committee on the Global Financial System (CGFS)
- Committee on Payment and Settlement Systems (CPSS)
- International Organization of Securities Commissions (IOSCO).

To date the ODCG has focused on ensuring four safeguards are in place to promote a resilient global framework for CCPs:

- fair and open access by market participants to CCPs, based on transparent and objective criteria
- cooperative oversight arrangements between all relevant authorities, both domestically and internationally, that result in robust and consistently applied regulation and oversight of CCPs serving multiple jurisdictions
- resolution and recovery regimes that ensure the core functions of CCPs are maintained during times of crisis and that consider the interests of all jurisdictions where the CCP is systemically important
- appropriate liquidity arrangements for CCPs in the currencies in which they clear.

The establishment of the four safeguards is ongoing through the various reform efforts of standard-setting bodies and individual jurisdictions that are home to, or hosting, OTC derivatives CCPs.

3.2.3 CPSS-IOSCO

Principles for Financial Market Infrastructures

As the peak standard-setting bodies for financial market infrastructure, CPSS and IOSCO have been heavily involved in the post-crisis reform agenda. In recent years these bodies' most significant workstream has been the development of the *Principles for Financial Market Infrastructures* (PFMIs) – a set of strengthened international standards for payment systems, CCPs, securities settlement systems, central securities depositories and trade repositories.¹¹ This set of principles, released in April 2012, unifies and replaces three previous sets of recommendations and principles published by CPSS and IOSCO with respect to particular types of FMI – payment systems, CCPs and securities settlement systems. The development of standards for trade repositories reflects their increasing prominence following the G-20 commitment to reporting of all OTC derivatives.

¹¹ CPSS-IOSCO (2012), *Principles for Financial Market Infrastructures*, Bank for International Settlements, April. Available at <<http://www.bis.org/publ/cpss101a.pdf>>.

With global reforms to OTC markets requiring participants to make greater use of centralised financial market infrastructure, often on a cross-border basis, establishing an internationally harmonised set of standards, such as the PFMLs, is essential. Authorities around the world are expected to incorporate the PFMLs into their respective regulatory regimes (see Sections 3.3.3 and 3.3.4 for details of Australian implementation). Moreover, the PFMLs strengthen previous international standards in a number of areas, including in the coverage of credit risk, the management of liquidity risks, and governance. This is particularly important given the challenges associated with the central clearing of OTC derivatives.

Recovery and resolution of FMLs

Although the PFMLs are intended to ensure that CCPs are highly robust, CPSS and IOSCO are seeking to further promote a resilient global framework for CCPs (in accordance with the third of the ODCG's safeguards) by developing principles around the recovery and resolution of FMLs. Specifically, CPSS and IOSCO released a consultation paper in July 2012, *Recovery and Resolution of Financial Market Infrastructures – Consultative Report*,¹² which considers the application of the FSB's *Key Attributes of Effective Resolution Regimes for Financial Institutions*¹³ to FMLs. This report, and ongoing work in this area, is crucial to giving market participants using, and relevant authorities (including those in host jurisdictions) with a regulatory interest in, systemically important FMLs the confidence that the failure of such FMLs would be managed in an appropriate and transparent manner.

Guidance around trade repository data

CPSS and IOSCO have also led the development of policy relating to data held by trade repositories. They have published standards for the nature and format of data to be reported, and the methodology by which these data should be aggregated globally.¹⁴ CPSS and IOSCO are also currently developing guidance for trade repositories and regulators on regulatory access to data. Importantly, it is expected that the issues addressed by this guidance will include concerns regarding cross-jurisdictional privacy and confidentiality.

3.2.4 BCBS

Since 2009, the BCBS has been working to give effect to the G-20 goal of creating incentives for banks to increase their use of CCPs for OTC derivatives, while at the same time ensuring that banks' exposures to CCPs are adequately capitalised. As part of this process the BCBS released a package of reforms in December 2010 to raise the level and quality of regulatory capital in the global banking system (known as 'Basel III'), with a revision issued in June 2011.¹⁵

The Basel III framework includes several improvements to the risk sensitivity of the capital adequacy framework. While the existing credit risk framework captured counterparty credit default risk, the experience of the recent financial crisis was that a large proportion of counterparty credit risk losses incurred were not in fact due to counterparty defaults. Instead, many losses were due to declining valuations of exposures following a deterioration in the creditworthiness of the counterparty. Under Basel III, the risk of this occurring will be

¹² CPSS-IOSCO (2012), *Recovery and Resolution of Financial Market Infrastructures – Consultative Report*, Bank for International Settlements, July. Available at <<http://www.bis.org/publ/cpss103.pdf>>.

¹³ FSB (2011), *Key Attributes of Effective Resolution Regimes for Financial Institutions*, November. Available at <http://www.financialstabilityboard.org/publications/r_1111104cc.pdf>.

¹⁴ CPSS-IOSCO (2012), *Report on OTC Derivatives Data Reporting and Aggregation Requirements*, Bank for International Settlements, January. Available at <<http://www.bis.org/publ/cpss100.pdf>>.

¹⁵ See BCBS (2011), *Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems – Revised Version June 2011*, Bank for International Settlements, June. Available at <<http://www.bis.org/publ/bcbs189.htm>>.

capitalised by incorporating a credit valuation adjustment (CVA) risk capital charge for bilateral OTC derivatives. Where there was a deterioration in the credit quality of an OTC derivatives counterparty, this will result in a lower (credit adjusted) value being ascribed to the future expected payments to be received from that counterparty, which is captured as a CVA (or mark-to-market) loss. Derivatives that are centrally cleared through a qualifying CCP will not be subject to the CVA risk capital charge, but will instead be subject to a much lower capital risk weighting, reflecting the very small (but non-zero) risk of a CCP default.¹⁶

Following these releases the BCBS further refined the counterparty credit risk requirements with interim rules set out in the *Capital Requirements for Bank Exposures to Central Counterparties* in July 2012.¹⁷ These rules consider the need to create incentives to increase the use of CCPs, including where this is undertaken through indirect clearing arrangements. The interim rules therefore include provisions on indirect clearing that allow clients of direct clearing members to benefit from the preferential capital treatment of central clearing. It is intended that these will come into effect from 1 January 2013, thereby allowing for the implementation of Basel III, while recognising that additional work is needed to further develop an improved capital framework; this work will take place in 2013.

3.2.5 BCBS-IOSCO working group on margin requirements for non-centrally cleared trades

At the November 2011 summit in Cannes, the G-20 leaders asked international standard setters to develop internationally consistent principles for margin requirements for non-centrally cleared OTC derivatives (i.e. transactions that remain bilateral between counterparties). In response, the BCBS-IOSCO Working Group on Margin Requirements (WGMR) issued draft principles for consultation and commenced a Quantitative Impact Study (QIS) in July 2012, with a view to issuing final principles by the end of December 2012.¹⁸

The draft principles relate to appropriate margining practices for non-centrally cleared derivatives and the treatment of collateral. The principles seek to mitigate the systemic risk arising from OTC derivatives that are not cleared by a CCP, by limiting the level of uncollateralised OTC derivatives exposures, and ensuring collateral is available to offset the losses resulting from a counterparty default. They also seek to ensure that cross-border OTC derivatives transactions are subject to consistent and non-duplicative regulation.

The QIS being conducted by the WGMR has sought to assess the likely impact of the draft principles on the demand for, and availability of, collateral in the global financial system.

3.2.6 IOSCO

Standards for Derivatives Market Intermediaries

In June 2012, IOSCO published a report *International Standards for Derivatives Market Intermediary Regulation*.¹⁹ This report provides recommendations for the regulation and supervision of derivatives market intermediaries – market participants that are in the business of dealing, making a market or intermediating transactions

¹⁶ Under these proposals, a CCP would be qualifying if it was domiciled and prudentially supervised in a jurisdiction where the relevant regulator has established and publicly indicated that it applies to the CCP, on an ongoing basis, domestic rules and regulations that are consistent with the PFMI.

¹⁷ See BCBS (2012), *Capital Requirements for Bank Exposures to Central Counterparties*, Bank for International Settlements, July. Available at <<http://www.bis.org/publ/bcbs227.htm>>.

¹⁸ BCBS-IOSCO (2012), *Margin Requirements for Non-centrally-cleared Derivatives*, Bank for International Settlements, July. Available at <<http://www.bis.org/publ/bcbs226.htm>>.

¹⁹ IOSCO (2012), *International Standards for Derivatives Market Intermediary Regulation*, June. Available at <<http://www.iosco.org/library/pubdocs/pdf/IOSCOPD381.pdf>>.

in OTC derivatives. The recommendations seek to ensure derivatives market intermediaries are subject to appropriate regulation so as to assist in mitigating systemic risks and managing counterparty risk in OTC derivatives markets and, where appropriate, setting business conduct obligations for these intermediaries.

The report made recommendations in the following areas:

- registration or licensing standards
- capital standards or other financial resources requirements for non-prudentially regulated derivatives market intermediaries
- business conduct standards
- business supervision standards
- record-keeping standards.

Trading platforms for OTC derivatives

In recent years IOSCO has published two reports in relation to the electronic trading of OTC derivatives.²⁰ These reports discuss preconditions for viable on-platform trading of OTC derivatives, and explore the different forms in which electronic trading can and does take place; they were not prescriptive in recommending which types of trading should be imposed by individual jurisdictions.

The reports identify the following benefits to increasing the use of trading platforms:

- more efficient price discovery
- increased competition which may potentially lower trading costs and improve liquidity
- reduction in systemic risk (due to enhanced market liquidity)
- improved regulatory supervision of the market for misconduct (as a result of increased centralisation).

In discussing which trade platforms may be appropriate for OTC derivatives markets, the following characteristics were agreed:

- registration of the platform with a competent regulatory authority, including requirements relating to financial resources and operational capability
- access for participants based on objective and fair criteria that are applied in an impartial, non-discriminatory manner
- pre- and post-trade transparency arrangements which are appropriate to the nature and liquidity of the product and the functionalities offered by the platform
- operational efficiency and resilience including appropriate linkages to post-trade infrastructure and measures to handle potential disruption to the platform
- active market surveillance capabilities, including audit trail capability
- transparent rules governing the operation of the platform
- rules that do not permit a platform operator to discriminate between comparable platform participants in relation to the interaction of buying and selling interests within the system, whether fully electronic or hybrid.

²⁰ The initial report was IOSCO (2011), *Report on Trading of OTC Derivatives*, February. Available at <<http://www.iosco.org/library/pubdocs/pdf/IOSCOPD345.pdf>>. This was supplemented by IOSCO (2012), *Follow-on Analysis to the Report on Trading of OTC Derivatives*, January. Available at <<http://www.iosco.org/library/pubdocs/pdf/IOSCOPD368.pdf>>.

Guidance on mandatory clearing

In February 2012, IOSCO published a report on *Requirements for Mandatory Clearing*; its recommendations covered matters such as:

- processes for determining whether a mandatory clearing obligation should apply to a product or set of products
- the factors to be considered around potential exemptions to a mandatory clearing obligation
- the establishment of appropriate communications among authorities and with the public
- the consideration of relevant cross-border issues in the application of a mandatory clearing obligation
- the importance of monitoring and reviewing the overall process and application of a mandatory clearing obligation.²¹

While the report is mainly addressed to regulators implementing mandatory clearing regimes, it also provides information for stakeholders subject to any mandatory clearing obligations.

3.2.7 LEIs

LEIs will enable a market participant's counterparties to be uniquely and consistently identifiable, which should greatly enhance the interoperability and automation of in-house and third-party systems. It should also enable individual participants and their supervisors to more readily aggregate and analyse cross-product class exposures, as well as enhance market regulators' surveillance capacities. The use of LEIs may also enhance regulators' or bankruptcy professionals' ability to identify creditors and debtors in an insolvency scenario.

At the Cannes summit in November 2011, the G-20 leaders endorsed the creation of a global LEI framework.²² In response to the G-20 leaders' request, the FSB has established an Implementation Group (IG) to establish global LEIs. A report by the IG in June 2012 provided recommendations to establish a global LEI system, in line with industry consensus standards developed by the International Standards Organisation. The G-20 leaders have endorsed a proposed three-tier structure for the global LEI system. The structure comprises:

- a Regulatory Oversight Committee, which has responsibility for governance of the system
- a Central Operating Unit, which is the operational arm with responsibility for ensuring globally consistent operational standards and protocols are applied
- Local Operating Units, which will have responsibility for local implementation of the LEI system including validation and maintenance of certain data.

The IG is seeking to establish the Regulatory Oversight Committee and Central Operating Unit by March 2013. The IG has also established a Private Sector Preparatory Group which will work on specific issues, such as the numbering scheme for the global LEI system. The Private Sector Preparatory Group has been asked to consider factors such as flexibility, costs, and operational requirements of the LEI system from the standpoint of short-term implementation and integration of local systems, as well as long-term flexibility and resilience of the global system.

²¹ IOSCO (2012), *Requirements for Mandatory Clearing*, February. Available at <<http://www.iosco.org/library/pubdocs/pdf/IOSCOPD374.pdf>>.

²² G-20 Summit, Cannes, 4 November 2011, Final Declaration (Article 31). Available at <<http://www.g20.utoronto.ca/2011/2011-cannes-declaration-111104-en.html>>.

3.2.8 BCBS-CPSS report on FX risks

In May 2008, CPSS released a paper that found that the financial services industry had made significant progress in reducing FX settlement risk. However, the report noted that 30 per cent of the market still settled in a manner that did not mitigate FX settlement risk; half the value of these obligations were at risk overnight; and that participants' bilateral settlement exposures were large relative to their capital.

In 2011 the CPSS and BCBS established a joint working group to revise supervisory guidance previously issued in September 2000, to ensure that financial institutions are adequately controlling their FX settlement exposures. As a result of this work, in August 2012 the BCBS issued a consultative document *Supervisory Guidance for Managing Risks Associated with the Settlement of Foreign Exchange Transactions*.²³

The proposed new guidance aims to ensure that risks are properly managed and provides more comprehensive and detailed guidance than that issued in 2000. In addition, it promotes the use of payment-versus-payment arrangements, where practicable.

The guidelines cover: governance; principal risk; replacement cost risk; liquidity risk; operational risk; legal risk; and capital for FX transactions.

3.3 Domestic Regulatory Developments

Much of the international work discussed above has been reflected in Australian regulatory developments over the past year. For market participants, the implementation of Basel III by APRA will result in ADIs' OTC derivatives positions being subject to higher capitalisation requirements where transactions are not centrally cleared. Domestic regulators are still waiting for the finalisation of other international reform efforts directly applicable to market participants – such as the development of minimum margin requirements for non-centrally cleared derivatives transactions – before considering how these might be applied in Australia. Other regulatory developments focus on FMIs, but with a key objective being to support domestic market participants' uptake of central clearing for OTC derivatives.

3.3.1 APRA implementation of Basel III counterparty credit risk capitalisation

As a member of the BCBS, APRA supports the implementation of Basel III reforms in Australia. In order to ensure that the Australian prudential framework is consistent with global standards, APRA proposes adopting the minimum Basel III requirements (except where it considers that there are strong reasons for departing from the framework). To this end, in August 2012, APRA released a discussion paper *Implementing Basel III Capital Reforms in Australia – Counterparty Credit Risk and Other Measures*.²⁴ The paper proposes the implementation of the Basel III reforms as discussed above in respect of counterparty credit risk from 1 January 2013, and seeks comment from industry and other interested stakeholders prior to the issuance of the final prudential standards (scheduled for November 2012).

As an additional measure, APRA also outlined that it envisages that ADIs with significant exposure to OTC derivatives counterparty credit risk will seek to mitigate operational risk by regularly undertaking portfolio reconciliations, trade valuations and collateral valuations with counterparties and, where practical, take opportunities to participate in portfolio compression exercises.

²³ BCBS (2012), *Supervisory Guidance for Managing Risks Associated with the Settlement of Foreign Exchange Transactions – Consultative Document*, Bank for International Settlements, August. Available at <<http://www.bis.org/publ/bcb229.pdf>>.

²⁴ APRA (2012), *Implementing Basel III Capital Reforms in Australia – Counterparty Credit Risk and Other Measures*, August. Available at <<http://www.apra.gov.au/adi/PrudentialFramework/Pages/Basel-III-Counterparty-Credit-Risk-and-other-measures-August-2012.aspx>>.

3.3.2 Regulatory influence over cross-border clearing and settlement facilities

The uptake of central clearing by the Australian market is likely to involve the use of overseas-based CCPs. While domestic solutions may emerge for some classes and currency denominations, these are unlikely to cover the full range of contracts transacted by Australian participants. The provision of such services in the Australian market will, in most cases, require licensing as a CS facility under the Corporations Act. However, overseas-based facilities are likely to apply for a CS facility licence under section 824B(2) of the Act, which is available only to overseas-based facilities subject to regulation in their home country that is sufficiently equivalent to that in Australia. For a CS facility licensed under this section, ASIC and the RBA would place reliance on information and reports provided by the CS facility's home regulator in assessing the CS facility's compliance with its licence obligations. In addition, overseas licensed facilities are not subject to the operating rule disallowance process under section 822E of the Act.

In regulating an overseas-based CS facility, the Council agencies would seek to ensure Australian regulatory influence regarding this facility was sufficiently strong. To that end, in July 2012 the agencies prepared a paper *Ensuring Appropriate Influence for Australian Regulators over Cross-border Clearing and Settlement Facilities*. This articulated a proposed approach to overseas-based CS facilities licensed under section 824B(2) of the Act, with a view to:

- establishing conditions whereby Australian regulators have effective oversight of a cross-border CS facility and can exercise sufficient influence to ensure that the facility meets domestic and international standards for systemic risk management, provides its services in a fair and effective way, and offers due protection to Australian participants
- minimising potential disruption and loss to Australian financial institutions, financial markets and the real economy in the event of a participant's default or other financial stress to a CS facility
- ensuring continuity of provision of clearing and settlement services to the most systemically important Australian financial markets.²⁵

The policy developed by the Council seeks to ensure that the imposition of such measures on overseas facilities is done in a graduated and proportionate fashion. It spans the following:

- Foundational requirements
 - *for all CS facilities licensed in Australia*: legal compatibility of the facility's rules with Australian regulatory objectives; adequate channels to demonstrate compliance with the RBA's Financial Stability Standards (FSSs) and other obligations as CS facility licensees under Part 7.3 of the Corporations Act
 - *for CS facilities licensed in Australia that have material Australian-based participation and/or provide services in Australian-related products*: governance and operational arrangements that promote stability in the Australian financial system.
- *Additional requirements for systemically important CS facilities*: holding an Exchange Settlement Account (ESA) with the RBA; strengthened influence for regulators (possibly through membership of relevant cooperative oversight groups).
- *Additional requirements for CS facilities that have a strong domestic connection*: holding a domestic CS facility licence (and hence submitting to primary regulation by Australian regulators), which may also require a

²⁵ Council of Financial Regulators (2012), *Ensuring Appropriate Influence for Australian Regulators over Cross-border Clearing and Settlement Facilities*, July. Available at <<http://www.treasury.gov.au/ConsultationsandReviews/Submissions/2012/cross-border-clearing>>.

domestic legal presence; and controlling the degree of offshore outsourcing of critical functions, including systems, data and staffing.

As an illustration of how these graduated measures might be applied, it is likely that a CCP clearing a large share of the Australian dollar-denominated interest rate derivatives market would be required to meet both the foundational requirements and the additional requirements for systemically important CS facilities. Such a CCP may not, however, need to meet requirements associated with having a strong domestic connection given the market in Australian dollar-denominated interest rate derivatives – although of systemic importance to the Australian financial system – is international in nature.

3.3.3 RBA Financial Stability Standards for clearing and settlement facilities

Under the Corporations Act, the RBA has the power to determine FSSs for the purpose of ensuring that licensed CS facilities conduct their affairs in a way that causes or promotes overall stability in the Australian financial system. In 2003, the RBA determined FSSs for two classes of CS facilities: CCPs and securities settlement facilities. The FSSs are each supported by a set of measures that the RBA considers relevant in assessing compliance, and which are broadly aligned with the previous CPSS-IOSCO recommendations for CCPs and securities settlement systems.

The RBA has recently undertaken a consultation to update the FSSs in line with the PFMI (discussed in Section 3.2.3).²⁶ The RBA's proposed approach is to fully adopt the PFMI relevant to stability in the new FSSs. This will involve a significant change in the structure and form of the proposed FSSs. The current FSSs each comprise a high-level requirement (i.e. that a CS facility licensee 'conduct its affairs in a prudent manner, in accordance with the standards of a reasonable CS facility licensee in contributing to the overall stability of the Australian financial system, to the extent that it is reasonably practicable to do so'), accompanied by measures relevant to the RBA's assessment of whether a licensee has complied with the applicable FSS.

By contrast, in aligning with the structure of the PFMI, the RBA is proposing a more granular (and detailed) set of FSSs for each type of CS facility. In particular, each PFMI would be adopted as a legally enforceable standard, with each 'key consideration' adopted as an associated and individually legally enforceable 'sub-standard'. Further, in relation to overseas licensees, the RBA is proposing to place reliance on authorities in sufficiently equivalent regulatory regimes in respect of assessment against only those FSSs for which a 'materially equivalent' standard is explicitly applied in the overseas regime. Where the RBA is not satisfied that a materially equivalent standard exists, or is not satisfied with the documentary evidence received from the overseas regulator, the RBA proposes to directly assess an overseas licensee's compliance with the relevant FSS. The proposed FSSs also seek to embed the Council's proposed policy approach regarding sufficient regulatory influence over overseas-based facilities, as discussed in Section 3.3.2.

It is expected that the final FSSs will be issued before the end of 2012, to take effect shortly thereafter.

3.3.4 ASIC Regulatory Guidance for clearing and settlement facilities

ASIC's Regulatory Guide 211 *Clearing and Settlement Facilities: Australian and Overseas Operators* (RG211), sets out ASIC's approach to the licensing and regulation of CS facilities in Australia.²⁷ RG211 provides guidance on when

²⁶ RBA (2012), *Consultation on New Financial Stability Standards*, August. Available at <<http://www.rba.gov.au/payments-system/clearing-settlement/consultations/201208-new-fin-stability-standards/index.html>>.

²⁷ ASIC (2010), *Regulatory Guide 211: Clearing and Settlement Facilities: Australian and Overseas Operators*, April. Available at <[http://www.asic.gov.au/asic/pdflib.nsf/LookupByFileName/rg211.pdf/\\$file/rg211.pdf](http://www.asic.gov.au/asic/pdflib.nsf/LookupByFileName/rg211.pdf/$file/rg211.pdf)>.

an Australian CS facility licence will be required; how to apply for a CS facility licence; and ASIC's approach to exemptions.

ASIC has recently consulted on proposed amendments to RG211 to take into account the updated PFMLs (discussed in Section 3.2.3) and the Council of Financial Regulators' paper on regulatory influence for Australian regulators over cross-border clearing and settlement facilities licensed in Australia.²⁸ The updated guidance is intended to provide greater clarity for CCPs, both domestic and offshore, intending to become licensed to clear OTC derivatives for Australian market participants.

Consultation closed in October 2012 and ASIC intends to have amended RG211 by the end of 2012. The proposed amendments would take effect immediately from that time.

3.4 Developments in Other Jurisdictions

The Australian OTC derivatives market is highly internationalised. The local presence of offshore-domiciled dealers contributes to the liquidity and efficiency of the domestic market. A number of Australian-owned institutions also have substantial operations in offshore markets. Because of this, it is highly likely that at least some of the activity that is undertaken in Australia or that involves an Australian-based counterparty will, at some point, fall within the scope of OTC derivatives regulatory regimes being developed in other jurisdictions (notably the European Union (EU) and United States). It is therefore important to understand how the design of these regimes may be a force shaping the Australian OTC derivatives market. For domestic market participants and FMs active in overseas markets – whether Australian- or foreign-domiciled – there may be some need to understand and demonstrate the equivalence of foreign regimes with that of Australia to avoid duplicated or conflicting regulatory requirements.

3.4.1 United States

Dodd-Frank Act

In the US, Title VII of the *Dodd-Frank Wall Street Reform and Consumer Protection Act 2010* (Dodd-Frank Act) introduces a regulatory regime for OTC derivatives (termed 'swaps' in the US regime), and requires the Commodity Futures Trading Commission (CFTC) and Securities and Exchange Commission (SEC) to adopt rules to implement the details of the regime. The CFTC is in the process of issuing rules in the following areas:

- joint rule with the SEC further defining product terms such as 'swap' and 'security-based swap'
- registration and regulation of Swap Dealers and Major Swap Participants, including capital and margin rules for non-banks, segregation of collateral and business conduct requirements
- clearing, including registration and regulation of CCPs (termed Derivatives Clearing Organizations (DCOs) in the US), clearing requirements and exemptions from clearing requirements
- data, including registration and regulation of trade repositories (termed Swap Data Repositories (SDRs) in the US), data record-keeping and reporting, real-time public reporting and reporting relating to commodity trading
- trading, including registration and regulatory requirements for Swap Execution Facilities (trading platforms) and requirements to make swaps available to trade.

28 ASIC (2012), *Consultation Paper 186: Clearing and Settlement Facilities: International Principles and Cross-border Policy (Update to RG211)*, September. Available at <<http://www.asic.gov.au/asic/asic.nsf/byHeadline/12-221MR%20ASIC%20consults%20on%20amendments%20to%20clearing%20and%20settlement%20facilities%20guidance?opendocument>>.

Recently, the CFTC finalised a rule establishing a schedule for compliance with mandatory clearing requirements for swaps and proposed the first classes of swaps that will be subject to mandatory clearing.

The CFTC's rules took effect from 12 October 2012, although large market participants have until end-December 2012 to register as Swap Dealers or Major Swap Participants.

In July 2012 the CFTC published proposed guidance on its approach to cross-border issues. Other jurisdictions have provided feedback raising a number of issues for further discussion as to potential overlap, potential conflicts and the need for further clarification. ASIC and the RBA have engaged with regulators in Hong Kong and Singapore on this issue, and signed a joint letter to the CFTC identifying key concerns for Asia-Pacific market participants that will be required to register as Swap Dealers and for financial market infrastructure based in this region.

As part of the implementation of trade capture and reporting requirements, the CFTC has implemented a CFTC Interim Compliant Identifier, an LEI which complies with the proposed global standard set for LEIs, discussed above in Section 3.2.7.

3.4.2 European Union

EMIR

The *European Union Regulation on OTC derivatives, Central Counterparties and Trade Repositories* (known as EMIR) entered into force in August 2012. EMIR enables the imposition of mandatory clearing requirements on OTC derivatives contracts entered into by financial entities, as well as those of non-financial entities that exceed a clearing threshold. Once fully implemented, OTC derivatives contracts not subject to the clearing mandate will be subject to alternative risk mitigation requirements, including the exchange of collateral or holding of additional capital. Counterparties to all OTC derivatives transactions will be required to report details of transactions to a trade repository. EMIR requires CCPs to be registered, and imposes prudential and business conduct requirements on registered CCPs. EMIR also imposes certain requirements on trade repositories.

In September 2012, the European Securities and Markets Authority (ESMA) issued draft technical standards to implement a number of provisions in EMIR. The technical standards are expected to be adopted by the European Commission as regulations by the end of 2012. The standards, if adopted, will:

- define the details of derivatives transactions that need to be reported to trade repositories
- define details of supervision of trade repositories, and the data that would be made available to relevant authorities and the public
- set out how thresholds for clearing obligations will operate; entities above these thresholds will be subject to a clearing mandate
- set out the mandatory risk mitigation techniques for OTC derivatives that are not centrally cleared, such as trade confirmation, portfolio compression and reconciliation
- define a set of organisational, conduct of business and prudential requirements for CCPs including margin requirements, default fund, default waterfall, liquidity risk management and investment policy, as well as stress- and back-testing arrangements.

Other European supervisory authorities have also consulted on, or published, related draft technical standards; for instance, the European Banking Authority has proposed draft technical standards on capital requirements for CCPs.

The cross-border application of EMIR will depend on whether a transaction (including a transaction where a counterparty is established in a third country) is likely to have a direct, substantial and foreseeable effect within the EU. EMIR also provides a mechanism for market participants to be deemed to have complied with relevant clearing, reporting and risk mitigation rules where at least one of the counterparties is established in a non-EU jurisdiction that the European Commission has determined to have an equivalent regulatory regime, which is applied in an equitable and non-distortive manner.

MiFID / MiFIR

On 20 October 2011, the European Commission adopted proposals for a revised *Markets in Financial Instruments Directive* (MiFID) and a new *Markets in Financial Instruments Regulation* (MiFIR). The proposed Directive and Regulation would:

- extend the existing harmonised European financial services and markets regime, in terms both of instruments and firms covered (so that, for example, certain commodity trading firms would fall within the scope of the regime)
- impose regulatory requirements on firms undertaking algorithmic trading (including high-frequency trading)
- impose position limits on the trading of commodity derivatives
- impose restrictions on third-country firms providing services in the EU
- introduce enhanced corporate governance requirements for investment firms
- introduce enhanced pre- and post-trade transparency provisions in respect of both equities and non-equities.

3.4.3 Other jurisdictions

Outside of the US and EU, Japan is one of the jurisdictions most advanced in the implementation of its G-20 commitments. Amendments were made to Japan's *Financial Instruments and Exchange Act* in May 2010 which require the central clearing and reporting of certain classes of OTC derivatives, as set out in cabinet ordinances by the Japanese Financial Services Agency (JFSA). The first such ordinance is due to be passed in November 2012. For central clearing, it is proposed that clearing obligations will apply to credit default swaps referencing Japanese entities and yen-denominated interest rate swaps eligible for clearing at the Japanese Securities Clearing Corporation (JSCC). While the legislation requires that derivatives with credit events closely associated with Japanese corporate bankruptcy law be cleared by a Japanese CCP (currently JSCC only), other stipulated derivatives may be cleared through foreign CCPs licensed by the JFSA or which have interoperability arrangements with a Japanese CCP. For trade reporting, a broad scope of OTC derivatives is likely to be stipulated, with direct reporting to the JFSA of derivatives for which there is no established trade repository. Trade execution requirements are not as well advanced, although draft legislation was proposed in March 2012.

In other jurisdictions, such as Hong Kong, Singapore and Canada, the design and implementation of legislation and regulation to impose mandatory requirements is less progressed but well underway. Similar to Australia, these jurisdictions have found value in observing developments in other large markets before crafting their own regimes. The design and implementation of the frameworks being adopted in these other jurisdictions would also appear to be somewhat similar to that of Australia. Although the final aspects of the regimes in

these jurisdictions are, in many cases, still subject to consultation and further consideration by regulators, some common characteristics are likely to emerge:

- mandatory trade reporting is likely to form part of the initial application of the regimes
- single-currency interest rate swaps, denominated in the local currency, are being considered for the initial application of any mandatory central clearing requirements
- participants are likely to be able to meet any mandatory central clearing obligations using central counterparties outside of the local jurisdiction in many cases
- participant exemptions from mandatory central clearing are being considered for public entities and end users that use derivatives solely to hedge.

Mandatory requirements imposed in jurisdictions outside of the EU and US are less likely to have a material and direct effect on the OTC derivatives activity of Australian entities. Any such requirements are expected to target products in specific currency denominations that are less traded by Australian entities. Also, these jurisdictions do not appear to be developing registration requirements for foreign entities that trade with local entities.

3.5 Global Industry Developments

In recent years global OTC derivatives market participants have initiated or accelerated a number of workstreams around the standardisation of data and processes, either as direct responses to regulatory requirements or as industry-driven proposals. These efforts in part reflect a recognition that common standards can have substantial benefits for participants and other stakeholders, and that these benefits increase as the number of transactions and participants in the market increase. They also partly reflect an assessment that many jurisdictions' regulatory agendas are closely aligned, and that globally consistent industry initiatives are likely to be a more efficient approach to introducing such reforms for market participants that engage in cross-border transactions.

3.5.1 Data standardisation

A key area of work has been the development of standardised identifiers when recording transaction details. As well as facilitating trade reporting, such standardised identifiers can also facilitate increased straight-through-processing and other aspects of trade automation, thereby reducing operational risks in OTC derivatives markets. A key initiative in this regard is the LEI project, discussed above in Section 3.2.7. It has been a deliberate strategy of the regulatory community to ensure market participants and industry groups are closely engaged in this work.

Operational risk management and trade reporting will also be enhanced by the development of Unique Product Identifiers (UPIs). While the specifications of an OTC derivatives transaction are often quite standardised within a product class, there is often substantial variation in the terms and conventions of trades across different product classes. By embedding some standardisation around these parameters, and enabling the identification of the specific product class of a transaction, UPIs should help simplify and increase the accuracy of transaction record-keeping, and further facilitate trade processing enhancements. Recognising this, global industry groups such as the International Swaps and Derivatives Association (ISDA) and the Global FX Division (GFXD) have proposed product taxonomies and related standards.

Several industry groups also have work underway to develop Unique Trade Identifiers (UTIs) – also known as Unique Swap Identifiers (USIs). UTIs allow for individual transactions to be identified within and across counterparties. As with UPIs, having a standard approach to generating these identifiers would greatly enhance operational efficiency and data management.

To facilitate process standardisation and system interoperability, a number of industry groups are promoting the greater uptake of common messaging standards, such as the FIX, FpML and SWIFT protocols.

3.5.2 Portfolio reconciliation and collateralisation arrangements

Industry groups have also been undertaking work on market conventions and best practice for market participants. ISDA has, for a number of years, surveyed market participants on collateral practices. Building on these surveys, it has published best practice guidelines around collateralisation in OTC derivatives markets.²⁹ As part of this work, it has developed a protocol around the management of disputed valuations and collateral calls. A related workstream looks to promote regular portfolio reconciliations, so as to reduce the incidence of missed or incorrectly captured trades, in turn reducing the likelihood of trade and collateral disputes. As part of this global effort, an Asia-Pacific Collateralised Portfolio Reconciliation Memorandum of Understanding has been developed, to which close to 30 firms from the Asia-Pacific region are adherents.³⁰

3.5.3 Documentation

OTC derivatives documentation has evolved in response to recent and anticipated regulatory developments. ISDA, in particular, has worked with industry participants and associations to produce standard documentation that seeks to assist market participants make the transition to revised or new OTC derivatives regulatory regimes.

Standardised credit support annexes

The high degree of heterogeneity in bilaterally negotiated credit support annexes (CSAs) that collateralise OTC derivatives positions has given rise to a number of risks. Larger dealers, who may have several thousand CSAs in place, face significant operational complexity in managing these arrangements. Further, where a counterparty has the option to provide a variety of different forms of collateral against a position, valuing this optionality in a standardised and transparent way has proved difficult at times. As well as complicating the valuation of bilateral positions, uncertainties around the valuation of optionalities in CSAs can also slow the process of transferring bilateral trades to CCPs. To overcome some of these difficulties, ISDA has released a standard credit support annex (which market participants may take up voluntarily) that seeks to standardise the calculation of collateral requirements for multi-currency exposures.

Client clearing and related documents

In response to the rules being promulgated under Title VII of the Dodd-Frank Act, ISDA has released an optional protocol in August 2012, allowing participants to incorporate standard representations into contractual terms that would satisfy customer business conduct rules issued by the CFTC. MarkitWire and ISDA have launched

29 ISDA (2011), *ISDA 2011 Best Practices for the OTC Derivatives Collateral Process*, November. Available at <<http://www2.isda.org/attachment/Mzc5MA==/2011%20ISDA%20Best%20Practices%20for%20the%20OTC%20Derivatives%20Collateral%20Process%20-%2030%20Nov%202011%20FINAL.pdf>>.

30 Details of the Memorandum of Understanding and adhering firms are available at <http://www2.isda.org/attachment/MzA4OA==/asiapacific_mou.html>.

the ISDA Amend platform for both sell-side and buy-side participants, to allow participants to satisfy the CFTC's business conduct requirements by exchanging information in pre-completed questionnaires and providing standard representations.

For transactions executed through a broker, the US Futures Industry Association (FIA) and ISDA released the Cleared Derivatives Execution Agreement in June 2011, releasing a revised version of the Agreement in September 2012. Consistent with final CFTC rules on swap relationship documentation for Swap Dealers and Major Swap Participants, the revised Agreement does not permit the disclosure of the identity of a client's counterparty to the client's Futures Clearing Merchant (FCM – a specific term for direct clearing participants in the US regime); includes a requirement for parties to accept trades for clearing as soon as technologically possible; and allows the parties to set out cut-off times for determining responsibility for trade breakage costs.

In August 2012, FIA and ISDA released a Cleared Derivatives Addendum as a supplement to a futures and options agreement between an FCM and a client. The Addendum facilitates the making of representations about matters including treatment of client collateral, and sets out provisions relating to tax, close-out methodology for cleared swaps and valuation of terminated trades.

In Europe, work is also underway with buy-side and sell-side participants on standard documentation for clearing of OTC derivatives.

4. Australian OTC Derivatives Market Activity

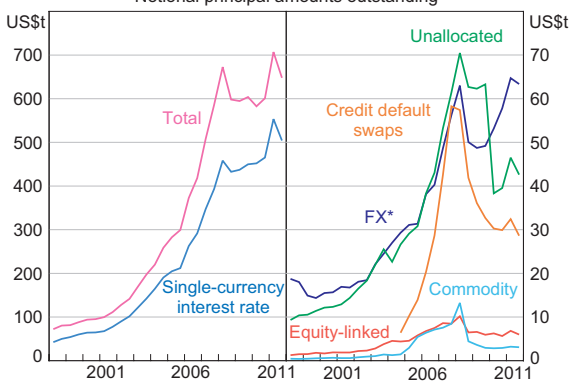
4.1 Introduction

The Australian OTC derivatives market is a relatively small share of the global market, with activity mostly focused on Australian dollar-denominated contracts. The vast bulk of this activity in most product classes is intermediated by a small group of domestic and offshore dealers. The most widely used product classes in Australia are single-currency interest rate derivatives, cross-currency swaps and FX derivatives – particularly those with an Australian dollar component. There is also some activity in other types of derivatives, though on a much smaller scale.

4.2 The Global OTC Derivatives Market

The Bank for International Settlements (BIS) conducts a semi-annual survey of large banks and other institutions to collect data on the global OTC derivatives market; this is supplemented by a more comprehensive survey every three years. Data from the BIS indicate that the total gross notional value of OTC derivatives outstanding globally at end-December 2011 was US\$650 trillion (Graph 1). This value has grown considerably in the past decade, although growth was interrupted in the years following the onset of the financial crisis in 2008. The largest component of the global market, measured by gross notional outstanding amounts, is interest rate derivatives. FX derivatives are the next largest class of derivatives. Credit derivatives grew very rapidly ahead of the financial crisis, but outstandings have declined since 2008.

Graph 1
Global OTC Derivatives
 Notional principal amounts outstanding



* Includes cross-currency swaps
 Source: BIS

The bulk of OTC derivatives positions reported to the BIS survey involve counterparties that are either dealers (mainly large banks) or other financial institutions, reflecting that the OTC derivatives market is primarily interbank (Table 1). For all major product classes, 85 to 90 per cent of positions are with financial counterparties. Non-financial counterparties are participants in FX and commodity derivatives, and (to a lesser extent) interest rate derivatives, reflecting their usage of derivatives to hedge payment and funding risks. In contrast, credit derivatives are used almost exclusively by financial institutions. Much of the large principal amounts outstanding between reporting dealers reflects the build-up of economically redundant trades, as discussed in

Table 1: Global OTC Derivatives Counterparties^(a)
Notional principal amounts outstanding, December 2011

	Single-currency interest rate		FX ^(b)		Credit		Equity-linked and commodity	
	US\$ trillion	Per cent of product class	US\$ trillion	Per cent of product class	US\$ trillion	Per cent of product class	US\$ trillion	Per cent of product class
Reporting dealers	157	31	28	44	17	58	2	38
Other financial institutions	309	61	26	41	12	41	3	50
Non-financial customers	37	7	9	15	0	1	1	12
Total	504	100	63	100	29	100	6	100

(a) Trades reported by dealers
(b) Includes cross-currency swaps
Source: BIS

Section 2.2. The gross market value of these contracts after adjusting for legally enforceable bilateral netting is estimated to be around 4 per cent of the notional outstanding amounts, at around US\$30 trillion.

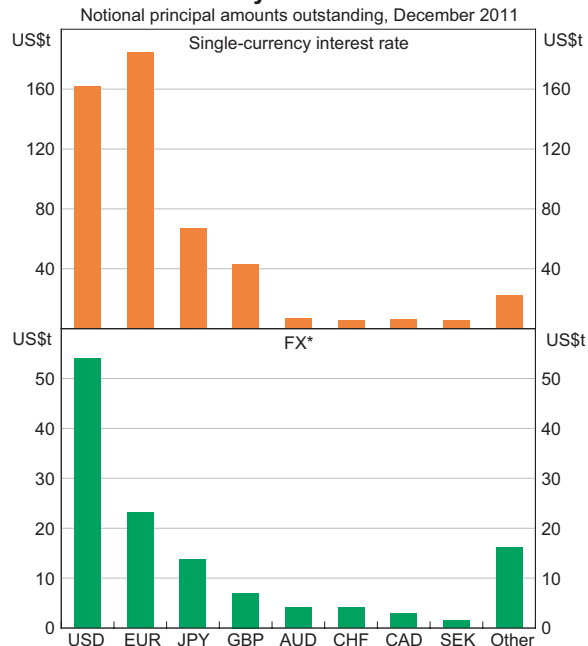
Globally, the vast bulk of trading is in instruments denominated in four currencies: US dollars, euro, Japanese yen and pounds sterling (Graph 2). At the end of 2011, outstanding derivatives positions denominated in Australian dollars were around US\$11 trillion, comprising around 2 per cent of the global market.

In terms of turnover (measured in gross notional principal amounts), the largest OTC derivatives markets are in the United Kingdom and United States (Graph 3). Australian market turnover is significantly lower than that seen in these largest markets, although it is of a similar size to the markets of several other G-20 countries.

4.3 Australian OTC Derivatives Market Survey

In July 2012 the regulators requested 65 institutions known to be active in the Australian OTC derivatives market to participate in a market survey (survey

Graph 2
Global OTC Derivatives by Currency Denomination
Notional principal amounts outstanding, December 2011



* Includes cross-currency swaps; specified currency against all other denominations
Source: BIS

recipients are listed in Annex 1). This group included the market participants that provide data to the annual survey undertaken by the Australian Financial Markets Association (AFMA), along with other sell-side and buy-side institutions. Responses were received from 37 institutions, of which 18 self-identified as price-makers (that is, dealers) for at least one product class. Based on the institutions in this latter group, the regulators are confident that the survey captured the bulk of dealing activity in the Australian OTC derivatives market.

The survey requested information relating to 'Australian' market activity, defined as transactions booked or executed by an Australian-based entity (in turn defined as an entity incorporated in Australia, or the branch or office of an overseas entity registered in Australia), across eight OTC derivatives product classes:

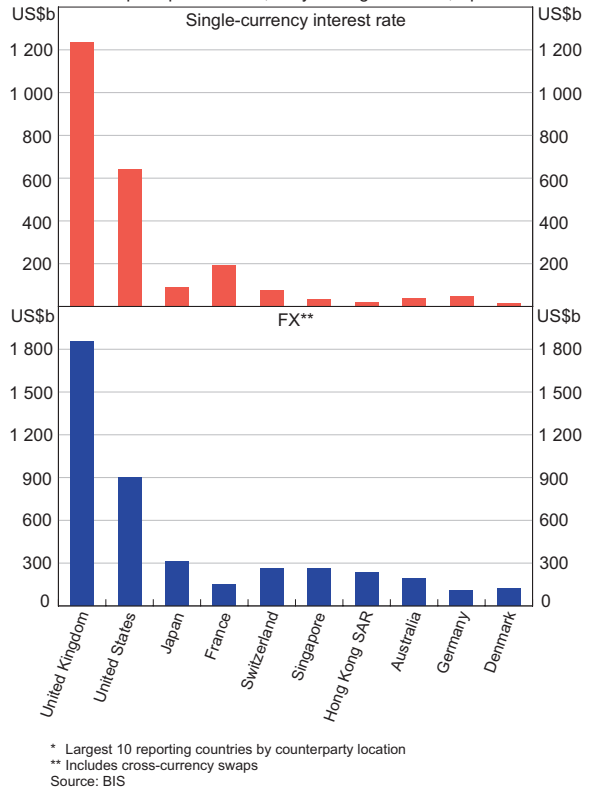
- single-currency interest rate
- cross-currency interest rate
- FX
- credit
- equity
- commodity
- electricity
- environmental.

In addition to the high-level product class breakdown, the survey sought information on outstanding positions and trading activity across counterparties, maturities and currencies. Qualitative and more targeted information was also sought in areas such as product liquidity, use of centralised infrastructure (including trading platforms and central clearing arrangements) and bilateral risk-management practices; survey results on these matters are discussed further in Chapter 5.

4.4 Australian Market Size and Composition

As noted above, as at end-2011 around US\$11 trillion of global OTC derivatives were denominated in Australian dollars, though not all of this is transacted in Australia or booked by Australian-domiciled entities. Measuring the size of the Australian OTC derivatives market is complicated by the large amount of cross-border activity that takes place. Many transactions executed in Australia involve a counterparty located in Australia and a counterparty located offshore. Even where both executing counterparties are located in Australia, it is common for foreign-domiciled counterparties (such as large global dealers) to record the transaction on the books of an overseas branch or affiliate.

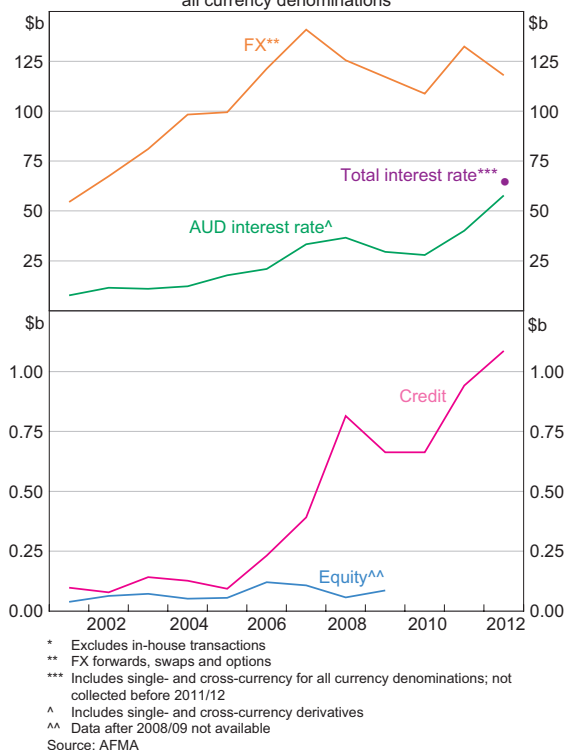
Graph 3
Location of OTC Derivatives Activity*
 Notional principal amounts, daily average turnover, April 2010



Data from AFMA indicate that over the year to end June 2012, daily average turnover of OTC derivatives in Australia was around \$180 billion (Graph 4).³¹ This figure includes transactions undertaken by an Australian-based counterparty, whether Australian- or foreign-domiciled, with either Australian- or foreign-based counterparties. Within this, turnover in OTC FX derivatives was around \$120 billion, while OTC interest rate derivatives (both single-currency and cross-currency) turnover was around \$65 billion; turnover in other derivatives products was much lower.

Turnover in the Australian OTC derivatives market is strongly Australian dollar-focused. AFMA data indicate that of FX derivatives turnover, around 55 per cent had an Australian dollar-denominated leg. Of interest rate derivatives, around 80 per cent of turnover across all products was in fully Australian dollar-denominated products, with an additional 4 per cent of turnover being cross-currency swaps with one leg denominated in Australian dollars. Data from the BIS indicate that trading in Australia accounts for the bulk of global turnover in Australian dollar-denominated derivatives.

Graph 4
Australian OTC Derivatives Market Turnover*
 Notional principal amounts, daily average for financial year, all currency denominations



4.5 Australian Market Participants

In the absence of widespread usage of trading platforms in OTC derivatives markets, dealers (large banks or other financial institutions) play a key role in intermediating these markets. The local dealer community consists of a range of foreign banks along with the larger Australian-owned banks. While some domestic and foreign dealers are market-makers in many classes of OTC derivatives, others take a more specialist role. Both AFMA data and the regulators' July 2012 survey indicate that the Australian OTC derivatives market is highly concentrated among a relatively small number of dealers. Within each product class, the market share of the top eight dealers is around 80 to 90 per cent of all transactions.

Based on the responses received for the regulators' July 2012 survey, the largest 10 dealers are counterparties to around 90 per cent of the aggregate notional value of all outstanding positions. Given these 10 dealers are on one side of the vast majority of positions in the Australian market, the relative sizes of the notional amounts outstanding on a representative book of one of these dealers reflect the product-class composition shares of the aggregate market (Table 2). The Australian dollar-focus of the local market is evident, with around 80 per cent of the notional outstanding value of combined interest rate and FX derivatives positions denominated in the local currency.

³¹ Note that these turnover figures measure the notional principal of contracts. Because of the derivative nature of these transactions, the full principal is generally not exchanged at the time the transaction is initiated, nor might it ever be exchanged over the lifetime of the contract. This is unlike transactions in securities such as equities or bonds, where the full amount of consideration is exchanged at the time the transaction is settled.

Table 2: Characteristics of OTC Derivatives Dealers in Australia
Average for largest dealers,^(a) June 2012

	Notional amount outstanding	Transactions outstanding	Transactions per day
	\$ billion	Number	Number
Single-currency interest rate	1 380	16 500	40
Cross-currency interest rate	270	2 900	10
FX	270	19 100	225
Credit	70	5 400	15
Equity	<10	1 700	<10
Commodity	<10	1 300	<10

(a) Dealers whose notional positions comprise 90 per cent of aggregate notional outstanding positions (not adjusted for double counting)

Source: survey responses

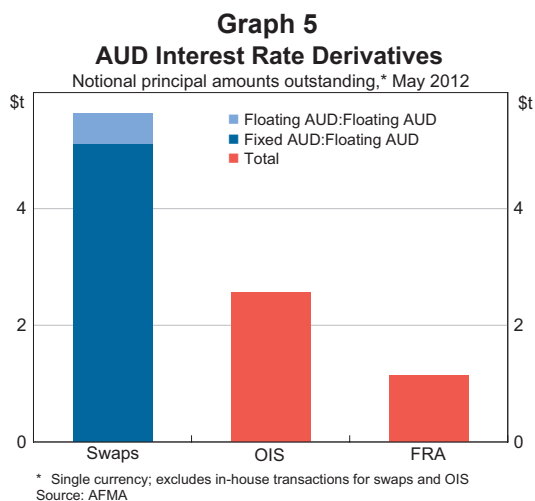
Trading activity is highest among FX derivatives, with the largest dealers executing around 225 transactions per day on average. The largest dealers had an average of around 19 000 FX derivatives transactions outstanding as at June 2012. Daily activity in single-currency interest rate derivatives is much lower; although owing to the long maturities of many of these contracts, the number of transactions outstanding is still quite high. The large number of transactions outstanding relative to notional amounts in credit, equity and commodity derivatives reflects the much lower principal amounts in these product classes. The lower daily average number of transactions in equity and commodity derivatives in part reflects these markets being more concentrated than other asset classes, with the bulk of market turnover being accounted for by a very small number of dealers.

4.6 Product Classes

4.6.1 Single-currency interest rate

Australian dollar-denominated interest rate derivatives comprise the largest component of notional positions outstanding in the Australian OTC derivatives market. According to AFMA data, the majority of the amount outstanding in this product class is comprised of fixed-to-floating interest rate swaps (Graph 5), 70 per cent of which have maturities greater than one year. Dealers are also active in shorter term contracts, such as overnight indexed swaps (OIS) and forward rate agreements (FRAs). Interest rate options (including swaptions, caps and floors) are also used, though relatively less than other classes of interest rate derivatives.

The dealers surveyed by the regulators in July 2012 reported that they indexed most Australian dollar-denominated single-currency interest rate derivatives to the bank bill swap rate (BBSW) or bank bill swap bid rate (BBSY). Other indices, such as OIS and AONIA–OIS



compound rates, are less commonly used as reference rates; the Australian dollar LIBOR is only used in a very small number of transactions by a few participants.

AFMA data indicate that around 75 per cent of trading activity in Australian dollar-denominated single-currency interest rate derivatives in Australia is interbank activity – both Australian-incorporated ADIs and foreign bank branches (Graph 6). Within this, interdealer trading accounts for almost half of annual turnover. Similar shares for the interbank and interdealer segments of the market also apply to the notional amount outstanding.

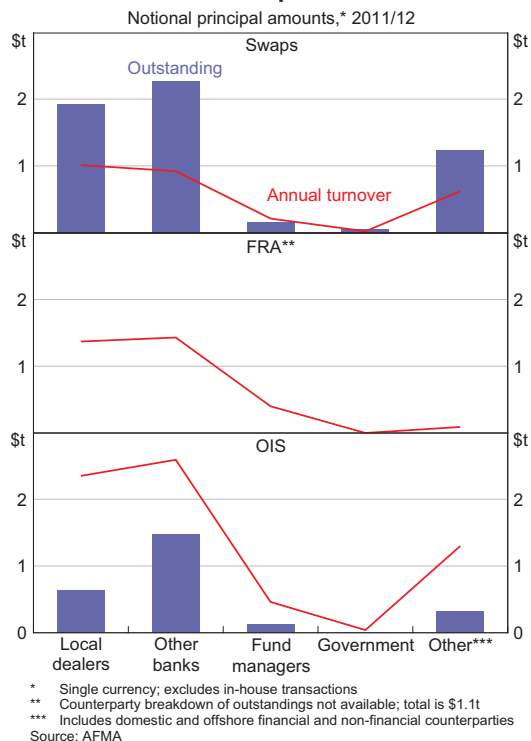
Activity in Australian dollar-denominated single-currency interest rate derivatives is quite liquid, with average daily turnover across all product classes of more than \$50 billion in 2012, representing growth of around 100 per cent in the past five years, mainly reflecting increased activity in OIS (Graph 7). As reported in Table 2, daily transaction volume is also high relative to most product classes apart from FX, with the average large dealer transacting in single-currency products around 40 times per day.

Across the most actively traded single-currency interest rate products (swaps, FRAs and OIS), respondents to the regulators’ survey generally reported relatively tight bid-ask spreads of between 1 and 2 basis points on average, with some participants noting sub-basis point spreads. Dealers indicated that standard transaction sizes in the local market generally ranged between \$50–\$100 million for swaps, while transaction sizes for FRAs and OIS tended to be larger, up to \$500 million. Depth in the swaps market is also evident, with dealers reporting a 1–3 basis point average price impact from a five times larger-than-average transaction. These results are similar to those reported in the regulators’ May 2009 survey, suggesting there has been little change in market liquidity and pricing over recent years.

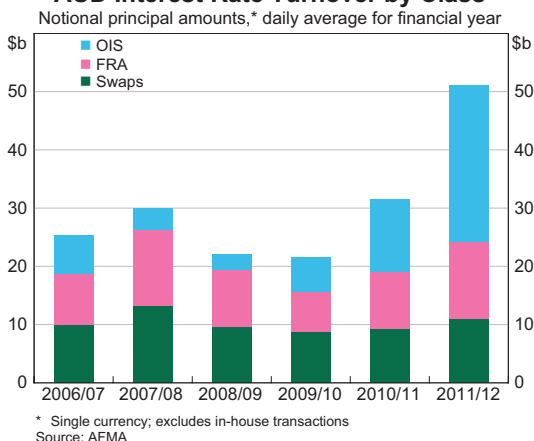
4.6.2 Cross-currency interest rate

Around 70 per cent of aggregate outstandings in cross-currency interest rate derivatives reported to the regulators’ survey involve the Australian-US dollar cross. Smaller amounts of transactions involve the New Zealand dollar, as well as the euro and Japanese yen. Responses to the regulators’ survey indicated small

**Graph 6
AUD Interest Rate Derivatives
Counterparties**



**Graph 7
AUD Interest Rate Turnover by Class**



amounts of activity in a broad range of other currencies, with trades reported in a total of 15 different pairs. Data from AFMA indicate that around 90 per cent of the notional amount outstanding in cross-currency swaps involving the Australian dollar has a floating Australian dollar leg.

According to AFMA data, average daily turnover in Australian dollar-denominated cross-currency interest rate derivatives was around \$2.5 billion in 2012, substantially lower than for single-currency products. Based on evidence from the regulators' survey, on average the largest dealers only conduct around 10 trades per day, with bid-ask spreads commonly around 2–4 basis points (and possibly narrower for the Australian-US dollar pair). Standard transaction sizes are typically \$50 million or \$100 million, although there is some evidence to suggest that sizes for transactions that mature within three years tend to be larger at around \$200 million. As with single-currency interest rate derivatives, these results suggest there has been little change in market liquidity and pricing in recent years.

4.6.3 Foreign exchange

As noted above, the notional value of turnover in FX derivatives is the highest of all OTC derivatives product classes. Survey participants generally reported the greatest number of transactions outstanding in outright FX forwards and FX swaps. A number of dealers also reported activity in foreign exchange options and non-deliverable forwards. Similar to activity in the single- and cross-currency interest rate product classes, most activity in FX derivatives occurs in the interbank market, with less than 5 per cent of turnover occurring with non-financial counterparties (Graph 8).

The market for FX derivatives is very liquid. According to the regulators' survey, dealers reported narrow bid-ask spreads of around 1 basis point or less for FX swaps; standard transaction sizes ranged from \$10 to \$100 million for the most active dealers. Depth in FX derivatives is also quite good, with the market generally able to absorb larger-than-average trades without significant price impact (the impact of a five times larger-than-average trade is reportedly 2 basis points or fewer).

FX forwards are also liquid, with most dealers indicating relative ease in executing transactions and facing bid-ask spreads of around 2 basis points or fewer. The reported standard transaction size for forwards varied considerably, and ranged up to \$250 million. For other FX derivatives, such as non-deliverable forwards (NDFs)

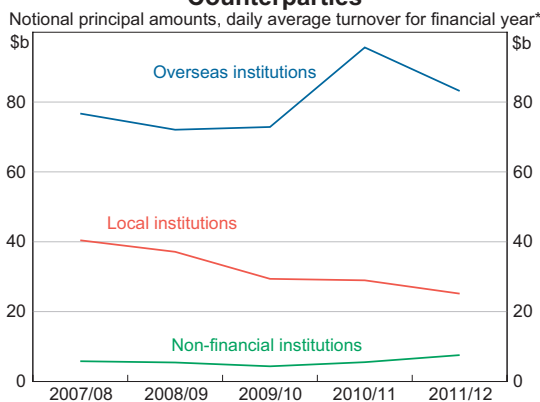
and options, survey responses suggest that standard transaction sizes are lower and bid-ask spreads are higher relative to swaps and forwards.

The Australian-US dollar cross comprised 45 per cent of the aggregate notional value of dealers' outstanding positions in OTC FX derivatives. A little over 10 per cent of the aggregate involved the euro-US dollar currency pair, with around 5 per cent of activity in each of the sterling-, yen- and NZ dollar-US dollar pairs. The remaining activity takes place across a broad range of currency pairs.

4.6.4 Credit

Credit default swaps (CDS) are the most commonly used OTC credit derivatives, with respondents to the regulators' survey reporting only limited use

Graph 8
Australian FX OTC Derivatives Counterparties



* Includes forwards and swaps
Sources: AFMA; RBA

of other products, such as total return swaps and synthetic correlation products. According to AFMA data, single-name CDS accounted for around 55 per cent of notional outstandings (including in-house) in Australia in 2012, with most of the remainder in index-based products (Graph 9). There was a greater prevalence of trading in credit derivatives with longer maturities (that is, those that with a maturity of three years or more), which accounted for over 60 per cent of outstanding positions.

Survey responses from dealers indicated that a number of institutions used CDS referencing the iTraxx Australia index. Data from DTCC indicates that the iTraxx Australia index is quite actively traded, though activity is substantially lower than that of the most heavily traded credit indices globally (Graph 10). There is also activity in Australian single-name CDS contracts, particularly for those referencing Australian banks and mining companies. However, trading volumes for CDS on Australian reference entities are typically well below those seen in the most actively traded single-name contracts globally.

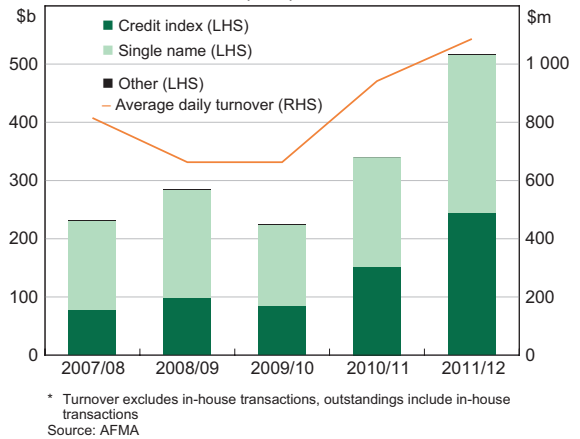
While total notional outstanding for all single-name CDS is larger in aggregate than for credit indices, amounts outstanding against many individual reference entities are quite small. Reflecting the larger market for credit indices, AFMA data indicate that average daily turnover for these products was around \$720 million in 2012, compared with \$360 million for single-name CDS. Responses to the regulators' survey suggest that local dealer activity in credit derivatives is mainly in Australian reference entities and indices.

Information provided to the regulators' survey on the characteristics of a standard credit derivatives transaction was somewhat limited and quite varied. However, there is some evidence to suggest that bid-ask spreads are lower for CDS referencing indices rather than single names, and that the standard size of these contracts is larger.

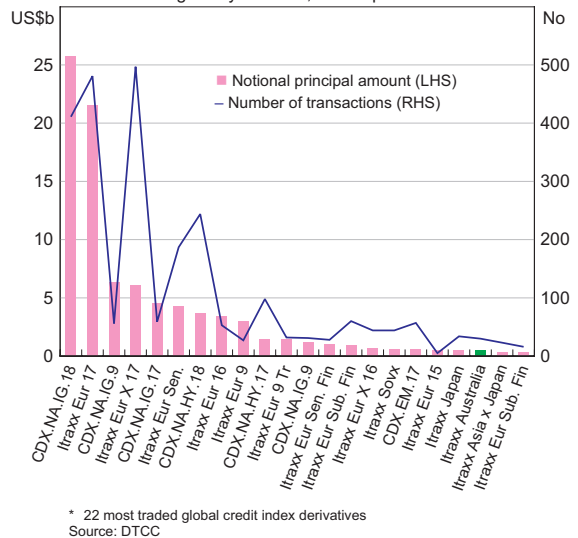
4.6.5 Equity

The limited notional outstanding in OTC equity derivatives markets is more dispersed across different products than that in other OTC derivatives product classes. The regulators' survey suggests equity options are the most common contract type, including options over both single stocks and major Australian equity indices. While

Graph 9
OTC Credit Derivatives Classes
Notional principal amounts*



Graph 10
OTC Credit Index Derivatives
Average daily turnover,* June quarter 2012



respondents generally reported activity in vanilla options, some reported use of less-standardised options, including exotics, barriers and auto-callable structures. Use of equity swaps was also reported, both for single stocks and indices. Typical trade sizes and bid-ask spreads vary widely across contract types.

4.6.6 Commodity

The participants in OTC commodity markets predominantly trade commodity swaps and forwards, with more limited use of commodity options. Survey respondents reported exposures in metals (particularly gold, copper and aluminium), oil and agricultural products (including wheat and sugar). Bid-ask spreads and standard transaction sizes varied widely with the underlying commodity.

4.6.7 Electricity

The participants in the OTC electricity derivatives market consist of a small number of financial intermediaries and a larger number of electricity generators and retailers that participate in the National Electricity Market (NEM). The survey results indicate approximately a quarter of the transactions in this market are conducted with a financial intermediary, with the remainder of the transactions in this market conducted between physical or NEM market participants. A range of products are traded in the OTC electricity derivatives market, with the most frequently traded products being flat and peak swaps followed by caps. Other products traded in this market include load-following and weather, and some swaps include a carbon pass-through component. The tenors of swap contracts are commonly by quarter, or by financial or calendar year.

Survey responses indicate participants predominantly rely on OTC transactions, rather than futures contracts traded on the ASX 24 exchange, to hedge their physical exposures. Participants that own both generation and retail businesses also rely on internal hedging. For the most commonly traded swap contracts, a number of participants reported generally consistent transaction sizes but reported some differences in bid-ask spreads. There was some dispersion in transaction size and spreads for other, less commonly traded, contracts. The ease of finding a counterparty can vary in some states.

4.6.8 Environmental

Forwards and options on Renewable Energy Certificates (RECs) constitute the bulk of the Australian market for OTC environmental derivatives. Activity related to NSW Greenhouse Gas Abatement Certificates (NGACs) and Gas Electricity Certificates (GECs) largely makes up the remainder of the market, with very limited activity in carbon-related products.

According to AFMA data, activity in the market is highly concentrated, with just three to four entities accounting for over 90 per cent of turnover in each of the main classes of certificate. Responses to the regulators' survey also show that the vast majority of activity is between Australian-based entities. Overall activity in this market is very small relative to that seen in most other OTC derivatives markets in Australia.

5. Risk Management and Infrastructure Usage in Australia

5.1 Introduction

This chapter reviews developments in the risk management practices and market infrastructure usage of participants in the Australian OTC derivatives market. As discussed in Section 2.2, due to the bilateral nature of many OTC derivatives markets, the resilience of these markets is highly dependent on each market participant's risk management practices. The regulators are therefore keen to ensure that major market participants implement and maintain robust risk management practices. Centralised infrastructure can further enhance individual participants' risk management, while also reducing some of the interdependencies between participants.

As discussed in Section 2.5.1, in May 2009 the Australian regulators undertook a survey of Australian OTC derivatives market participants to better understand risk management and infrastructure usage in Australia. Based on those survey results, the regulators made a number of recommendations to the industry to:

- promote market transparency
- ensure continued progress in the timely negotiation of industry-standard legal documentation
- expand the use of collateral to manage counterparty credit risks
- promote Australian access to central counterparties for OTC derivatives products
- expand the use of automated facilities for confirmations processing
- expand the use of multilateral portfolio compression and reconciliation tools.

The July 2012 survey undertaken by the regulators has provided an insight into the domestic market's progress with regards to these recommendations, as well as other developments around risk management and infrastructure usage. In general, the survey results reveal that some enhancements to risk management processes have been made in recent years, and generally appear to be appropriate to the scale and nature of the domestic OTC derivatives market. Within this, though, there would appear to be some areas where additional improvements are warranted. Usage of centralised infrastructure is not yet well entrenched, though some increased uptake is evident.

5.2 Counterparty Credit Risk Management

5.2.1 Trade documentation

As part of a trading relationship, it is common for the rights and obligations between two counterparties to be governed by a master agreement that applies to all transactions. A master agreement typically allows one counterparty to calculate a net exposure across all its positions with respect to another counterparty, and sets

out the circumstances under which positions can be closed out. ISDA has developed a master agreement that is widely used among active market participants, including in Australia. Most dealers reported that they had between 100 and 1 000 master agreements in place with counterparties in the Australian market; a small number of dealers reported having more than 1 000 agreements in place. Master agreements would appear to be in place between the majority of larger counterparties; utilisation for smaller market participants would appear to be somewhat lower. For internationally active participants the governing law of master agreements or other related contracts was reported to be a mix of Australian, English and New York law. For participants active only in the local market, Australian law was reported to be the most prevalent governing law. There was also some limited incidence of other governing laws.

5.2.2 Credit support arrangements

The survey results indicate that around half of these master agreements are supplemented by Credit Support Annexes (CSAs) or similar agreements that set out how and when a set of bilateral exposures might be marked-to-market, whether exposures should be collateralised, the form of this collateralisation and the governing law for the agreement.

Survey respondents reported that the largest percentage of credit support arrangements were typically with interbank and professional counterparties as opposed to customer- or corporate-related activity (Table 3). For most dealers, use of credit support is predominantly with financial institutions and fund managers, of which overseas-based financial institutions make up the largest component. Of the aggregate number of CSAs in place with dealers, on average around 40 per cent were established with overseas financial institutions, while around 20 per cent were established with Australian financial institutions. CSAs are less widely used for non-financial counterparties.

Table 3: Credit Support Annex Usage
Per cent of dealers' CSAs^(a)

Counterparty type	Per cent
Overseas-based financial institutions	40
Australian-based financial institutions	18
Australian-based fund managers	13
Corporates	11
Overseas-based fund managers	10
Government	2
Australian-based individual investors	<1
Other	5

(a) Average across dealers
Source: survey responses

Smaller domestic market participants tended to use Australian law CSAs exclusively. English law CSAs are by far the most widely used by the larger participants in the Australian market, followed by New York law, with Australian law CSAs also used to some degree by these larger participants.

For internationally active Australian banks and local presences of foreign banks, CSAs typically specify that multi-currency collateral can be posted – the main currencies reported were AUD, EUR, GBP, JPY and USD. There is a clear trend that domestically focused market participants predominantly use AUD collateral, while

foreign currency denominations are more widely used when transactions involve offshore entities. Smaller domestic respondents with CSAs in place typically only specify AUD, largely due to their limited access to foreign currency-denominated collateral.

Consistent with the 2009 survey results, the vast majority of respondents who make use of collateral only accept cash or government securities (Table 4). However, there would appear to be some expanded use of some other collateral types such as corporate bonds, covered bonds, equities, letters of credit and guarantees, perhaps reflecting changes in the availability of high quality liquid assets.³²

Table 4: Acceptable Collateral under Credit Support Annexes
Per cent of dealers' CSAs^(a)

Collateral type	Per cent
Cash	100
Government or central bank securities	100
Corporate bonds	38
Covered bonds	13
Equities included in major stock indices	13
Gold	0

(a) Share of dealers accepting collateral type
Source: survey responses

Survey respondents noted that a significant percentage of current documentation generally allows for some rehypothecation or reuse of collateral under existing CSAs. Around 50 per cent of respondents noted that rehypothecation is not permitted under at least some of their CSAs.

Responses from electricity market participants indicate electricity derivatives tend to be documented under ISDA master agreements tailored to this product class. Their responses also highlighted important differences in counterparty credit risk management practices compared with other markets. A majority of respondents do not use CSAs for credit support; instead, they use other arrangements such as letters of credit or parent guarantees. Some may negotiate collateral-giving on a transaction-by-transaction basis. As a result of these practices, it is not common for cash collateral or other forms of collateral to be posted between counterparties. These differences in practices are discussed further below.

5.2.3 Margining practices

Since the 2009 survey, and consistent with recent margin surveys undertaken by ISDA, there is evidence of an increased use of collateral in the Australian market, reflecting a number of factors: at-times tight credit market conditions; ongoing rating action against financial entities; and an appreciating local currency creating large mark-to-market exposures for foreign currency derivatives positions.

Respondents noted a range of criteria for setting initial margin, threshold and transfer amounts. These are consistent with the 2009 survey responses and include the following:

- credit policies and guidelines

³² For further discussion of issues around the demand and supply of high quality liquid assets in Australia, see Heath A and Manning M (2012), 'Financial Regulation and Australian Dollar Liquid Assets', RBA *Bulletin*, September, pp 43–52. Available at <<http://www.rba.gov.au/publications/bulletin/2012/sep/bu-0912-6a.html>>.

- assessment by the credit risk resource responsible for the counterparty
- bilateral negotiation with the counterparty, that considers counterparty creditworthiness and the liquidity, funding and operational implications of the exposures
- external rating considerations, with some specific counterparty types having zero thresholds and low minimum transfer amounts
- industry standard considerations
- volatility of exposures and operational practicalities.

In general, most CSAs allow two-way variation margin (or mark-to-market collateralisation). However, some government, corporate and funds management counterparties appear to be resistant to entering into two-way CSAs given the potential liquidity and cash-flow implications of variation margin calls.

For larger bank respondents initial margins are not typically posted. Only a very small number of CSAs require that a counterparty post initial margin (or independent amounts); there would appear to be only a small number of these arrangements, which are mainly used to facilitate transactions with smaller or weaker counterparties.

It is common practice for an unsecured threshold to be provided under CSAs with two-way mark-to-market arrangements along with a specified minimum transfer amount across all nominated products. Some of these arrangements in effect result in one-way collateralisation and reflect assessments about the creditworthiness of the counterparty; for instance, for some highly rated entities the threshold can be set very high with provisions in place to reduce the threshold amount should the perceived creditworthiness of the entity deteriorate.

There were variations between the respondents in relation to the amount of collateral posted, and the mark-to-market value of their derivatives books. Some respondents post close to \$1 of collateral for each \$1 of mark-to-market exposure. Others, however, would appear to over-collateralise their positions; this may be in order to reduce the operational burden of managing daily collateral flows.

Again, the responses from OTC electricity market participants highlighted some important divergences from standard practices seen in other OTC derivatives markets. As noted above, it appears to be uncommon for counterparties to exchange cash or other property to collateralise their OTC electricity derivatives exposures, especially if they are perceived as a significant entity with good credit standing. Instead, these market participants effectively establish a line of credit for their trading counterparties through setting trading limits, which in turn are based on assessments of counterparty creditworthiness. Where bilateral trading limits have been reached, some market participants indicated that additional transactions would be executed on-exchange (through ASX 24) and collateralised pursuant to the exchange's standard clearing processes. However, the responses indicate that, overall, very low volumes of transactions are conducted on-exchange.

These responses suggest that participants in the OTC electricity derivatives market sometimes have large uncollateralised exposures, thus making them vulnerable in the event of a counterparty default. Because market participants in the OTC electricity derivatives market are predominantly corporates transacting with similar corporates, the quality of each of these entities' risk management practices is important to ensuring the resilience and stability of this market.

5.3 Post-trade Practices

5.3.1 Trade capture

Automated trade capture facilitates straight-through processing and connection to post-trade infrastructure thereby reducing operational risks. For a majority of product classes, use of automated trade capture (both through internal front office systems and external platforms) is prevalent. There has been increased use of these services since the 2009 survey, although some products are still captured through manual processes.

5.3.2 Trade compression

Active traders in OTC derivatives can build up large volumes of economically redundant contracts over time. Through a multilateral process, trade compression services can facilitate the termination of many such transactions, replacing them with a smaller number of trades that result in economically equivalent exposures. Results from the 2009 survey indicated limited use of tear-up or trade compression services by large Australian and international banks. These services are now being more actively used by these participants across the major product classes. Around half of the 2012 survey respondents reported they are using trade compression for some or all of their interest rate derivatives positions.

Despite this increased usage, data from one of the main providers of trade compression services suggest that participation in compression cycles is somewhat sporadic. Partial participation reduces the effectiveness of trade compression, since to the extent that the process relies on multilateral netting, the effectiveness of multilateral compression is greater with a larger number of market participants. This suggests that more effective use of trade compression services by larger market participants in Australia might be possible.

5.3.3 Portfolio reconciliation and trade disputes

As noted in Section 3.5.2, there has been ongoing international work in recent years to develop an agreed industry approach around disputed OTC derivatives collateral calls, as well as portfolio reconciliation guidelines. Some respondents to the 2012 survey made reference to these arrangements; while the international banks active in Australia have all agreed to the international protocol, only one of the large Australian banks is an adherent.

In part, the lower level of interest demonstrated by Australian participants in these developments reflects the relatively low level of disputes that are experienced in the Australian market. Although respondents noted some ongoing margin disputes, including some major ones relating to collateral or valuation processes, these were typically cleared within a normal dispute resolution time horizon. Survey respondents noted that some incidence of valuation disputes was considered to be normal, provided that these were not prolonged or did not remain unresolved.

Some disputes were noted as being due to the omission of trades, rather than as a result of different valuations. There has been some increase in portfolio reconciliation to reduce the incidence of these problems. Four of the five largest Australian banks are now regularly using third-party services in this area, as are the large international dealers; this compares well to the 2009 survey results, which indicated only sporadic utilisation of portfolio reconciliation.

For those respondents calculating margin or mark-to-market valuations for collateral purposes, internal models were being used across all applicable product classes. Since the 2009 survey a mix of internal and vendor supplied solutions continue to be utilised as collateral management systems.

5.4 Market Infrastructure

5.4.1 Trade reporting and related developments

Large overseas-based financial institutions active in Australia are all utilising trade reporting for at least some transactions executed or booked in Australia. In part this reflects their transition to mandatory reporting obligations that will apply in their home jurisdictions. In contrast, the adoption of trade reporting by Australian-based participants has been somewhat slower. Section 6.2 discusses some of the factors behind this in more detail.

Trade reporting for credit derivatives is most well entrenched, reflecting the fact that a trade repository for these products has been established now for a number of years. Australian-based participants report little, if any, utilisation of trade repositories for other product classes.

5.4.2 Central clearing

Global data from CCPs clearing Australian dollar-denominated OTC interest rate derivatives suggest that a little under \$4 trillion of notional outstanding amounts are currently centrally cleared, which is around half of global outstandings reported by the BIS for this product class. Central clearing of OTC derivatives is only just starting to penetrate the Australian market.

No Australian-owned institution directly participates as a clearing member in any CCP clearing the main classes of OTC derivatives traded in Australia. Anecdotally, though, the Australian regulators are aware of some discussions between Australian banks and existing or prospective providers of central clearing services regarding direct participation. In the absence of direct clearing memberships, some Australian financial institutions, including the large Australian banks, have negotiated or are negotiating indirect access to CCPs (i.e. as clients of existing direct participants) to centrally clear interest rate and credit derivatives. This move is being largely driven by three factors:

- Some counterparties of Australian institutions will soon be required to centrally clear certain product classes, due to regulatory requirements in their home jurisdictions. Australian-based participants that are active in these jurisdictions may also be captured by these requirements.
- Proposed changes to APRA's counterparty credit risk standards, in line with Basel III, will lower the capital charge for centrally cleared relative to non-centrally cleared derivatives exposures (as discussed in Section 3.3.1). These updated credit standards are proposed to become effective in Australia from the start of 2013. Other jurisdictions are looking to similarly adopt these Basel III standards, with a consequent effect on banks based in these jurisdictions.
- Reflecting this, many Australian institutions are beginning to observe a differential in the dealer-quoted prices of centrally cleared versus non-centrally cleared contracts as a result of impending Basel III capital charges.

Many of the global banks who are active in the Australian market are already centrally clearing OTC derivatives. A small number of these global banks offer OTC derivatives client clearing services in Australia. As these banks are clearing participants in a number of overseas OTC derivatives CCPs, they typically offer their Australian clients a choice of CCP through which to clear (where multiple CCPs serve a given contract type or product class).

They also typically offer a choice in account structures. Survey responses indicate that a choice between individually segregated and legally segregated/operationally commingled (LSOC) accounts has been offered.

Some, though not all, Australian clients have also been offered choices between gross and net commingled omnibus accounts.³³ Account structures with greater segregation of collateral offer a higher probability that a client will be able to access the margin it has posted to its clearer in the event that the clearer defaults. However, segregated account structures are more costly to administer and offer few netting benefits to the clearer – these costs are consequently passed onto clients. A client’s choice of account structure thus represents a trade-off between these two considerations. An additional consideration for Australian entities is that collateral posted to their clearers will likely be held offshore and subject to foreign legal jurisdiction.

International financial institutions that deal in OTC derivatives in Australia centrally clear some of their portfolios through their offshore parents or affiliates which are already members of CCPs. Products cleared by these institutions typically include single-currency interest rate derivatives, but also extend to other product classes.

Some of the remaining Australian market participants – including smaller financial institutions – have not identified sufficient commercial incentives to move away from bilateral arrangements, or have identified that there are no acceptable clearing solutions available for some of the contracts they trade. Other market participants are considering or negotiating potential client clearing arrangements on acceptable terms.

Domestic participants have been most focused on central clearing of interest rate derivatives. Where clearing solutions are currently available, anecdotal evidence suggests that, at this stage, market participants are not moving to clear their entire single-currency interest rate derivatives portfolios through their client clearing arrangements; rather, as discussed above, the establishment of these arrangements has been in part to ensure an uninterrupted capacity to trade with offshore counterparties if these are obliged to centrally clear non-Australian dollar-denominated interest rate derivatives in the near future. It follows that the largest component of Australian banks’ single-currency OTC derivatives portfolios – Australian dollar-denominated interest rate derivatives, and in particular Australian dollar-denominated interest rate swaps – remains largely bilaterally managed.

5.4.3 Trade execution

The results of the survey, and analysis of ASIC data on licensed trading platforms, suggest that Australian market participants are able to access and utilise a wide range of electronic and other trade execution facilities.

In terms of the availability of trading platforms in Australia, there are currently 11 Australian market licence (AML) holders offering derivatives trading in Australia (of which five are domestically licensed and six are overseas licensed), together with 15 entities that have been exempted from holding an AML. These platforms together offer trading services across five broad instrument classes (see Annex 2 for further details of these platforms).

All major market participants reported using brokers or multilateral electronic trade execution facilities for at least some transactions across all product types. Within this, though, there was substantial variation in the share of transactions reported by individual participants, and across different product types.

Survey respondents reported significant variation in their use of trade execution platforms and brokers across product classes. In almost all markets, some respondents reported less than 10 per cent of transactions were executed through platforms or brokers, while other respondents reported more than 90 per cent of transactions were executed through these channels. Foreign banks generally reported higher percentages of

³³ These various types of account structures are explained more fully in Council of Financial Regulators (2012), *OTC Derivatives Market Reform Considerations*, March. Available at <<http://www.rba.gov.au/payments-system/clearing-settlement/otc-derivatives/201203-otc-der-mkt-ref-con/index.html>>.

platform or broker execution than domestic banks. This variation may reflect differences in the composition of counterparties, with domestic banks tending to have a larger share of corporate and smaller institutional clients, while foreign banks tend to have a more wholesale client base. The differences may also reflect the types of products used by some classes of respondents, some of which may be more standardised and therefore suitable for platform execution, while others may be more bespoke and more suited to bilateral dealings. OTC electricity derivatives market participants reported a large proportion of transactions were conducted through brokers, with the percentage ranging from around 60 per cent to more than 90 per cent. These respondents reported no use of trade execution platforms for electricity contracts.

6. Assessment and Recommendations

6.1 Introduction

Chapters 4 and 5 have set out the OTC derivatives landscape in Australia, and the current state-of-play of risk management practices and centralised infrastructure usage. This chapter considers further the merits of regulatory intervention to drive a greater uptake of centralised infrastructure, given the in-principle benefits of this that were discussed in Chapter 2. Recommendations around bilateral risk management are also discussed.

The regulators will also take into account whether imposing mandatory central clearing, trade reporting or trade execution requirements would enable Australia's regulatory regime to be recognised as comparable or equivalent to those of key overseas jurisdictions. This may enable Australian participants and financial market infrastructure to avoid a duplicated regulatory burden, with Australian entities being primarily regulated in Australia where sufficient equivalence or substituted compliance tests are met.

6.2 Trade Reporting

As discussed in Section 5.4.1, trade reporting is not well entrenched in the Australian OTC derivatives market. There is some evidence of an increased uptake in trade reporting by larger market participants, which the regulators welcome. In the near term some of the domestic and foreign participants in the Australian OTC derivatives market are expected to be required to report transactions executed in US and EU markets (or undertaken with US and EU counterparties) in compliance with regulatory regimes being developed in those jurisdictions. Outside of these requirements, however, an industry-led transition to trade reporting in the Australian market would not seem likely in the near term.

6.2.1 Benefits of increased trade reporting in Australia

As discussed in Section 2.3.1, the regulators consider that there would be substantial benefits to the efficiency, integrity and stability of the financial system if market participants were to use centralised trade repositories, including:

- increased capacity for market oversight and monitoring of risk concentration and other systemic risk indicators
- improved risk management for market participants
- enhanced market transparency
- greater operational standardisation.

Comprehensive trade reporting would also provide the regulators with detailed information to inform recommendations around potential future product class prescriptions and DTR design.

In principle, all product classes and participants might directly or indirectly benefit from these enhancements. However, it is likely that the most immediate benefit would be in higher turnover markets and for larger participants. As discussed in Chapter 4, markets in interest rate derivatives and FX derivatives are the most actively used in Australia; the credit derivatives market is also widely used. Within these, the bulk of turnover involves financial institutions, of which the vast majority of activity is facilitated by a relatively small number of dealers.

6.2.2 The domestic regulatory environment for trade repositories

The Derivative Transactions Bill currently before the Australian Parliament proposes the creation of an Australian licensing regime for trade repositories. The licensing regime will be supplemented with further detail to be prescribed via regulations, derivative trade repository rules (DTRRs) to be made by ASIC and, potentially, licence conditions (as is the case with the AML and CS facility licensing regimes).

The licensing regime for trade repositories envisages a single licence type for both domestic and offshore trade repositories (the legislation also provides for mandatory reporting obligations to require the reporting of OTC derivatives transactions to specified public authorities in the absence of a licensed trade repository). The trade repository licensing regime enables rules to be made which will provide legal safeguards around a trade repository's use of the data it is holding, and who may access these data.

Subject to the Parliament passing the Derivative Transactions Bill, ASIC would consult on rules for trade repositories and guidance for applicants for trade repository licences. Assuming these steps are taken in a timely fashion, details of the regime would likely be largely in place in 2013. It is anticipated that obligations on trade repositories would come into effect alongside guidance as to the licensing of trade repositories.

6.2.3 Considerations around mandatory trade reporting obligations

Currently there are no trade repositories licensed in Australia. As noted above, work is underway to develop a regulatory regime for these entities. Until it is clear that an Australian trade repository licensing regime and a trade reporting mandate will be established, it is unlikely that many Australian market participants will be willing to closely engage with trade repositories, or voluntarily commit to the operational changes needed to undertake trade reporting.

The provision of data to a trade repository requires that a market participant either has some direct connectivity to the trade repository, or can use an agent or other intermediary arrangement to transmit and access necessary information. Once a connection is made, it is likely that the ongoing marginal cost of utilising this connection will be low. However, there may be some costs associated with establishing systems that can efficiently capture the necessary information and transmit this to and from trade repositories. A market participant's unit cost of reporting trades will, therefore, in part be a function of its overall scale and level of activity.

Globally, trade repositories exist for interest rate, FX, credit, equity and commodity derivatives, with eight trade repositories currently in operation across a number of jurisdictions including Brazil, the EU, Hong Kong, India, Korea and the US. The preferred business model of many of these trade repositories would appear to be to broaden the product classes for reporting and the markets in which they operate, while remaining physically located in just one jurisdiction. It is considered likely that at least one existing offshore trade repository would wish to apply for an Australian trade repository licence once the licensing regime is settled.

For most OTC derivatives product classes, the vast bulk of transactions will typically involve at least one counterparty from the group of larger market participants. These larger firms may therefore be well positioned, operationally, to act as agents for counterparties in using trade repositories.

An impediment to the larger firms doing so, voluntarily or under the reporting mandate of another jurisdiction, could be the duty of confidentiality that banks and other larger market participants owe to clients under Australian law and under contract. Without the express consent of clients, banks may be unable to report the details of client trades to trade repositories in the absence of a regulatory provision that would allow the banks or market participants to report data without breaching such duties. This 'opt in' requirement could substantially slow the uptake in trade reporting in Australia, delaying the system-wide benefits discussed previously.

The issue of confidentiality is also relevant with respect to the reporting obligations that are being implemented in other jurisdictions. Many Australian and foreign participants active in the domestic market are also active in major overseas markets. There is a strong likelihood that, depending on the counterparties involved, some transactions undertaken in the Australian OTC derivatives market will have to be reported to trade repositories in accordance with offshore reporting obligations. In this regard, the Derivative Transactions Bill provides legal protections to entities that report to trade repositories in accordance with a mandatory obligation imposed under Australian law.

6.2.4 Recommendation

In the view of the regulators, having as high a proportion of OTC derivatives transactions as possible reported to trade repositories would enhance the efficiency, integrity and stability of the Australian financial system, for the reasons discussed earlier.

While there is some prospect of the largest Australian-based market participants voluntarily taking up trade reporting should a trade repository be licensed in Australia, it is unlikely that there would be a rapid uptake in reporting by smaller market participants. As noted above, there may be limits to voluntary uptake in trade reporting by Australian OTC derivatives market participants, especially where voluntary trade reporting involving smaller counterparties or clients is constrained for operational or legal reasons. If the legal constraints under Australia's legal framework limit domestic banks and other institutions from participating in offshore markets, this could potentially reduce the liquidity and efficiency of domestic OTC derivatives markets.

Given these various considerations, the regulators recommend that the government consider a broad-based mandatory trade reporting obligation for OTC derivatives should the Derivative Transactions Bill be passed.

Should mandatory reporting obligations be implemented, due regard should be given to the operational impact that this may have for different market participants. Implementation of trade reporting obligations could be phased in across products and participants.

In particular, many larger participants may already be well advanced in implementing operational changes in response to reporting obligations in offshore markets. It may therefore be appropriate to consider whether the initial scope of any reporting obligation might usefully be limited to this group of larger market participants, either by requiring only these participants to report, or providing for them to have the capacity to act as reporting agents on behalf of smaller entities. This could be set out in regulations when making an initial prescription of derivatives under the proposed Derivative Transactions Bill, or through DTRs. Over time, it may be appropriate to require trade reporting from a larger group of entities (including ADIs, insurers, AFSL holders

and market participants that are exempt from the requirement to hold an AFSL), so as to ensure the benefits discussed above are more fully realised.

Subject to further consultation around larger market participants' readiness to connect to trade repositories, the regulators consider it desirable for reporting obligations to be implemented as soon as practicable for the markets in which such larger participants predominantly transact. The timing for any mandatory obligations to take effect, and decisions around what is practicable for reporting, would also need to take into account the availability of licensed trade repositories for product classes that may be prescribed. In parallel with the uptake of trade reporting by industry participants, the regulators will need to ensure they have sufficient analytical resources in place to effectively utilise data available from trade repositories.

6.2.5 Further considerations

Should the government prescribe one or more classes of derivatives as subject to a mandatory reporting obligation, ASIC would then need to develop DTRs in consultation with stakeholders and the other regulators. The following sets out some of the considerations regarding the parameters of reporting obligations.

Scope and phasing of trade reporting – products and participants

The scope of any mandatory obligation could be shaped through regulations at the time following the Minister's determination that a class of derivatives should be subject to mandatory trade reporting requirements, or subsequently through DTRs developed by ASIC.

As noted above, the regulators consider it appropriate for trade reporting mandates to apply to a broad scope of instruments. In implementing a reporting obligation, however, it may be appropriate to consider a phased-in obligation across product classes. A first phase could include interest rate, FX and credit derivatives, with other products in subsequent phases, reflecting the relative importance of these various product classes within the Australian financial system.

As far as scope of entities is concerned, the regulators also see merit in broad coverage of institutions licensed by the regulators: ADIs, insurers and AFSL holders, as well as some exempt entities. Again, some phasing-in of reporting obligations might be appropriate, according to metrics around participant size or activity. Beyond these classes of entities, it may also be appropriate to consider reporting obligations for other entities, subject to there being appropriate materiality thresholds so as to ensure that benefits continue to outweigh costs.

In determining phasing and thresholds for reporting obligations, the relative costs of data submission across different participants and products would also need to be considered. For some participants and products, data submission to trade repositories might be possible through existing automated processes, while for others it may involve costlier manual processes. If reporting thresholds were in place, these might take into account whether a participant transacts with dealers or through market infrastructure.

In general, the regulators would look to harmonise reporting obligations across participants and products with those in place in other jurisdictions.

Subject to passage of the Derivative Transactions Bill and if any subsequent Ministerial determination is made relatively soon thereafter, it is possible that DTRs could be consulted on and finalised in the first half of 2013. A first phase of reporting obligations could commence after a relatively short transitional period, with longer lead times for other products and participants.

Range of data reported

The range of data that must be reported would be specified in DTRs or regulations. As discussed in Section 3.2.3, CPSS and IOSCO have provided guidance about the data fields that may be reported for each class of product, and such international guidance will be considered by the regulators.

For dealers and larger market participants, or for transactions that pass through FMI, it may be relatively straightforward to record and report a comprehensive set of data fields for each transaction as contemplated under this international guidance.

However, for other classes of participants or transactions, establishing the requisite systems to provide more detailed reporting may be more costly. In such cases, it may be appropriate for the regulators to consider alternative interim reporting arrangements that still generate some of the regulatory benefits of reporting (such as facilitating the monitoring of any build-up of risks in the relevant OTC derivatives markets). In some circumstances, it may be sufficient to only require reporting that enabled position and counterparty risks to be understood. Should this approach be taken, the regulators would consult with relevant stakeholders on the parameters of proposed reporting requirements and the implementation of such requirements.

Data transparency – statistics and post-trade transparency

The regulators are of the view that should a mandatory reporting obligation be prescribed by the Minister, it could be useful for the wider market if aggregate market statistics were published on a relatively frequent basis. This would be consistent with public reporting proposals in other jurisdictions. In the EU, for example, technical standards proposed by ESMA will require aggregate open position data per product class to be published and updated at least weekly.

In developing DTRs – that is, the rules that specifically apply to trade repositories – another consideration will be the extent (if any) to which post-trade transparency obligations imposed on Australian-licensed trade repositories should be harmonised with those of other jurisdictions. For instance, in the US the CFTC will require swap data to be published by the trade repository as soon as technologically possible, unless a time delay applies to the data (which may vary from 15 minutes to 48 hours depending on the nature of the transaction and the counterparties). As noted above, some Australian banks and dealers will likely be required to register as swap dealers with the CFTC, and may be obliged by US requirements to report to trade repositories that comply with US post-trade transparency requirements. On the other hand, under proposed requirements in the EU, post-trade transparency obligations are imposed on market participants and particular kinds of execution venue, rather than on trade repositories (though trade repositories may be able to fulfil transparency obligations on behalf of clients in certain conditions).

Differences in trade reporting requirements, and the potential consequences of these differences for the mutual recognition of trade repositories based in Australia or offshore, may also be a consideration for ASIC in developing the Australian licensing regime for trade repositories.

Timing of trade reporting

A trade reporting obligation will have to specify an acceptable timeframe within which trades must be reported. One consideration here is a possible requirement on trade repositories to publish aggregate (or potentially trade-level) data, and the frequency of this publication. Another consideration is the need, in stressed circumstances, to ensure access by regulators to fresh data held by trade repositories; this may require more timely reporting to trade repositories than would be required simply to facilitate aggregate-level data.

On this basis, for example, it could be that transactions must be reported by the close of business on the business day following the execution, modification or termination of transactions (that is, on a T+1 basis), even if aggregate-level data are only required to be published less frequently.

Data aggregation and standardisation

Data aggregation is necessary for regulators to analyse and assess the risk of OTC derivatives markets, particularly counterparty exposures among market participants, and for public post-trade transparency. There are legal and operational factors that make the aggregation of data challenging and which reflect the limited capacity of existing trade repositories to aggregate data. The lack of a standardised industry-wide format for trade reporting creates operational complexity and additional technology costs due to the multiple reporting formats across and among product classes for those reporting, and for trade repositories and regulators. These costs could prove to be a significant burden for smaller market participants, though the regulators consider there is scope to mitigate such costs through industry- or regulator-led initiatives. For example, reporting costs may be reduced by the outsourcing of reporting to third parties (including FMI's such as trading platforms and CCPs) given the functional synergies between trading, clearing and trade reporting. Industry work around data standardisation may also reduce costs and complexity; some of the main initiatives were discussed in Section 3.5.1.

Use of data by regulators

International standard-setters have been developing guidance around regulatory authorities' access and utilisation of data held in trade repositories (as discussed in Section 3.2.3). It will be necessary for the Australian regulators to consider and define their own needs for data reported to trade repositories, and where necessary review their arrangements for sharing data among themselves (the Derivative Transactions Bill proposes amendments to facilitate this). A related consideration is how the regulators individually or collectively will use data reported to trade repositories to ensure adequate monitoring of risks in market participants and across the markets. This is expected to be an increasing focus of regulators' work in 2013.

Regulators will also have to consider issues including: data fragmentation arising from multiple trade repositories and the reporting of trades to different jurisdictions; the potential future demands for system architecture to use, house and store data for trade repository supervision and enforcement purposes; and adequate analytical resourcing.

6.3 Central Clearing

For markets in financial products that are sufficiently liquid and standardised, central clearing can promote greater market resilience and thereby contribute to the stability and integrity of the wider financial system. The transition to central clearing from a bilaterally organised market does, however, pose a number of challenges.

The regulators have previously suggested that the market for Australian dollar-denominated interest rate derivatives is of systemic importance to the Australian financial system and is amenable to central clearing. For other classes of OTC derivatives transacted by Australian market participants, the availability of appropriate CCPs and the systemic benefits of central clearing are less clear at this time.

As discussed in Section 5.4.2, some larger Australian financial institutions have commenced indirect central clearing of some of their OTC derivatives, reflecting:

- the likelihood of overseas mandatory central clearing requirements

- proposed changes to APRA's counterparty credit risk standards, in line with Basel III
- observed differentials in dealer-quoted pricing of centrally cleared versus non-centrally cleared contracts.

In addition, as discussed in Section 3.2.5, derivatives that remain outside of central clearing may be subject to minimum margining requirements under international standards being developed by the BCBS and IOSCO. These requirements, if implemented in Australia, have the potential to impose larger collateral demands on participants than margin requirements for centrally cleared positions, providing a further incentive to migrate towards central clearing.

At the moment smaller ADIs have not moved to central clearing due to the operational challenges and associated costs. Both large and small Australian-based market participants still have many concerns around migrating OTC derivatives to central clearing.

6.3.1 Benefits of increased central clearing in Australia

As discussed in Section 2.3.2, the Australian regulators consider there to be strong in-principle benefits to the Australian OTC derivatives market from adopting central clearing. A key benefit is the enhanced market resilience that a CCP brings. CCPs are able to apply risk controls – such as collateralisation of exposures in the form of margining – consistently and transparently to participants, and are not subject to the information asymmetry involved in bilateral counterparty risk assessments. The robustness of a CCP's risk framework is ensured through strict regulation and oversight.

A particular benefit in times of market stress is that, in comparison to a market comprising only bilateral exposures, counterparty default management can typically be handled in a more orderly manner by a CCP. This default management capacity is supported by pooled financial resources maintained by the CCP to cover default losses in an extreme scenario, and transparent, documented and legally enforceable procedures for the closing out or transfer of a defaulter's outstanding portfolio.

Central clearing could also strengthen other aspects of risk management practices in the Australian OTC derivatives market. For example, the regular use of trade compression services to restrict the build-up of large, bilateral exposures over time is not currently universal, and many bilateral exposures remain uncollateralised. Central clearing can also contribute to increased operational efficiencies in financial markets.

6.3.2 Developments in the availability of CCPs

The central clearing landscape for OTC derivatives continues to evolve. Offshore, CCPs now operate for most broad classes of OTC derivatives, while domestically an OTC interest rate derivatives clearing service is under development (Annex 3 provides a list of CCPs offering OTC derivatives clearing).

CME Group (CME) and LCH.Clearnet Ltd (LCH) operate two of the largest and most well-established CCPs for OTC interest rate derivatives. They each clear a range of product classes, including fixed-to-floating interest rate swaps in a number of currency denominations, including Australian dollars. Direct participants in CME's OTC derivatives clearing services are mainly global investment banks and securities dealers. A similar range of globally active institutions participate in LCH's interest rate derivatives clearing service, SwapClear; participants in this service also include a number of domestically focused European banks. Many of the non-Australian direct clearing participants in both CME and LCH are also active participants in the Australian interbank OTC derivatives market, in some cases through affiliated legal entities.

Other OTC derivatives CCPs tend to be more narrowly targeted in either their product or participant scopes. For example, LCH.Clearnet SA, ICE Clear Europe and ICE Clear Credit attract cross-border participation by the global banks, but clear predominantly credit default swaps relevant to their respective jurisdictions. No CCPs currently clear Australian CDS products, such as those referencing the iTraxx Australia index. A number of other CCPs – particularly those in (or under development in) the major Asian financial centres – offer a broader range of product classes, but are designed for local financial institutions. Many of these CCPs are being developed specifically in response to the implementation of OTC derivatives reform in the local jurisdiction.

In Australia, the ASX Group is investigating the development of a clearing service for Australian dollar-denominated interest rate derivatives.³⁴ ASX has suggested that the service would leverage its existing CCP for exchange-traded derivatives, ASX Clear (Futures), and, in doing so, offer cross-product margin offsets with interest rate futures. ASX has engaged in a design study in collaboration with interested market participants, that it intends to complete by the end of 2012. Should ASX proceed with this, it has indicated it would aim to deliver the new service in mid 2013. ASX has also developed a clearing service for OTC equity options written on ASX-listed entities.

For other classes and some specific contract types, lack of standardisation and liquidity or other practical issues have hampered the development of central clearing solutions. For example, the expansion of central clearing of FX derivatives with a deliverable component is currently problematic, largely because of difficulty in integrating central clearing with the existing CLS settlement mechanism. The international FX dealer community and CCPs continue to investigate the development of a solution which could appropriately manage both pre-settlement and settlement risks.

Given no CCP offers clearing of all contract types, an institution that deals in a broad range of products is likely to require access to multiple CCPs to clear its portfolio of contracts that are capable of being centrally cleared. While interoperability allows for the central clearing of trades between participants of different CCPs, there are no existing interoperability arrangements between CCPs for OTC derivatives products, reflecting the challenges in establishing risk controls appropriate to such arrangements.³⁵

6.3.3 Direct and indirect participation in central clearing

In making a transition to central clearing, Australian market participants would need to decide whether to join relevant CCPs as direct clearing participants (where this was possible) or seek to appoint one or more direct clearing participants to provide indirect clearing services for them.

Direct participation

An immediate hurdle to direct participation in OTC derivatives clearing for Australian participants is the need for a relevant licensed CCP to offer these services in Australia. A CCP that offers OTC derivatives clearing services to Australian entities must have an Australian CS facility licence, or receive an exemption from this requirement. The regulation of these facilities is jointly overseen by ASIC and the RBA, with the granting and revocation of a licence at the discretion of a Minister of the Australian Government. Apart from ASX's OTC equity options clearing service, there are currently no licensed CCPs offering OTC derivatives clearing services in Australia. The time taken for a licence applicant to prepare and submit a formal licence application; for that

34 See ASX (2012), Submission to Treasury on exposure draft of *Corporations Legislation Amendment (Derivative Transactions) Bill 2012*, August. Available at <<http://www.treasury.gov.au/~media/Treasury/Consultations%20and%20Reviews/2012/derivative%20transactions/Submissions/PDF/ASX.ashx>>.

35 For further discussion of interoperability between CCPs, see Garvin N (2012), 'Central Counterparty Interoperability', *RBA Bulletin*, June. Available at <<http://www.rba.gov.au/publications/bulletin/2012/jun/bu-0612-7a.html>>.

application to be assessed by ASIC and the RBA; for ASIC and the RBA to prepare advice for the Minister; and for the Minister to make a decision on granting a licence can take, at a minimum, several months.

Direct membership of CCPs may confer a number of benefits in a market landscape where standardised contracts have largely moved to central clearing, both from a commercial and a risk management perspective. The commercial benefits include:

- direct access to more liquid markets vis-à-vis those that remain outside of CCPs
- the ability to offer client clearing services (where facilitated by the CCP), which may become an important competitive advantage for banks in servicing their customers
- avoiding the need to direct business as a client through an institution which may otherwise be a competitor in the wholesale or retail banking market
- avoiding onerous and undesirable contractual terms under a client clearing agreement
- capital advantages in circumstances where indirect clearing does not qualify for a lower risk weighting under the Basel III capital framework.

The risk management benefits include:

- having exposure to (i.e. collateral posted with) the CCP, which is likely to be of greater credit standing than a bank owing to its risk-management focus and close oversight under regulatory standards such as the PFMI
- ongoing participation in a CCP's decision-making around risk management and operational design.

Indirect participation

For many participants in the OTC derivatives market, direct membership of a CCP will likely be too onerous, and therefore access to CCPs would need to be arranged through clearing participants. However, at present, the global market for these indirect clearing services is highly concentrated among a small group of global institutions. It appears these clearing participants may only provide clearing services to a small number of (more active) Australian counterparties, for a number of reasons including operational capacity, risk appetite and cost.

Where client clearing arrangements are available, the terms of these agreements generally differ from the greater flexibility offered by current bilateral arrangements. Typically these agreements have been initially modelled on clearing agreements for exchange-traded futures and options, and contain terms that reflect the fact that the clearing participant is responsible to the CCP should its client default. Discussions with market participants have highlighted some terms in particular. For example, client clearing agreements typically give the clearing participant the right to call additional margin from clients, including amounts that are a multiple of what is required by the CCP, to reflect the clearing participant's assessment of the client's creditworthiness.

In part, the uncertainties articulated to the regulators in consultations would appear to reflect the fact that indirect OTC derivatives clearing agreements are a relatively new arrangement, and there is not yet a market-wide consensus in Australia as to what is a standardised arrangement, notwithstanding developments in the EU and US (see Section 3.5.3). As noted in Section 5.2, the bulk of smaller Australian counterparties' bilateral derivatives documentation is Australian law-governed. Where indirect clearing agreements are established to access offshore CCPs, the relevant governing law may be that of other jurisdictions. This may be an additional challenge for some market participants.

Australian regulators continue to examine matters such as client monies rules, so as to ensure adequate protections for Australian institutions that engage in client clearing. Client monies also remain an important area of focus for regulators around the world, and various international groups are exploring the scope for further coordinated work in this area.

6.3.4 Australian dollar-denominated interest rate derivatives

Of the various product classes traded in the Australian OTC derivatives market, an increase in the central clearing of Australian dollar-denominated interest rate derivatives is likely to yield the most immediate and substantial benefit to the Australian financial system. As discussed in Chapter 4, this product class forms the largest component of Australian financial institutions' derivatives exposures (in terms of gross notional outstanding amounts), and is of systemic importance given the prevalence of its use by a large number of domestic financial institutions in managing interest rate risk. The existence (and prospective entry) of a number of CCPs clearing this market indicates that the preconditions for safe, effective and economically viable clearing for many contract types in this product class have been met. Given the core role of the Australian dollar-denominated interest rate derivatives market, its resilience is a key consideration for the stability and integrity of the Australian financial system. Central clearing would enhance this resilience.

There may be collateral efficiencies to be gained from the central clearing of this market. Relative to other product classes, the build-up of notional exposures between counterparties from activity in interest rate derivatives has been particularly rapid owing to the long maturity of many contracts.

Market participants

As described in Chapter 4, dealing activity in the Australian dollar-denominated interest rate derivatives market is quite concentrated. AFMA data suggest that around 75 per cent of turnover and outstandings in this market is interbank, of which close to half is interdealer.

This would indicate that large benefits to financial system efficiency, integrity and stability could be realised even if only a relatively small number of large market participants were to centrally clear interbank trades. Not only would this result in a large amount of notional exposure moving to clearing, but – owing to economies of scale and product scope – large financial institutions would stand to benefit most from the netting and the standardised operational and collateral practices afforded by central clearing.

While smaller financial institutions (including smaller ADIs) are counterparties to a material share of turnover and outstanding positions in this market, the benefits of these entities moving to central clearing are less clear. Participation in central clearing, particularly direct participation, requires considerable financial, operational and legal sophistication; such requirements are more easily met by larger financial institutions. Alternative forms of indirect access would also likely require substantial business changes and possibly introduce new risks, the cost of which may outweigh the in-principle benefits of central clearing. These considerations would also hold for non-financial counterparties, who make up a relatively small share of market activity.

Central clearing options

As noted above, two CCPs – LCH and CME – currently offer clearing of Australian dollar-denominated OTC interest rate derivatives, although neither is a licensed CS facility in Australia (Annex 4 gives more detail of these offerings). These CCPs could permit direct participation by Australian-domiciled entities if licensed. Many of the larger foreign-owned banks active in the Australian OTC derivatives market are already participants of

these CCPs. ASX has also indicated its plans to develop a clearing service for Australian dollar-denominated OTC interest rate derivatives.

Whether particular offerings are more attractive to Australian participants will depend on a number of factors. In addition to the requirement that a CCP be licensed in Australia, elements of the CCP's design and functioning are also likely to influence the decision of Australian participants (particularly larger banks) on joining the CCP:

- *Product scope:* As discussed in Section 4.6.1, fixed-to-floating rate swaps comprise well over half of Australian participants' notional outstandings in single-currency interest rate derivatives (excluding options). Overnight index swaps also make up a significant share, followed by forward rate agreements and floating-to-floating rate swaps.
- *Acceptable collateral:* Section 5.2.2 highlighted that most Australian participants' existing collateralisation arrangements are strongly shaped around Australian dollar-denominated securities and cash. Many participants are therefore looking for central clearing arrangements that are harmonised with existing arrangements.
- *Operational time lines:* Many CCPs are not open during the Australian business day, and therefore conduct margin calculations and calls outside the regular business hours of many domestic market participants.
- *Payment and settlement arrangements:* A CCP may require clearing members to have bank or securities accounts in another jurisdiction or jurisdictions, and require these accounts be denominated in currencies other than Australian dollars, for the purposes of posting cash or other securities to meet collateral obligations. Other CCPs could allow clearing members to have accounts in Australia denominated in Australian dollars.
- *Client clearing models:* For participants of some CCPs, only the 'principal' model of membership is available. Other CCPs offer the 'agency' model of membership. Under the 'principal' model, any collateral posted by a clearing member to the CCP on behalf of a client generally remains in the name of the clearing member – that is, the CCP has no direct relationship with, or any 'see through' to, the client. Should a clearing member default in this case, its clients' only recourse to their collateral is through the clearing member. Work is underway, however, to develop individually segregated accounts for clients, that would afford more protections to clients in the event of a clearing member default. Under the 'agency' model, arrangements executed between clients and the CCP seek to ensure that should a clearing member default, a contractual relationship between the client and CCP will come into being, giving rights over the collateral to the client.
- *Legal jurisdiction:* In clearing through an offshore CCP, Australian institutions could be submitting to a foreign legal jurisdiction. In particular, they would likely be subjecting themselves to the insolvency regimes in place in that jurisdiction.

Discussions with a wide range of market participants have indicated a diversity of views as to the importance of these various considerations, and how concerns should be best addressed. As existing offshore OTC derivatives CCPs have developed outside of Australia, it is unsurprising that some aspects of their design have not been shaped primarily around the requirements of domestically focused market participants. For example, operational time lines may be based on overseas time zones, rather than activity in the Australian business day. Similarly, some Australian market participants may be accustomed to market pricing or valuation conventions, or a range of acceptable collateral, that are different to those used by offshore CCPs.

As discussed in Section 3.3, there have been a number of regulatory developments in Australia over recent months intended to support the uptake of central clearing by the Australian market. In particular, an exacting

framework for the regulation of any CCP (whether domestic or offshore) offering OTC derivatives clearing services is being put in place via the RBA's revised FSSs (this is discussed further in Section 3.3.3). This includes requiring the CCP to consider how its operations promote stability in the Australian financial system. Such requirements, particularly where they relate to operational matters, could address some of the issues listed above. In parallel, ASIC has developed complementary regulatory guidance (discussed in Section 3.3.4), in part to ensure that adequate regulatory influence over offshore CCPs is in place.

The regulators remain interested in understanding Australian participants' concerns regarding existing and prospective CCPs that may look to be licensed in Australia, where these relate to the fairness and effectiveness of a CCP, or how the CCP promotes the stability of the Australian financial system. However, where concerns are more related to commercial considerations, the regulators would not wish to interfere with the competitive responses of CCPs or market participants in developing clearing solutions that best serve the market as a whole.

6.3.5 Cross-currency and FX derivatives

The benefits of central clearing identified in Section 6.3.1 would appear to also apply to the cross-currency interest rate and FX derivatives markets.³⁶ These are important classes of derivatives in the Australian market, as evidenced by the value and volume of transactions (discussed in Sections 4.6.2 and 4.6.3) and the economic role played by these contracts – for example, the management of FX risk involved in offshore funding activities. However, there is less immediate scope for the benefits of central clearing to be realised in these markets, as a central clearing solution for derivatives with a deliverable FX component is yet to be developed (see Section 6.3.3). Possible risk mitigants for these product classes are discussed further in Section 6.4.3.

6.3.6 Other product classes

Turnover in Australian credit derivatives – particularly credit indices – suggest that there is some prospect of the preconditions for central clearing being met, though the regulators are not aware of any proposals by CCPs to clear these products.

For the remaining product classes, there may be less immediate market efficiency, integrity or stability benefits to be gained from increased central clearing. Largely, this reflects the lower level of larger Australian market participants' activity in these derivatives. It also reflects that there is generally less standardisation and liquidity among these contracts and, consequently, there are fewer clearing solutions available. Although promotion of standardisation through central clearing can benefit the integrity and stability of a market, it must also be recognised that bespoke contracts in many cases are designed for specific and idiosyncratic purposes. Should standardisation be imposed on such contracts, there may be other unintended and adverse consequences for these markets and sectors of the broader economy.

6.3.7 Recommendations and further considerations

The regulators recommend that a mandatory clearing obligation for Australian dollar-denominated interest rate derivatives is not necessary at this time. However, should substantial industry progress towards central clearing in this class of derivatives not be evident in the near future, the regulators would revisit this recommendation.

³⁶ For further discussion of some of the issues around central clearing of FX transactions, see Manning M, A Heath and J Whitelaw (2010), 'The Foreign Exchange Market and Central Counterparties', RBA *Bulletin*, March, pp 49–57. Available at <<http://www.rba.gov.au/publications/bulletin/2010/mar/pdf/bu-0310-8.pdf>>.

This recommendation is based on the following considerations:

- There would be a substantial benefit to the efficiency, integrity and stability of the Australian financial system from increased central clearing of OTC Australian dollar-denominated interest rate derivatives. The practical scope for this exists since established clearing solutions are already available (subject to licensing in Australia).
- Given the bulk of activity is interbank, and the fact that large international participants in the Australian market already have access to central clearing, only the large Australian banks would need to migrate to central clearing for much of this benefit to be achieved. Moreover, this migration would appear to be well underway.
- In part, a more wholesale migration to central clearing of larger market participants' Australian dollar-denominated interest rate derivatives activity is pending the availability of a licensed CCP that clears these products. Larger participants are also considering the benefits and costs of direct participation, as well as how best to address the issues outlined in Section 6.3.4. The regulators understand that the local dealer community has been discussing with relevant CCPs ways in which these concerns might be allayed. It would seem beneficial to allow the competitive responses of CCPs and market participants to play out further, so as to facilitate the development of clearing solutions that best serve the market as a whole.
- The systemic benefits of increased central clearing of Australian dollar-denominated interest rate derivatives by smaller market participants are not immediately apparent. Furthermore, the availability of acceptable client clearing services for these market participants would appear to be quite restricted at present.
- There would be some systemic benefit from the central clearing of FX and cross-currency derivatives with a deliverable component, but no such central clearing solutions currently exist. It follows that there is no immediate scope for an uptake of central clearing of these derivatives by the Australian market, although Australian regulators will continue to monitor relevant industry developments.
- For credit derivatives, there would also be some benefits from central clearing. There are CCPs for certain European and North American CDS products, but not yet for Australian products. As above, Australian regulators will continue to monitor relevant industry developments.
- Australian entities' use of derivatives in the remaining product classes is highly heterogeneous, and the prospects for appropriate central clearing services are not clear. In addition, many of the contracts traded within these product classes – particularly electricity – are bespoke and not currently suitable for central clearing. Regardless, based on the evidence available, the aggregate exposures associated with these product classes would not appear to present immediate concerns for the financial system.

The regulators consider that it remains appropriate for industry-led migration to central clearing of Australian dollar-denominated interest rate derivatives to continue for the time being. There is clear evidence that large Australian banks are establishing central clearing arrangements for this product class. Further, the regulators are of the view that there are good prospects for adequate arrangements to be put in place for Australian participation in the relevant CCPs. However, should the migration of single-currency interest rate derivatives to central clearing not make sufficient progress in the near future, the regulators would consider recommending that a mandatory central clearing obligation be instituted as a priority.

The regulators also note the points set out in Section 2.6.3, that mandatory obligations may be warranted for regulatory equivalence purposes, or to ensure that opportunities for regulatory arbitrage were not being exploited. Should evidence suggest that there would be some benefit from mandatory clearing obligations in these regards, the regulators would respond accordingly.

For smaller market participants, the availability of acceptable client clearing agreements may be a constraint in migrating to central clearing. This availability in part depends on there being a sufficient number of institutions active in the Australian market with the requisite operational and financial capacity to offer client clearing. An expansion in the number of such institutions, as well as the development of mutually acceptable client clearing arrangements, will take time.

The regulators will continue to assess market developments, with a view to considering where central clearing for other products might be warranted.

6.4 Risk Management for Non-centrally Cleared Transactions

The migration to central clearing of single-currency interest rate derivatives can be expected to address many of the risk management concerns discussed in Chapter 5, given many of the key advantages of central clearing relate to enhancements to the management of counterparty credit risk and trade life-cycle processes.

However, as discussed above, central clearing is not likely to be available for a number of important product classes, nor may it be desirable that it be adopted by all market participants. It is therefore important that rigorous bilateral risk management processes are in place. This section discusses these further, and makes a number of recommendations.

6.4.1 Counterparty credit risk management

The extent of credit support for OTC derivatives transactions appears to have increased since the 2009 survey, though the survey responses suggest that only around 50 per cent of transactions are covered by CSAs.

Participants should ensure that adequate credit support arrangements are in place for all OTC derivatives transactions.

At present there appears to be limited use of initial margin. This is not unexpected, given this has not been a widespread component of counterparty credit risk management in OTC derivatives markets. In addition to industry-led changes to the use of credit support for non-centrally cleared transactions, international standard setters are considering international principles on margin requirements for such transactions. The regulators will continue to monitor these developments and provide advice to the government as appropriate.

A welcome development is the growing trend of Australian market participants to collateralise mark-to-market exposures. However, survey responses indicated some instances of quite high unsecured threshold and minimum transfer amounts. As a general principle, the regulators would expect that unsecured thresholds and minimum transfer amounts should be as low as possible, to ensure mark-to-market exposures are adequately collateralised at all times. Within this, the regulators recognise that the operational and balance sheet-related costs of this are likely to be non-trivial, and may be overly burdensome for smaller participants in particular. For exposures between systemically important participants, however, a more stringent approach should be in place.

The regulators consider that for large and more active market participants, daily collateralisation of exposures should be adopted as best practice in the market where possible. It is recognised that this needs to be balanced against the operational costs and liquidity risks that this may create for some types of counterparties.

Survey responses indicated that, where collateral is posted, in some cases the amounts over-collateralise mark-to-market positions. Some respondents are likely to have done so to minimise the operational burden of continuous collateral flows. Nevertheless:

Market participants should understand the increased counterparty exposure generated by posting collateral over and above mark-to-market (variation margin) requirements, and ensure that the resultant risks are adequately managed.

The regulators also note that further consideration should be given to the risks associated with practices around collateral rehypothecation, and the availability of additional collateral for margining of cleared and uncleared trades. While rehypothecation and reuse of collateral can lengthen the chains of interdependencies between market participants, it can also contribute to liquidity in securities markets.

In relation to the OTC electricity derivatives market, the regulators consider there is a case for industry and regulatory initiatives to strengthen counterparty credit risk management practices, particularly among larger participants (many of whom are significant participants in the National Electricity Market). One way to do so may be requiring participants to establish, over an appropriate period of time, CSAs or equivalent arrangements. The terms of these arrangements should require adequate collateralisation of exposures that exceed specified thresholds, taking into account the scale of participants' commercial activities. Further, these arrangements should be an integral component of the entity's overall risk management strategy and systems.

6.4.2 Post-trade practices

Trade compression services are now being more actively used by larger participants across the major product classes. However, the evidence also suggests that usage is still somewhat sporadic among these participants. Moreover, utilisation of trade compression services has been insufficiently coordinated to achieve the full multilateral netting benefits.

The regulators see increased benefits in there being a more coordinated market-wide approach to the usage of trade compression services. The regulators call on the industry to consider how this may be achieved.

Disputes around trade valuation and missed trades would not appear to be of major concern in the Australian market at present, and incidents that do occur appear to be appropriately managed. ISDA has developed best practice guidelines in this regard, and Australian market participants are encouraged to review these proposals. Continued work on trade automation and straight-through processing would help further reduce the incidence of missed trades, as well as provide other operational efficiencies.

A more widespread usage of portfolio reconciliation services would also reduce the prospects of trade disputes becoming an issue over time.

Although there has been some increase in the use of portfolio reconciliation services, the regulators consider that a greater utilisation of these services should be pursued by the industry.

In this regard, the regulators note that draft guidance from APRA (APG 113) outlines that ADIs with significant exposure to OTC derivatives counterparty credit risk should seek to mitigate operational risk by regularly reconciling trade populations, trade valuations and collateral valuations with counterparties and, where practical, take opportunities to participate in portfolio compression exercises.³⁷ There may also be benefit for

³⁷ APRA (2012), *Prudential Practice Guide: APG 113 – Internal Ratings-based Approach to Credit Risk*, August. Available at <http://www.apra.gov.au/adi/PrudentialFramework/Documents/ADI_PPG_APG113_AUG2012_FINAL.pdf>.

non-ADIs that have significant exposures to OTC derivatives markets to consider participating in some of these services.

6.4.3 Other considerations

As discussed in Chapter 4, the cross-currency and FX derivatives markets are important components of the Australian OTC derivatives landscape, along with Australian dollar-denominated single-currency interest rate derivatives. But while central clearing of the latter is in prospect, as discussed in Section 6.3.2 it currently appears unlikely that CCPs clearing cross-currency and FX derivatives markets will emerge in the near future (particularly for trades that require physical delivery of currencies at settlement, which are the main product types used in Australia). The regulators are therefore considering what other regulatory and market responses might be usefully applied to enhance the resilience of these markets.

In particular, the absence of a CCP for these markets reduces the capacity for a whole-of-market response to a counterparty default. Without a CCP's financial risk resources standing behind a defaulted participant's positions, and without binding rules on participants to control the response to a default, market participants may have a strong incentive to quickly close out positions, which could result in a disorderly market and see stresses emerge for other market participants.

To mitigate some of the impact of a large participant default in these markets, it is important that market participants with large exposures in these markets have highly robust approaches to risk management. These participants should ensure they adopt the recommendations discussed in Sections 6.4.1 and 6.4.2, in particular:

- widespread usage of collateralisation, portfolio compression and reconciliation, so as to reduce the extent of any immediate crystallisation of counterparty credit risk
- report all transactions to trade repositories, so that exposures could be easily identified if necessary to facilitate regulatory or market responses.

International regulatory efforts are also looking to enhance the resilience of the financial system should a large OTC derivatives counterparty default. If large counterparties held initial margin against interdealer positions, such as in accordance with the recent BCBS-IOSCO proposals (discussed in Section 3.2.5), this would provide a buffer for non-defaulting counterparties to cover some of the costs of closing out and replacing defaulted positions. More generally, the FSB's work around the recovery and resolution of systemically important financial institutions will be important in facilitating a globally coordinated and consistent regulatory response to such an event.

The Australian regulators will also continue to explore issues around the development of clearing solutions which appropriately manage both pre-settlement and settlement risk in FX and cross-currency derivatives markets. In parallel, the regulators will examine the merits of other market-wide initiatives to promote the resilience of these product classes.

6.5 Trade Execution

The survey undertaken by the regulators indicated that trading platforms are widely used across participants and product classes. However, their utilisation generally accounts for only around a quarter of trading activity, suggesting that participants use these platforms as part of a suite of execution options.

As discussed in Section 4.5, apart from FX derivatives, the absolute number of transactions in the market is not very high. For single-currency interest rate derivatives, for instance, the largest dealers in the domestic market

only execute an average of around 40 transactions a day, across all currency denominations, product subtypes and tenors.

6.5.1 Benefits of increased utilisation of trading platforms in Australia

A long-standing concern with OTC derivatives markets has been whether the relatively opaque nature of these markets poses a challenge to the overall efficiency and integrity of the financial system. While it is not necessarily the case that these concerns have been realised in Australia, the transparency and operating rules associated with exchanges and trading platforms can still be of benefit to market participants. Trading platforms can also introduce operational efficiencies. For instance, automated trade processing can be facilitated where trading platforms incorporate trade capture and confirmation systems, and where they have connectivity with in-house or centralised post-trade systems.

6.5.2 Discussion

Given these benefits, some other jurisdictions are moving ahead quite aggressively with mandatory trade execution obligations. The regulators also agree that there may be in-principle benefits to the Australian financial system of a greater share of OTC derivatives being executed through centralised venues. Generally speaking, though, the regulators would look to promote centralised trade execution in a manner that was sensitive to the particular instrument classes concerned, and which limited as far as possible the potential to adversely affect liquidity or significantly increase the cost of participating in the relevant market. Given the relatively low level of activity in the Australian market, any mandated migration to centralised trade execution would need to assess the effect of this on market liquidity and efficiency.

Should a trade reporting mandate be implemented in Australia in the future, it would be easier to conduct the kind of granular market assessments that would ideally inform policymaking in this sphere. Information from trade repositories would be one key input in considering regulatory action to drive the uptake of trade execution platforms; once data and other policy elements are in place, work on promoting centralised trade execution could follow quite quickly. In developing further market assessments and recommendations, the regulators will be guided by the underlying objectives of the G-20 commitment in this area – improving transparency, mitigating systemic risk, and protecting against market abuse in OTC derivatives markets.

Even without domestic trade execution obligations, other market developments look to be somewhat supportive of trading platforms taking a greater role in Australian OTC derivatives markets. The emergence of central clearing for some OTC derivatives classes could prove to be an important development, to the extent that it introduces operational or product standardisation and reduces counterparty credit risk concerns. Trading platforms emerging in overseas markets may also seek to offer services in the Australian market in the period ahead.

6.5.3 Recommendation and further considerations

At this stage the regulators do not propose to make a concrete recommendation to the government around any mandatory obligations to support the centralised trade execution of OTC derivatives transactions. Additional work will be done before recommendations are made.

That said, if Australian participants or FMs bring to regulators' attention the desirability of mandating particular instruments (e.g. to facilitate compliance with overseas regulatory requirements) this could be a relevant consideration that might accelerate such a market assessment.

6.5.4 Trading platforms in OTC derivatives markets

One matter that requires further consideration is which form of trading platforms supporting OTC derivatives markets best meets the execution requirements of participants and the policy goals of regulators. As discussed in Section 3.2.6, IOSCO has identified a number of characteristics of trading platforms that best facilitate centralised trade execution for OTC derivatives markets. It remains to be seen whether platforms with all these characteristics will be available in the Australian marketplace. A relevant consideration here is that the Derivative Transactions Bill proposes that, should a mandatory trade execution obligation be implemented, only facilities licensed under the AML regime would generally be eligible as trading venues, unless it is expressly prescribed otherwise.

In that regard, the Treasury has indicated that it is undertaking a review of the licensing regime for Australian financial markets. Depending on the results of this review, and subsequent decisions by the government and the Parliament, the scope of the AML regime or the criteria on which exemptions are granted could be changed, or conceivably new regulatory categories could be established. It is expected that the government would decide whether to make regulations prescribing further classes of platforms beyond the AML category as relevant platforms only once this review has concluded.

While both Europe and the US are moving to mandatory on-platform trade execution requirements, there are significant differences in what are adjudged to be qualifying platforms; this relates particularly to so-called 'hybrid systems', which are essentially screen-assisted voice broking systems. These platforms are intended, under the EU's MiFID II and MiFIR proposals, to count as qualifying platforms for the purposes of mandatory trade execution mandates, while under the CFTC and SEC's regimes these systems could not qualify as Swap Execution Facilities for the purposes of the Dodd-Frank Act's trading mandate. In addition, single dealer platforms are qualifying platforms for EU, but not for US, purposes.

The regulators' preliminary view is that multi-dealer systems, as well as hybrid or single dealer systems (such as those permitted in the EU regime, but not the US regime), may be appropriate venues for trade execution in Australia. However, this is a matter for further discussion and consultation in the period ahead.

7. Conclusion

In coming months the regulators will engage further with domestic market participants around the findings and recommendations set out in this report.

In the first instance, the recommendations around bilateral risk management practices, set out in Section 6.4, are largely able to be pursued by market participants without the need for specific regulatory action. The regulators will look to monitor progress on these recommendations in discussion with industry, and will pursue further action with market participants where necessary.

Effecting the recommendations around trade reporting made in Section 6.2 relies on the passage of the Derivative Transactions Bill. Should the Parliament pass this legislation, and the government look to implement a mandatory reporting obligation, the regulators – led by ASIC – would then develop the licensing framework for trade repositories and the contents of any trade reporting obligations. This would be done in close consultation with market participants and other stakeholders.

Regarding central clearing, the regulators are keen to support industry-led solutions in this area, as discussed in Section 6.3. However, should there be insufficient progress by the Australian market in migrating to central clearing for Australian dollar-denominated interest rate derivatives in particular, regulatory intervention may be necessary. ASIC and the RBA acknowledge their responsibility for dealing expeditiously with any proposals from CCPs seeking to provide services in Australia. The regulators remain keen to discuss with stakeholders concerns around other impediments, such as operational and other design elements, while the development of mutually acceptable client clearing agreements is a matter in which the regulators have a particular interest. The regulators will also give consideration to how best to manage systemic risks in other markets that are not currently amenable to central clearing, such as cross-currency and FX derivatives.

The regulators will continue to review if and how any further regulatory intervention may be warranted to further enhance the efficiency, integrity and stability of the Australian OTC derivatives market and the broader Australian financial system. As part of this, it is currently anticipated that additional market reports will be undertaken in the period ahead.

Annex 1

Survey Circulated in July 2012

The survey was circulated to the following 65 institutions. Responses were received from 37 entities.

AGL Energy Limited	International Power (Australia) Pty Ltd
Alinta Energy	Investec Bank (Australia) Limited
AMP Capital Investors Limited	JP Morgan Chase Bank, N.A.
Arcadia Energy Trading Group Pty Ltd	Lloyds TSB Bank plc, Australia Branch
Aurora Energy Pty Ltd	Loy Yang Power Limited
Australia and New Zealand Banking Group Limited	Macquarie Bank Limited
Australian Office of Financial Management	Macquarie Generation
Australian Power and Gas	Mizuho Corporate Bank Ltd, Sydney Branch
Bank of America – Merrill Lynch Australia	Morgan Stanley Australia Limited
Bank of China Limited	National Australia Bank Limited
Bank of Queensland Limited	Nomura Australia Limited
Bank of Tokyo-Mitsubishi UFJ Ltd, Sydney Branch	Northern Territory Treasury Corporation
Barclays Bank PLC	New South Wales Treasury Corporation
Bendigo and Adelaide Bank Limited	Origin Energy Electricity Limited
BNP Paribas	QIC Limited
Citigroup Global Markets Australia Pty Ltd	Queensland Treasury Corporation
CLSA Australia Pty Ltd	Rabobank Australia Limited
Colonial First State Global Asset Management	RMB Australia Limited
Commonwealth Bank of Australia	Royal Bank of Canada
Credit Agricole CIB Australia Limited	Snowy Hydro Limited
Credit Suisse AG	Société Générale
CS Energy Limited	South Australian Government Financing Authority
Cuscal Limited	Standard Chartered Bank
Delta Electricity	State Street Bank and Trust Company
Deutsche Bank AG, Sydney Branch	Suncorp-Metway Ltd
Eraring Energy	Tasmanian Public Finance Corporation
Ergon Energy Queensland Pty Ltd	The Royal Bank of Scotland, plc
Goldman Sachs & Partners Australia Pty Ltd	Treasury Corporation of Victoria
Greater Building Society Ltd	TRUenergy Pty Ltd
HSBC Bank Australia Limited	UBS AG, Australia Branch
Hydro Tasmania	Western Australian Treasury Corporation
ING Bank (Australia) Limited	Westpac Banking Corporation
InterGen (Australia) Pty Ltd	

Annex 2

Derivatives Trading Platforms and Exchanges in Australia

Name of Operator	Name of Platform(s)	Platform Type ^(a)	Active derivatives product classes				
			Interest rate	Credit	Commodity	Equity	FX
ASX Ltd	ASX	Licensed (Domestic)			✓	✓	
Australian Securities Exchange Ltd	ASX 24	Licensed (Domestic)	✓		✓	✓	✓
BGC Brokers LP		Exempt	✓	✓			✓
Bloomberg Tradebook Australia Pty Ltd	BETSY; ALLQ; BTS; Tradebook FX; FX Dealing	Licensed (Domestic)	✓	✓	✓	✓	✓
Board of Trade of the City of Chicago Inc (CBOT)	CME Globex	Licensed (Overseas)	✓		✓	✓	
Chicago Mercantile Exchange Inc (CME)	CME Globex	Licensed (Overseas)	✓		✓	✓	✓
Creditex Brokerage LLP		Exempt		✓			
Currenex Inc	Direct Services & Central Counterparty Service	Exempt			✓		✓
EBS Service Company Ltd	EBS Spot	Exempt			✓		✓
Eurex Frankfurt AG	Eurex Deutschland	Licensed (Overseas)	✓		✓	✓	
FX Alliance International LLC	FXall	Exempt					✓
GFI Brokers Ltd	ForexMatch & CreditMatch	Exempt		✓	✓		✓
GFI Group Pte Ltd		Exempt	✓				

(a) Licensed (Domestic): The licensee has been licensed to operate in Australia by the Minister in accordance with section 795B(1) in Part 7.2 of the Corporations Act
 Licensed (Overseas): The licensee has been licensed to operate in Australia by the Minister in accordance with section 795B(2) in Part 7.2 of the Corporations Act
 Exempt: The facility has been exempted by the Minister from the markets licensing provisions in Part 7.2 of the Corporations Act
 Source: ASIC

Name of Operator	Name of Platform(s)	Platform Type ^(a)	Active derivatives product classes				
			Interest rate	Credit	Commodity	Equity	FX
ICAP Europe Limited	i-forwards market	Exempt					✓
ICAP Securities Limited	ICAP Credit	Exempt	✓	✓			
ICE Futures Europe	ICE Platform	Licensed (Overseas)		✓	✓	✓	✓
London Metal Exchange (LME)	London Metal Exchange	Licensed (Overseas)			✓		
Mercari Pty Ltd	Mercari Direct	Licensed (Domestic)	✓		✓		✓
MMADX Pty Ltd		Exempt	✓				
Reuters Transaction Services Ltd (RTSL)	Reuters Treasury Broking services (RTBS)	Licensed (Overseas)	✓				✓
TFS Australia Pty Ltd	Volbroker	Exempt					✓
TradeWeb Europe Ltd	TradeWeb	Exempt	✓	✓		✓	
Tullett Prebon (Australia) Pty Ltd	tpCREDITDEAL	Exempt	✓	✓			✓
Tullett Prebon (Singapore)	tpTRADEBLADE	Exempt			✓		✓
Vyapar Capital Market Partners (UK) Ltd		Exempt		✓			
Yieldbroker Pty Ltd	'Dealer & Client Market' & 'Interdealer Market'	Licensed (Domestic)	✓				

(a) Licensed (Domestic): The licensee has been licensed to operate in Australia by the Minister in accordance with section 795B(1) in Part 7.2 of the Corporations Act
 Licensed (Overseas): The licensee has been licensed to operate in Australia by the Minister in accordance with section 795B(2) in Part 7.2 of the Corporations Act
 Exempt: The facility has been exempted by the Minister from the markets licensing provisions in Part 7.2 of the Corporations Act
 Source: ASIC

Annex 3

Central Counterparties Clearing OTC Derivatives

Domicile	CCP	Product classes	Status
Australia	ASX Clear	Equity	Active
	ASX Clear (Futures)	Interest rate	Proposed
Brazil	BM&F Bovespa	FX, equity, commodity, interest rate	Active
Canada	CDCC	Equity	Active
		FX	Proposed
China	Shanghai Clearing House	Interest rate	Proposed
France	LCH.Clearnet SA	Credit	Active
Germany	Eurex Clearing	Credit	Active
		Equity	Proposed
		Interest rate	Proposed
	European Commodity Clearing	Commodity	Active
Hong Kong	HKEx	Interest rate, FX	Proposed
India	Clearing Corporation of India	FX	Active
		Interest rate	Proposed
Japan	JSCC	Interest rate, credit	Active
Korea	Korea Exchange	Interest rate, credit	Proposed
Poland	KDPW_CCP	Interest rate, FX	Proposed
Singapore	AsiaClear	Interest rate, commodity, FX	Active
Sweden	Nasdaq OMX	Commodity, equity, interest rate	Active
United Kingdom	CME Clearing Europe	Commodity, energy	Active
		Interest rate, credit, FX	Proposed
	ICE Clear Europe	Credit, energy	Active
	LCH.Clearnet Ltd	Interest rate, equity, commodity, FX	Active
	NYSE Liffe	Equity, commodity	Active
United States	CME Group	Interest rate, credit, commodity, energy, FX	Active
		ICE Clear Credit	Credit
	LCH.Clearnet LLC	Interest rate	Proposed
	NYPC	Interest rate	Proposed
	Options Clearing Corporation	Equity	Proposed

Sources: FSB; RBA; Risk Magazine

Annex 4

Central Counterparties Currently Clearing Australian Dollar-denominated OTC Interest Rate Derivatives

	LCH.Clearent Limited	CME Group
Domicile	United Kingdom	United States
Interest rate products cleared	EUR, GBP and USD interest rate swaps (including basis swaps) out to 50 years; AUD, CAD, CHF, JPY, SEK out to 30 years; CHF, CZK, DKK, HUF, NOK, NZD, PLN, SGD and SEK out to 10 years; CHF, EUR, GBP and USD overnight index swaps out to 2 years; EUR, GBP and USD variable notional swaps out to 50 years; EUR, JPY and USD forward rate agreements out to 3 years; CHF, CZK, DKK, HUF, NOK, PLN and SEK out to 2 years.	USD, GBP, EUR interest rate swaps out to 50 years; CAD, JPY, CHF, AUD out to 30 years.
Acceptable collateral	USD, EUR, GBP, CAD, CHF, JPY, SEK, DKK and NOK cash; US Treasury debt; US Agency debt; sovereign and government-guaranteed debt from Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Luxembourg, the Netherlands, Norway, Spain, Sweden and the UK.	USD, GBP, EUR, JPY, CAD, AUD, CHF cash; sovereign debt of UK, Germany, France, Canada, Japan, and Sweden; US Treasury debt; US Agency debt; US Agency mortgage-backed securities; min A- rated USD corporate bonds (via tri party repo); money market mutual funds and bank deposits eligible for CME's collateral management program.
Minimum capital requirement	US\$50 million	US\$50 million
Minimum contribution to default fund	£10 million	US\$50 million (US\$100 million if CDS also cleared)
Clearing members for interest rate products	67 ^(a)	22
Pre-funded default waterfall	1. Defaulter's initial margin 2. Defaulter's default fund contribution 3. £20 million of LCH capital 4. Survivors' contributions to the default fund	1. Defaulter's initial margin and liquidity charge ^(b) 2. Defaulter's default fund contribution 3. US\$100 million of CME capital 4. Survivors' contributions to the default fund
Interest rate notional cleared	~US\$340 trillion	~US\$490 billion
AUD interest rate notional cleared	~A\$4 trillion	~A\$6 billion

(a) 13 are US clearing members only

(b) Liquidity charge accounts for protecting large concentrated portfolios, the close-out of which could cost more or take longer than baseline timeframe

Sources: CME; LCH