


2016 Australian Financial Markets Report



Building Australia's financial markets
by promoting efficiency, integrity and professionalism

The background of the slide is a dark blue gradient. On the left side, there is a vertical strip of abstract imagery featuring binary code (0s and 1s) and glowing orange and yellow lines that resemble a financial data feed or a digital stock market. On the right side, there are several bright, glowing blue and white lines that curve and sweep across the frame, creating a sense of dynamic movement and digital connectivity. The overall aesthetic is high-tech and futuristic.

Australia's financial markets play an economically essential role in bringing together saving and investment, allocating capital to its most efficient uses, and managing cash flow and balance sheet risks for investors, business and government.

The 2015-16 financial year saw a continuation of a low-inflation, low interest rate environment for the world's advanced economies, including Australia. Long-term interest rates posted new record lows throughout the world, extending a downward trend that has persisted since the early 1980s.

Preface

2016 Australian Financial Markets Report

IN PREVIOUS YEARS, the Australian Financial Markets Report (AFMR) was based on a survey of Australian Financial Markets Association (AFMA) members in their capacity as market participants. Responses to the survey were aggregated to generate annual turnover figures for individual financial instruments, broader asset classes, exchange-traded and OTC markets.

The survey-based methodology became increasingly difficult to implement in recent years and has been discontinued beginning with this report.

In place of the previous survey methodology, the 2016 AFMR has implemented a top-down data collection process, drawing on the resources of financial system regulators and market participants. This creates a discontinuity with previously reported survey results, but should improve the overall reliability and consistency of the data reported. In particular, the AFMR will no longer report an aggregate turnover figure across Australia's exchange-traded and over-the-counter markets.

The data collected for exchange-traded and foreign exchange market turnover remains comparable with previous years' reports. These data are subject to minor revisions and these revisions are reported in this year's report.

Turnover data for government and non-government debt securities, non-transferable instruments (NTI), repurchase agreements (repo) and collateral have been compiled from Austraclear for 2014-15 and 2015-16 and reported in this year's AFMR. The Fixed Income section of the report shows a reconciliation of the Austraclear data with the 2014-15 survey methodology. Aggregate physical market turnover for 2014-15 is very similar based on the two methodologies. Within that aggregate, there is some substitution evident between outright and repo transactions, reflecting differences in how

trades have been classified by last year's AFMA survey participants and Austraclear.

Turnover data for OTC interest rate derivatives (IRD) has been sourced from the Reserve Bank of Australia's response to the Bank for International Settlements' triennial survey of over-the-counter derivatives markets. The Reserve Bank has also supplied an additional breakdown of IRD turnover by currency of denomination. Note that the aggregate turnover data are based on daily averages for the survey reference period and are denominated in US dollars. These data are thus subject to valuation effects from changes in the Australian dollar foreign exchange rate, as well as changes in the volume of transactions. Annual turnover data in interest rate derivatives cleared by LCH Swapclear are shown in Australian dollar terms.

The Report also shows gross notional outstandings for interest rate derivatives by asset class in Australian dollar terms. While the notional amount outstanding provides an absolute measure of market size, it does not measure economic exposures or value at risk. Notional value is only a reference point for the calculation of contractual payments and does not represent amounts actually payable between counterparties.

The gross value of OTC derivatives evaluated at current market prices are typically less than 3% of the notional amount outstanding, based on Bank of International Settlements data across all OTC derivatives asset classes. When allowance is made for netting between counterparties and within asset classes and the posting of collateral, the economic exposures represented by OTC derivatives are typically only 0.4% to 0.8% of the notional amount outstanding.

Financial market regulators and market participants have invested considerable resources in improving data availability and market transparency in recent years, including through trade

reporting and central clearing mandates. As these data become more readily available, AFMA will be in a position to improve the scope and detail of the AFMR. The Productivity Commission has recently released a draft report from its inquiry into Data Use and Availability. The report makes recommendations to improve the accessibility of both public and private sector data, a policy direction AFMA has supported.

AFMA would like to thank the following individuals and organisations for their assistance in compiling this year's Report: the Australian Securities and Investment Commission; Piers Symons and Jackie Slee, ASX Ltd; Michael Somes, Chi-X; Sue Black, Reserve Bank of Australia; Matthew Chan, DTCC; Jack Drew, LCH Clearnet; Graham Harman, Russell Investments; Ray Attrill, NAB; Martin Whetton, ANZ; Fiona Martyn; and Macrobond.

Inquiries about the Report can be directed to afmr@afma.com.au. ■

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A Low Inflation, Low Interest Rate World



Stephen Kirchner, Economist



Australia's financial markets play an economically essential role in bringing together saving and investment, allocating capital to its most efficient uses, and managing cash flow and balance sheet risks for investors, business and government.

The 2015-16 financial year saw a continuation of a low-inflation, low interest rate environment for the world's advanced economies, including Australia. Long-term interest rates posted new record lows throughout the world, extending a downward trend that has persisted since the early 1980s. Both short-term policy interest rates and longer-term, market-determined interest rates fell below zero in a number of economies. Around a third of the bonds in global government bond indices posted negative yields, challenging the traditional assumption that nominal interest rates are necessarily bounded at zero. At the same time, riskier asset classes such as equities managed to overcome concerns about global economic growth prospects and geopolitical issues to post gains over the year, despite sharp sell-offs in August 2015 and first months of 2016 after the Federal Reserve prematurely raised interest rates in December 2015.

Monetary Policy and Inflation

The low inflation, low interest rate environment challenges the conventional view that post-financial crisis monetary policy has been overly easy or accommodative, based on the low level of official policy rates through the industrialised world. As Milton Friedman noted in his 1967 Presidential address to the American Economic Association:

As an empirical matter, low interest rates are a sign that monetary policy has been tight-in the sense that the quantity of money has grown slowly; high interest rates are a sign that monetary policy has been easy-in the sense that the quantity of money has grown rapidly. The broadest facts of experience run in precisely the opposite direction from that which the financial community and academic economists have all generally taken for granted.

Nothing in the subsequent 50 years has invalidated Friedman's empirical observation, both about the relationship between the level of interest rates and the stance of monetary policy, but also the failure of the financial community and academic economists to appreciate the nature of this relationship.

Since the financial crisis, there has been an increase in the demand to hold money in its role as a generally accepted medium of exchange and store of nominal value and other safe assets, including government debt securities. Central bank asset purchases have successfully accommodated the increased demand for reserve holdings on the part of financial institutions, averting a severe deflation, but have not been so accommodative as to promote excessive growth in either the price level or nominal spending.

Headline inflation in the United States ended 2015-16 a percentage point below the Federal Reserve's 2% target, while inflation in Australia ended the year at 1%, 1.5 percentage points below the mid-point of the Reserve Bank's medium-term target of 2-3%. Inflation outcomes rather than official interest rates are the appropriate benchmark of the stance of monetary policy. Inflation rates that are below the central bank's target are



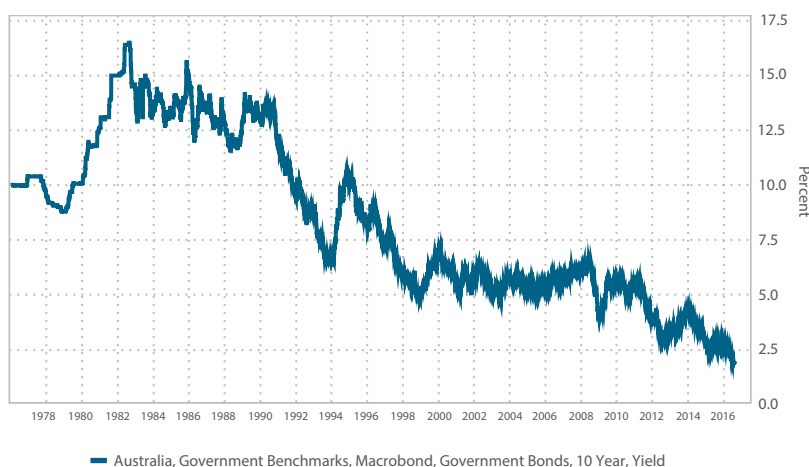
not consistent with the suggestion that monetary policy has been too easy relative to the central bank's own policy objectives. Inflation targets should be viewed symmetrically, with undershoots relative to expectations potentially just as problematic as overshoots. Yet the Federal Reserve's 2% inflation target has increasingly been viewed as a ceiling rather than a central tendency.

Long-term inflation expectations implied by inflation-linked bonds also posted record lows during the course of the year, including Australia, implying a continuation of low inflation outcomes over the next decade. Estimates of the term premium, the compensation investors demand to hold longer-term bonds rather than short-term securities, have fallen and by some estimates have turned negative, implying investors see little additional risk in investing in long-term versus short-term debt securities.

Structural Forces and Regulation

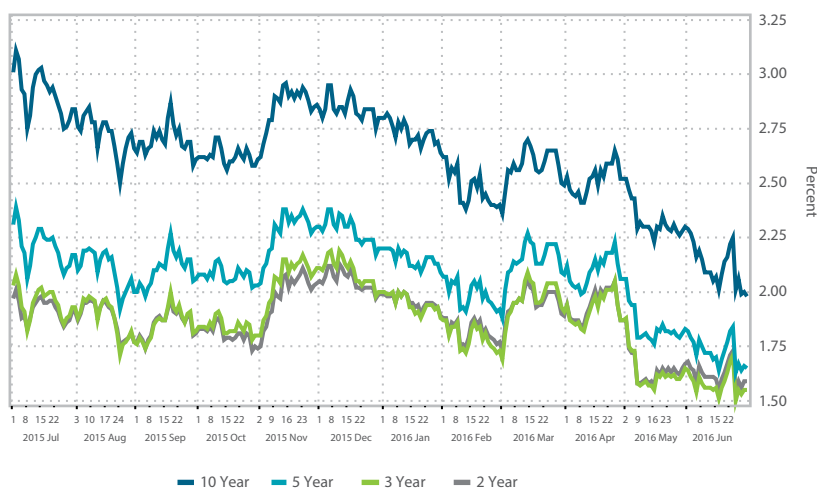
The secular decline in global interest rates over the last 30 years suggests that structural as well as cyclical factors are at work. Productivity growth has been subdued in many countries, including Australia, implying a decline in the neutral or equilibrium real interest rate. The decline in both central bank policy rates and market-determined, longer-term interest rates is a reflection of these underlying structural forces, as well as the stance of monetary policy. Given that monetary policy is neutral for real economic growth in the long-run, it remains incumbent upon governments to raise the productive potential of their economies through structural and fiscal reforms. While monetary policy can avert deflation, stabilise nominal spending and tie down the long-run price level if central banks make full use of the policy instruments available to them, monetary

FIGURE 1: Australia, Government Bonds, 10 Year, Yield



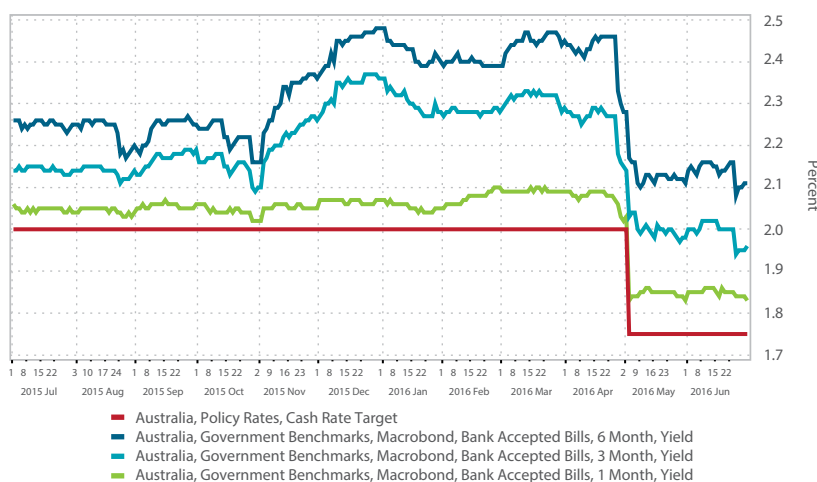
Source: Macrobond

FIGURE 2: Australia, Government Bonds, Yield



Source: Macrobond

FIGURE 3: Australia, Official Cash Rate and Bank Accepted Bills, Yield



Source: Macrobond

policy cannot raise long-term economic growth rates.

Regulatory changes have also increased the demand to hold safe assets such as government securities for the purposes of meeting increased prudential, liquidity and collateralisation requirements. While the failure of fiscal consolidation efforts in a number of G20 countries has ensured a continued supply of newly-issued government securities, this additional issuance has found no shortage of demand on the part of investors.

Electronic trading on the part of principal trading firms (PTFs) and agency trading have continued to assume greater prominence in overall market turnover, especially in fixed income markets as global banks retreat from market-making activities and their balance sheets continue to contract. Asset managers are increasingly conscious of the impact of reduced liquidity on the quality of trade execution. That said, 2015-16 was less characterised by some of the pronounced volatility episodes that were seen in previous years, suggesting markets have perhaps become more adapted to liquidity constraints.

Interest Rates and Debt Markets

Expectations for a rise in global interest rates, a consistent feature of year-ahead market forecasts for several years, were again frustrated in 2015-16. While many analysts saw the December 2015 increase in the US Federal funds rate from 0.00-0.25% to a 0.25-0.5% range as a harbinger of a turn in the global interest rate cycle, the Federal Reserve was unable to follow through with further tightening in the first half of 2016 and is expected to remain on hold in the second half of 2016. The Fed's inability to "normalise" the Fed funds rate in line with the prior expectations of Federal Open Market Committee members helped set the tone for global markets.

Australian government bond yields trended lower during the course of 2015-16, in line with the global decline in long-term interest rates, underscoring the fact that Australian interest rates are largely determined in global markets. The long-end of the curve outperformed on a relative basis, with the yield differential over US

10-year Treasuries narrowing after the RBA cut interest rates in May 2016.

The short-end of the curve also rallied in price following the Reserve Bank of Australia's reduction in the official interest rate to a new low of 1.75% at its May 2016 Board meeting, with further rate cuts priced into the forward yield curve. The RBA lowered the official cash rate again at its August 2016 Board meeting to a record low 1.5%.

Issuance of Australian government securities remained strong, with the federal government continuing to run underlying cash deficits in excess 2% of GDP and Commonwealth net debt increasing from 14.8% of GDP in 2014-15 to 17.3% of GDP in 2015-16. The face value of Commonwealth government securities on issue rose from \$368.7 billion (22.9% of GDP) to \$427 billion (25.9% of GDP). Issuance of Treasury Bonds by the Australian Office of Financial Management remained skewed to the long-end of the curve to capitalise on low interest rates, with a weighted average term to maturity on outstanding Treasury bonds of 6.6 years. A new 20-year bond futures contract was introduced on the ASX on 21 September 2015, reflecting the extension of duration in the physical bond market.

Offshore participation in the Australian government bond market weakened somewhat over the year, with non-resident holdings of Australian government securities falling from 65.2% in June 2015 to 60.4% in March 2016. While net offshore buying has continued steadily, it has not kept up with the pace of domestic issuance, leading to a reduction in the offshore share of outstandings.

Government debt securities turnover rose by 28% over the year, with a 31% increase in Commonwealth government securities turnover offset by a 13.8% decline in foreign government debt securities turnover. Turnover in non-government debt securities fell 11%.

Equity Market Developments

The benchmark S&P/ASX 200 index underperformed US equities on a total return, local currency basis for much of 2015-16, and ended the financial year only modestly higher. Implied volatility peaked

in August 2015 and February 2016 when the index posted major lows in line with global markets, however, implied equity market volatility was mostly lower than in 2014-15. Total market capitalisation was little changed at around \$1.6 trillion over the year, with the number of listings also little changed at 2014. ASX market turnover increased by 8.2% over the financial year to just over \$1.2 trillion, while turnover on Chi-X rose 10.6% to \$259.9 billion.

Daily average value traded on ASX and Chi-X increased from \$5.8 billion in June 2015 to \$5.9 billion in June 2016. Over the same period, the daily average number of trades rose from 1.084 million to 1.339 million. Average trade size fell from \$5,358 to \$4,442, based on ASIC data

The number of floats fell 39.4% in 2015-16 to \$23.585 billion following a bumper year in 2014-15. Secondary raisings rose 16.8% to \$42.298 billion, leaving total cash equity raisings down 11.4% over the year at \$66.882 billion.

The Australian Securities and Investments Commission's Review of Australian Equity Market Cleanliness (Report 487, August 2016) found that over the period 1 November 2005 to 31 October 2015, there was an improvement in market integrity, shown by a decrease in anomalous trading activity ahead of material, price sensitive announcements. The review examined possible insider trading and information leakage ahead of material, price-sensitive announcements by looking at price movements or shifts in trading behaviour before these announcements. The results suggest that insider information and the loss of confidentiality ahead of material announcements has declined over the decade. The review used an established market cleanliness measure and a new market cleanliness measure developed by ASIC to come to this conclusion. Based on the new measure, 95% of material announcements exhibited no (or negligible) anomalous trading patterns ahead of an announcement in the period 1 November 2014 to 31 October 2015. The report also noted that independent international research ranks Australian market cleanliness favourably compared to other developed equities markets.



Australian Dollar Exchange Rate and Foreign Exchange Markets

The Australian dollar exchange rate underperformed against most major currencies during the course of 2015-16, with the exception of the UK pound sterling, which fell sharply with the Brexit referendum result towards the end of the year.

Reductions in the RBA's official cash rate and a narrowing in the 10-year bond spread to the United States undermined AUD's yield appeal. Commodity prices also weighed in the second half of 2015, although recovered in the first half of 2016, offering the AUD exchange rate some support into year end, although AUD lagged gains in AUD-denominated commodities prices towards the end of the year as generalised risk aversion increased.

Total foreign exchange turnover in the spot, forward and swap markets increased by 6% in 2015-16 compared to the previous financial year.

Over-the-Counter Derivatives Markets

OTC derivatives markets play an essential role in enabling firms, financial institutions and asset managers to manage cash flow and balance sheet risks. Derivatives can be used to hedge risk in relation to foreign currency earnings and liabilities, changes in interest rates and commodity prices. By increasing certainty in relation to future cash flows, assets and liabilities, derivatives markets provide increased confidence, underpinning long-term investment and economic growth.

According to DTCC, the gross notional amount of derivatives outstanding in the Australian market as at the end of 2015-16 was just under \$49 trillion, a 65% increase on the same period last year. While the notional amount outstanding provides an absolute measure of market size, it does not measure economic exposures or value

FIGURE 4: Equity Market Performance, 1 July 2015 = 100



FIGURE 5: S&P/ASX 200 Total Return Index and Volatility

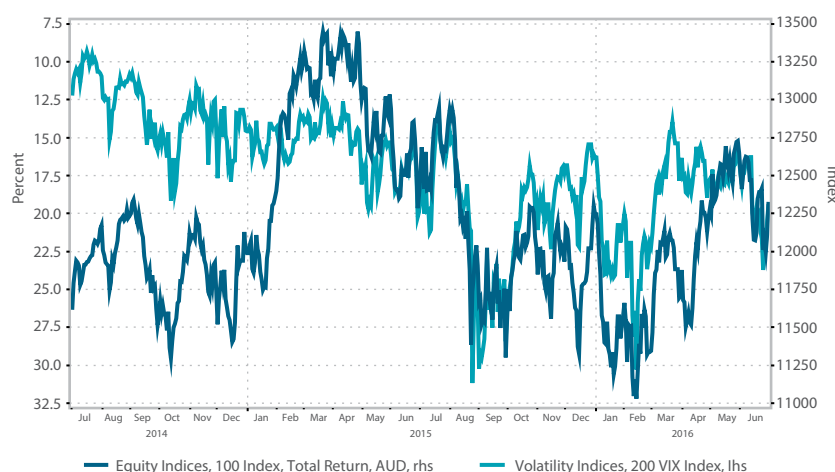
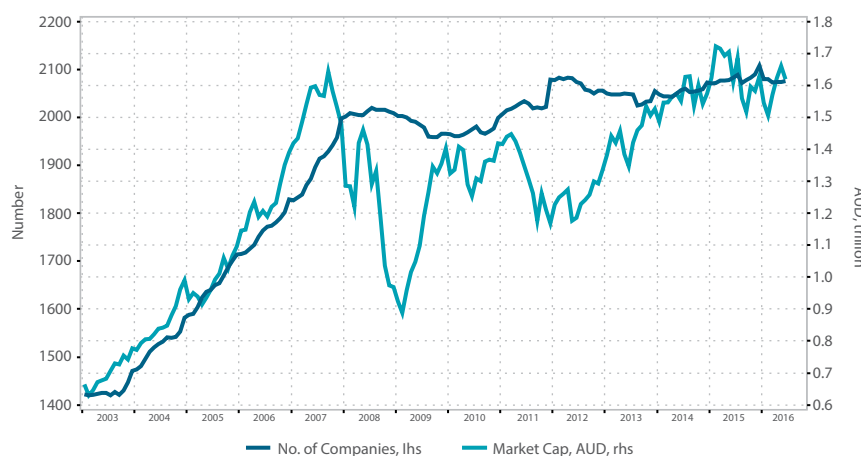
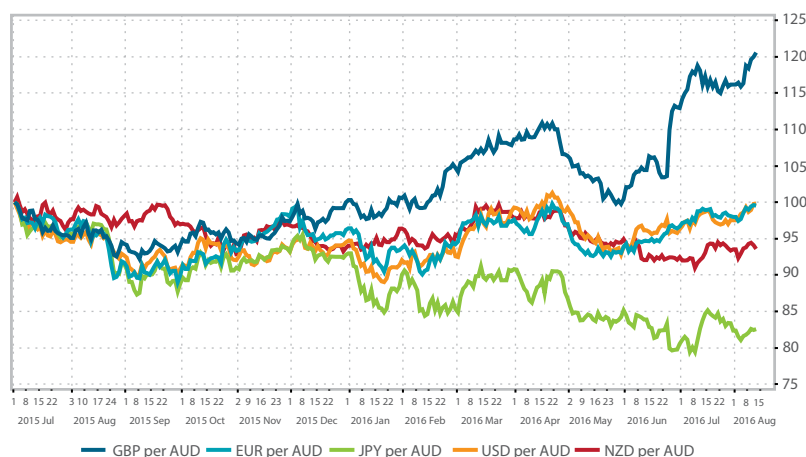


FIGURE 6: Equity Market Capitalisation and Number of Listings



Source: Macrobond

FIGURE 7: AUD Relative Performance, 1 July 2015 = 100



Source: [Macrobond](#)

at risk. Notional value is only a reference point for the calculation of contractual payments and does not represent amounts actually payable between counterparties.

The gross market value of OTC derivatives evaluated at current market prices are typically less than 3% of the notional amount outstanding, based on Bank of International Settlements data across all OTC derivatives asset classes. When allowance is made for netting between counterparties and within asset classes and the posting of collateral, the economic exposures represented by OTC derivatives contracts are typically only 0.4% to 0.8% of the notional amount outstanding.

The Reserve Bank of Australia's April 2016 survey of OTC interest rate derivatives activity in Australia found average daily turnover of \$US 49.3 billion, a 25.5% decline on the previous survey in April 2013. This largely reflects a 26% decline in the AUD-USD exchange rate over the same period. Holding the exchange rate constant, turnover was little changed. Turnover in interest rate derivatives cleared by LCH SwapClear rose 27.5% over the financial year in Australian dollar terms.

Industry Developments

The financial and insurance services sector grew 5.3% in real terms between June 2015 and June 2016, outperforming real GDP growth of 3.3% over the same period. The financial and insurance services sector has

the largest output share of the 12 industries making up the market sector of the Australian economy, with a 10.3% share of total industry gross value-added. Since 1989-90, the sector has enjoyed strong multi-factor productivity growth of 2.3% per annum on average, outperforming most other sectors of the economy. Employment in the financial and insurance services sector rose by 40,900 to 434,300 employees over the year to May 2016, making up 3.6% of total employment.

AFMA led a number of industry developments and policy initiatives during the course of the financial year.

AFMA led an industry project in early 2015 to reduce the settlement cycle for domestic fixed income securities from T+3 to T+2. Led by AFMA's senior committees and with the support and mandate of the RBA, the industry assessed the transition issues and costs that might be associated with the change. The move was supported at senior levels in the industry for risk management and balance sheet reduction reasons as well as aligning the Australian market with international standards and the introduction of best practice in the industry.

Shortening the cycle for fixed Income securities also complemented the ASX's initiative to introduce T+2 settlement for the Australian equities market. In a coordinated move with the New Zealand Financial Markets Association (NZFMA), the fixed income and equities markets of both countries went live with the shorter

settlement cycles on 7 March 2016. Other jurisdictions are now looking to the Australian process as a model for implementing T+2 in their home markets.

Following comprehensive engagement with members and buy-side participants in the financial markets, AFMA finalised its response to the Council of Financial Regulators' consultation on reform of the benchmark Bank Bill Swap Rate (BBSW) methodology. The new methodology, based on a volume-weighted average price (VWAP), is expected to be implemented in 2017.

Following the Financial Stability Board's recommendation that near risk-free reference rates be developed, AFMA conducted a survey of members in August 2015 to gauge interest in the development of a robust, near-risk-free benchmark interest rate for the Australian market to complement other existing benchmarks. Survey results indicated that a compounded total return index, which would measure the performance of an investment earning the RBA's official cash rate, would be the most useful for designing investment product referencing the risk-free rate.

The RBA offered to calculate and publish the index given its administration of the underlying official cash rate, with AFMA and the RBA collaborating on the design of supporting conventions. The RBA announced the publication of the Cash Rate Total Return Index (TRI) on 9 May 2016, backdated to 4 January 2011 and an initiation level of 100.

On 30 March 2016, the Government accepted recommendations made to it by the Council of Financial Regulators (CFR) in relation to the review of competition in clearing of cash equities. The CFR's conclusions on competition are consistent with advice provided by AFMA in its submission to and discussions with the Council. The Government's response recognises the on-the-ground realities of equities clearing in Australia, where economies of scale need to be attainable to commercially justify and maintain a viable cash equities clearing service, while adhering to the existing principle of open competitive markets for financial market infrastructure enshrined in the Corporations Act. ■

Equity Market Overview

Graham Harman, Senior Investment Strategist, Asia-Pacific, Russell Investments

The 2015-16 financial year was a quiet one for the Australian sharemarket. The increase of just 0.6% in the S&P/ASX 200 Accumulation Index over the period epitomises this subdued environment. The modest total return outcome comprised a 4.1% fall in the S&P/ASX Price Index in the 12 months to June 30, 2016 that was more than offset by compounded dividends through the year.

The benefits of franking credits for investors further enhance returns to investors. Small stocks performed relatively well, with the Small Ordinaries up 14% for the year. Also moving sideways through the year was the market capitalisation of domestic listed equities, barely rising from the June 2015 value of \$1.612 trillion to be \$1.620 trillion by June-end, 2016.

On the face of it, the economic backdrop was a benign one for the sharemarket in 2015-16. Economic growth had accelerated from 2% to over 3%, on a year-on-year basis. Market anxieties – for example, about a possible end to Australia's housing boom – proved unfounded. Business confidence remained convincingly in positive territory

also at healthy levels, particularly centred around raisings from banks and financials in the latter half of calendar 2015.

Even more encouraging were signs of a stabilisation in the volume and value of sharemarket turnover through the year. The value of market turnover by 2014 had declined significantly from the boom-time outcomes of 2007 and from the heightened

THE AUSTRALIAN EQUITY MARKET FOUND ITS FEET IN ITS ROLE AS A MARKET FOR CAPITAL. INITIAL PUBLIC OFFERINGS WERE SOLID, AT OVER \$20 BILLION AND, WHILST DOWN ON THE 2014 SURGE IN LISTINGS, THE LEVEL OF PRIMARY MARKET ACTIVITY COMPARED FAVOURABLY WITH MUCH OF THE POST-GFC PERIOD.

throughout the year, notwithstanding the distractions of a drawn-out election campaign that concluded immediately following the financial year-end. Simultaneously, inflation resumed its downtrend, and the Reserve Bank weighed in with a cut in the official cash rate in May 2016 (from 2.00% to 1.75%). This left the equity market's headline dividend yield (of 4.6%, trailing, at year end) a solid 2.85% above the cash rate.

In this supportive environment, the Australian equity market found its feet in its role as a market for capital. Initial public offerings were solid, at over \$20 billion and, whilst down on the 2014 surge in listings, the level of primary market activity compared favourably with much of the post-GFC period. Secondary raisings were

levels of 2010-11 to be down by a factor of a third from the peaks. These declines were halted and reversed in 2015-16, with the volume of turnover up 9% for the year as a whole, and with the value of turnover up by 7%.

Offsetting these clear positives, a number of headwinds held total sharemarket returns back to the flat result recorded by year-end. Of these, the most noteworthy developments were:

— **Persistent earnings disappointments.**

Earnings per share growth was flat in 2014-15, and expectations for 2015-16 (as at July 2015) were for a similarly lacklustre year ahead. As things turned out, sequential downgrades throughout the period saw the final outcome being an 11% decline.

- **Global malaise.** Whilst no overwhelming catastrophes befell the global economy through the year, the period was characterised by a downbeat international backdrop. The US economy underwhelmed, with the Federal Reserve able to raise rates only once – well below prior expectations. China continued to slow; the Japanese economy failed to respond to aggressive monetary stimulus; and political and financial difficulties continued to hold back Europe.
- **Commodity weakness.** Commodity weakness was not extreme during the year as a whole, with Australia's export-weighted commodity price indices down by around 10% in US dollar terms, and by little worse than half that amount in Australian dollars. However, the post-boom 'hang-over' in the commodity sector made itself clearly felt. Mining related investment also continued to unwind, from its previous highs.
- **Loss of momentum for the banks.** The all-important banking sector had delivered spectacularly positive performance in 2014-15, and was beset by an inevitable retracement in 2015-16. Despite the appeal of their still-attractive dividend yield in world of dwindling cash rates, the banks were down by 10%.
- **Challenging valuations.** Major sectors of the Australian sharemarket – resources and banks – are highly cyclical industries, which would normally trade on single-digit multiples in most international markets. As such, they proved subject to valuation downgrades over the year. The banks, for example, saw their price/book rating drop by 15%.
- **A rising payout ratio.** Acutely conscious of investors' hunger for

dividend income and for yield, corporate Australia has been pushing payout ratios higher in the face of sluggish profitability. The payout ratio climbed from 74% at the beginning of the financial year, to 88% by year-end, diverting cashflow away from reinvestment and internally-funded growth.

- **Hostile social trends.** Whilst not particularly marked in Australia, the 12-month period under review was marked, globally, by a continuing swing of the political pendulum away from capital and the establishment, and towards populism and labour. The rewards from such growth as the Australian economy is achieving, are being tilted towards the wage share of GDP, rather than to the profit share, which has continued to trend lower.

Turning to sectoral considerations, key developments through the year included:

- **Stellar performance from defensive yield sectors.** Most dramatic of these was a 40% lift in the listed infrastructure sector, although 25% jumps in each of Utilities and REITs were also eye-catching. This reflects the easing bias of central banks, both globally and in Australia.
- **Ongoing strength in Healthcare** – with demographics and regulation acting as drivers, both in Australia and overseas.
- **Weakness across the board in resources** – both energy and mining. Drivers in the sector included relentless downdraughts in commodity prices, as boom-related capacity continued to come on-stream against a backdrop of weak demand growth; and write-downs to assets and investments, relative to their boom-time valuations. Of the ASX top-100 stocks, the four worst performing for the financial year were

all drawn from the materials sector.

- **Weakness in banks, and to a lesser extent insurers.** This reflected regulatory headwinds; weakness in banks globally; and the dampening impact on profitability of a relentlessly low-rate environment. ■

EVEN MORE ENCOURAGING WERE SIGNS OF A STABILISATION IN THE VOLUME AND VALUE OF SHAREMARKET TURNOVER THROUGH THE YEAR.

Exchange-Traded Markets – ASX Group



Activity in local exchange-traded markets remained relatively healthy in the face of uncertainty around the medium-term economic prospects, both in Australia and abroad. Over the 2016 Financial Year (FY16), the pace of activity in public markets built on the steady growth experienced over the past couple of years.

The Year in Review

Cash equity market activity levels generally rose across a range of ASX metrics:

- 124 new entities were listed up from 120 in FY15. New listings were again centred on the biotech and fintech sectors as well as listed investment entities.
- Total capital raised through IPOs and secondary raisings fell 12% to \$78.6 billion in FY16 following a very strong FY15 result built on some very large IPOs.
- Total secondary capital raisings alone rose 10% to \$55.0 billion, underpinned by raisings from Australia's 'big four' banks.
- Average daily on-market trading was 9.6% higher, valued at \$4.2 billion, with ASX accounting for around 89% of total on-market trading. The number of daily trades on ASX was up 24%, averaging 928,829.

The story was more mixed in derivatives markets with strong growth in futures trading offset to some extent by continuing challenges in equity options following the 2015 collapse of BBY Limited:

- Overall futures and options on futures volumes grew in FY16 (up 8%), driven in large part by strong growth in the 10 Year Bond contract as economic uncertainty and consequent monetary policy responses resulted in increased volatility in interest rate markets. Trading in equity index futures (SPI 200) also rose strongly over the period.
- Overall equity options volumes declined during the year, with lower trading in single stock options (down 19%) outweighing stronger index options volumes (up 17%). ASX continues to work with key stakeholders

on strategies to reinvigorate the market.

ASX trading platforms continued to exhibit the resilience and operational efficiency required in response to political and economic events that can drive extreme volatility and market activity at times. During the trading day of 24 June 2016, in response to rapidly changing market sentiment as the results of the UK's 'Brexit' election came in, ASX Trade processed a record 1.55 million equity trades and ASX 24 a record 85,664 futures transactions. The system uptime for ASX's equity and futures trading platforms across the period were 100% and 99.98% respectively.

Building on the core strength of existing systems, ASX continues to invest in critical infrastructure to ensure world-class trading and post-trade systems. It is also committed to refreshing its rules and guidance framework to maintain Australia's competitiveness and reputation for quality and integrity in a changing global marketplace.

The major initiatives in FY16 included:

- A new trading platform for futures expected to be implemented in February 2017. ASX is investing in the technology to support our equity and derivatives markets, including upgrades of the risk management and clearing systems.
- The successful implementation of T+2 settlement of sharemarket trades in March 2016. The reduced settlement period provides efficiencies for the market, reduces margin requirements and systemic risk, and ensures that Australia remains at the forefront of global best practice. The success of the transition to T+2 was underpinned by the close cooperation between ASX and its customers.
- Establishment of an office and

technology hub in Hong Kong to connect ASX's growing Asian customer base to Australia's financial markets community. ASX now has points of presence in the US, Europe and Asia, broadening the distribution of ASX's products and providing global access to ASX markets.

- ASX and its partner Digital Asset Holdings are leading global assessments of how distributed ledger technology or 'blockchain' could be applied to financial markets. The technology offers the potential to reshape existing processes to improve efficiency of post-trade services and take costs and complexity out of the system. Assessing the benefits and implications of deploying this technology is a multi-year project and will require the active involvement of all key stakeholder groups. Any new system must meet the highest regulatory and operational standards before implementation.
- Consultation on proposals to update the admission requirements for listing to maintain the quality of the ASX market as a world-class venue to raise capital, invest and build long-term wealth. Following constructive engagement and feedback, the new rules are expected to be published and become effective in the second half of 2016.
- Regulatory approval to simplify the dual listing of New Zealand companies and continued work to build a reputation as the technology exchange of the Asian time zone.
- Expansion of the 'investment supermarket' of assets for investors, particularly with growth in the mFund settlement service, now with 48 fund managers, offering 161 unlisted managed funds via 18 brokers; and exchange-traded products, which grew in FY16 to 176 listed products totalling \$22.5 billion.

On a historical note, July 2016 marked the tenth anniversary of the merger between ASX and the Sydney Futures Exchange. This was a significant event for Australia's financial markets, creating one of the world's first multi-asset class, vertically integrated exchanges.

Primary markets

Overall, 124 new entities listed in FY16, a 3% increase on last year. The largest initial public offerings (IPOs) came from the financials, consumer staples, and information technology sectors. The market capitalisation of new listings in cash equity markets decreased by 39% in FY16, from \$38.9 billion in FY15 to \$23.6 billion.

Link Administration Holdings Limited had the highest capitalisation of new IPOs with \$2.3 billion. Reliance Worldwide Corporation Limited and Wisetech Global Limited were also notable listings, with capitalisations of \$1.3 billion and \$973.6 million respectively. The National Australia Bank Limited demerger of CYBG PLC created the largest new listing for the year with a market capitalisation of \$2.8 billion.

Secondary raisings of equity capital in FY16 totalled \$45.3 billion, up 17% on FY15.

average of 928,829 trades were executed on the ASX, an increase of 24%.

ASX matched 89% of lit market trades and captured 82% of the gross traded and reported value in Australian equities. Fragmentation continued to increase, particularly in dark on-market trading with price improvement. ASX Centre Point matched \$79 billion in FY16, an increase of 5%, delivering \$687 million of price improvement.

ASX Exchange-Traded Options (ETO)

Total ETO market volumes were down 16% in FY16 compared with FY15. This fall was led by a decrease in retail usage which in part stemmed from the collapse of BBY in March 2015. Despite the overall decline, index option volumes grew by 17% due to institutions increasingly implementing overlay strategies on their share portfolios.

ON A HISTORICAL NOTE, JULY 2016 MARKED THE TENTH ANNIVERSARY OF THE MERGER BETWEEN ASX AND THE SYDNEY FUTURES EXCHANGE.

Secondary equity market

Commodity prices, particularly iron ore, remained subdued through FY16 and saw the resources index fall almost 16%. More broadly, the S&P/ASX All Ordinaries index fell by 3%, while the S&P ASX 200 Index fell by 4%. Continued concerns over global growth and low inflation through FY16 saw the MSCI World Index down almost 5% and the S&P 500 Index up marginally by nearly 2%, compared with an increase of 5% in FY15.

Consolidated on- and off-market average daily turnover was \$5.8 billion, up 9% over the previous year. Higher turnover tracked higher market capitalisation, with velocity averaging 92%. Average volatility continued to rise with the S&P/ASX 200 VIX averaging 19.7. Over the year, a daily

ASX launched TORESS (Total Return Single Stock) option contracts in November 2015. Since inception over a million contracts have traded, representing over \$980 billion in traded value.

In October 2016 ASX will be listing new weekly and serial option contracts over index and the top single stock underlyings.

ASX SPI 200® Futures and Options

The Australian equity market benchmark index, the S&P/ASX 200, closed the year down 4% at 5233 points. In contrast ASX SPI 200® futures volumes were up 17%. SPI options volume was down 20%, impacted by the increased usage of cash index options. In the coming financial year ASX plans to introduce



market makers to SPI Options to address this decline.

ASX Warrants

In FY16, the number of new warrants listed rose 2%, bringing the total number of warrants listed on ASX to 3,131. Total value traded fell nearly 12%. MINI style warrants were the most popular, with the value traded increasing to \$1.5 billion.

In March 2016 ASX announced a new type of warrant called a bonus certificate which includes a unique feature, the bonus level. A holder of a bonus certificate warrant will be entitled to the bonus level if the quoted price of the underlying share or ETF or the level of the applicable index has not fallen to or below the barrier level at any time during the term. This was the first new type of warrant to be issued in 8 years and initially will only to be offered on ASX.

Exchange-Traded Products (ETPs)

ETPs continued to see significant growth, both in terms of number of products and funds under management, with 47 new funds commencing trading on ASX. K2, Magellan, Australian Corporate Bond Company, VanEck, State Street Global Advisers, Blackrock, Vanguard and BetaShares all issued new funds.

Market capitalisation of traded market ETPs grew strongly by 22% to reach around \$22.5 billion of funds under management.

The number of monthly trades in ETPs also rose from 55,194 in FY15 to roughly 71,706 at the end of FY16. Monthly value traded was up 49% to almost \$2.7 billion.

ASX-Quoted Bonds

ASX Bonds include Government bonds (Treasury Bonds and Treasury Indexed Bonds) and corporate bonds (fixed and floating rate). A total of 42 Government and corporate bonds were available to retail investors with maturities extending to August 2040. The average monthly turnover for these products during FY16 was 6,827 trades with an annual turnover of over \$2 billion.

ASX Hybrid Securities

The ASX Hybrid Securities market includes convertible notes, capital notes and preference shares. This market continued to attract issuers and investors with the total value traded for FY16 exceeding \$6 billion and the total market capitalisation for the sector was up 27% to more than \$38 billion.

ASX 24 Interest Rate Futures

ASX 24 interest rate futures volumes were stronger in FY16 compared with the previous financial year. Market activity was primarily driven by greater interest rate volatility in the second half of FY16, with the RBA cutting the Overnight Cash Rate by 0.25% in May 2016 to 1.75%, citing economic growth concerns and a sluggish inflation outlook.

Due to the nature of the 30 Day Interbank Cash Rate Futures contract, heightened speculation of RBA rate changes strongly correlate with increases in volume, and so this product experienced

a 12% increase in volume over the previous year. There was a modest 3% rise in FY16 on FY15 volumes for 90 Day Bank Bill Futures. Spreads and depth levels continued to improve in the second, third and fourth year contracts due to the continued support of market makers.

Bond futures activity remained strong in FY16. The 3 Year Treasury Bond Futures contract continued to be the most actively traded futures contract on ASX 24, and had an average daily volume (ADV) of 194,960 contracts, a slight increase over FY15. Activity in 10 Year Treasury Bond Futures grew strongly with a 22% increase during the year (ADV of 140,386 contracts). Greater market participation and spread activity in the 10 Year Bond Futures contract has contributed to growth in volume and open interest.

ASX Launches 20 Year Bond Futures

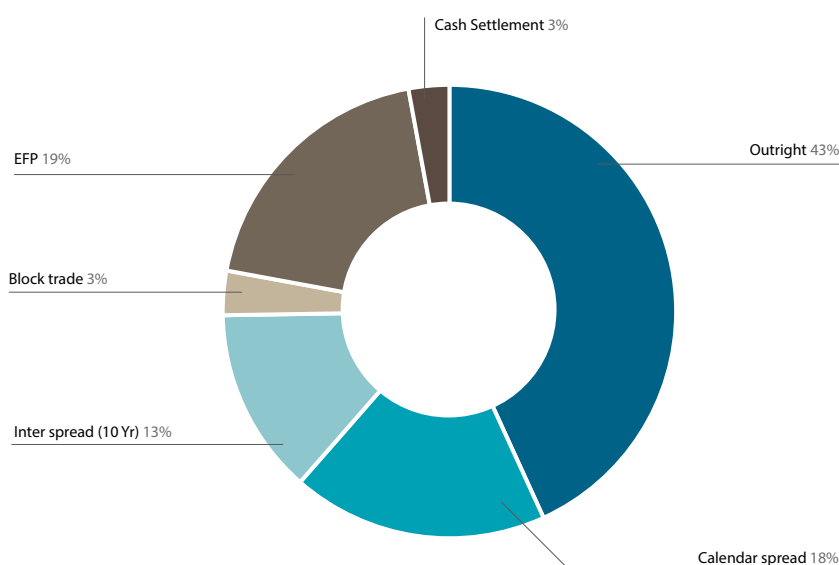
In September 2015, ASX launched the 20 Year Treasury Bond Futures contract, complementing the benchmark 3 and 10 Year Treasury Bond Futures contracts. With the Australian Office of Financial Management (AOFM) lengthening the maturity profile of Treasury Bonds out to 23 years, this contract provides participants with a tool to hedge longer dated Australian Bonds and trade longer dated Australian dollar interest rates. In FY16, ADV was 2,124 contracts with a mix of outright, spread, block and EFP trade activity. The below chart shows the breakdown of activity by trade type:

Consistent with central banks around the world, the RBNZ continued on a path of easing monetary policy action given weaker global growth and low headline inflation figures. Over FY16, the RBNZ reduced the Official Cash Rate from 3.00% to 2.25%, thereby fostering greater interest rate volatility. This translated to a 37.4% increase in New Zealand 90 Day Bank Bill Futures activity in FY16 (ADV of 7,450 contracts).

Block trade activity remained strong, increasing 36% in FY16 on the previous year. Exchange-for-physical transactions decreased 6% on FY15 and contributed to 8% of total exchange traded activity.

ASX 24 INTEREST RATE FUTURES VOLUMES WERE STRONGER IN FY16 COMPARED WITH THE PREVIOUS FINANCIAL YEAR. MARKET ACTIVITY WAS PRIMARILY DRIVEN BY GREATER INTEREST RATE VOLATILITY IN THE SECOND HALF OF FY16.

FIGURE 1: 20 Year Treasury Bond Futures Volume Breakdown - FY16



Trading activity in a 24 hour trading day

The SYCOM (ASX Trade24) trading system permits near-24 hour trading of ASX's futures contracts, making the market accessible at any time from many major global financial centres through the ASX Trade24 distribution network. Activity during the day session predominantly occurs with the open of interest rate and ASX SPI 200 contracts markets, around economic and RBA cash rate announcements, and in the lead up to market close. During the night session, trading activity centres on the session open and early trading in the European and US markets. Night session activity represented 30% of total trading activity during FY16, increasing from 28% last financial year.

Austraclear

Austraclear is the major central securities depository for the domestic debt market. It primarily provides settlement, custody and issuer services for Australian dollar-denominated debt securities and has a direct link to the Reserve Bank Information and Transfer System (RITS), facilitating real-time gross settlement of Australian dollar debt, cash, foreign

exchange and derivatives transactions. Austraclear has just over 850 participants, including banks, Commonwealth and state government authorities, trustee companies, custodian banks, other non-bank financial institutions, and large corporates.

Total Austraclear debt holdings experienced moderate growth in FY16, rising by 8% to \$1,895.6 billion at year end from \$1,752.5 billion at the end of FY15. This growth continued to be driven by strong increases in floating rate notes, up 16%, and Treasury bond issuances, up 15% on FY15.

Austraclear membership increased marginally from 846 at the end of FY15 to 855 at the end of June 2016. There were 71 new participants admitted to Austraclear during FY16, including a number of public trusts and retail energy providers. The latter were special purpose participants (energy) to settle daily margins on electricity supply contracts with the Australian Energy Market Operator (AEMO) who acts as a clearing house.

ASX Energy Derivatives

The ASX Australian electricity market rallied dramatically through FY16, particularly in the final few months of the financial year. Calendar 2017 base load

strip futures were up 28% in NSW to \$54.68/MWh, 49% in Victoria to \$50.75/MWh, 22% in Queensland to \$63.60/MWh. South Australia saw the largest price rise of \$34.30, ending the year at \$87.28/MWh for a gain of 65% across the year.

Following the repeal of carbon legislation which had helped drive activity during FY15, total volumes fell slightly in FY16, trading more in line with FY14 volumes. FY16 traded volume was \$16.5 billion in face value, or 388.9 TWh of traded energy, representing 125% of the underlying NEM system demand. The ADV of energy traded was 1.5 TWh with a face value of \$64.5 million.

Activity continued to consolidate in the base load quarterly futures, where 55% of total energy contracts were traded. Base load \$300 cap futures comprised nearly 13% of traded energy, base load financial/calendar year options 25% and base load average rate quarter options were almost 7%. The remaining activity was distributed between peak load calendar quarter futures and base load calendar month futures. The most actively traded state was Victoria at 36%, followed by Queensland at 33%, New South Wales at 30%. South Australia only had 1% of traded volume.

ASX Agricultural Derivatives

In parallel with reduced activity in the physical market, trading activity on the ASX grain futures and options market was more subdued in FY16 than FY15. The total volume traded was 133,530 contracts, which equates to 2,670,600 tonnes of Australian grain, a 6% decline in volume on FY15.

To increase liquidity ASX has implemented a number of changes, initiatives and incentives in FY16, supported by the ASX Agricultural Product Advisory Committee which consists of grain industry participants. One initiative was the launch of the new Eastern Australia Wheat contract, featuring an expanded delivery arc providing additional flexibility and increased confidence to deliver wheat across the east coast of Australia. ■

www.asx.com.au

Chi-X Australia



The 2015-16 financial year was significant for Chi-X as it launched an investment products platform that enabled it to compete with the ASX in the quotation of investment products that are exclusively traded on the Chi-X market. By the end of the financial year, Chi-X had quoted over 314 investment products and had seen competing operators cut relevant issuer fees by over 60%. Market turnover in investment products experienced consistent trend growth, totalling over \$18 million by the end of June 2016.

The launch of the investment products platform complemented the continued growth of Chi-X as an established execution platform for Australian listed cash equities (see the total turnover figures in Figure 1). Cash equities trading on the Chi-X market continued the trend and outcomes seen in previous years:

- (i) retail investors continued to make up approximately 30% of the total aggressive flow on the Chi-X order book (see Figure 2);
- (ii) the market share of principal trading/market making firms continued on a downward trend (see Figures 2-4);
- (iii) institutional trading sustained its dominant market share in both passive and aggressive liquidity (see Figures 2-4).

Market-wide trading in cash equities saw a continued overall market trend toward range bound trading, with some notable periods of event-driven volatility.

ETF trading of over \$35million. Chi-X also:

- (i) introduced a market data app which will, for the first time, enable users to obtain free real time market data on a mobile app provided by a licenced market operator;
- (ii) introduced a new @Last trading phase, which enables participants to submit visible market on close orders that are matched at the closing price of each equity market product as published by the ASX at the conclusion of its closing auction;
- (iii) consulted upon and made substantial progress in developing proposals for transferable custody receipts (TraCRs) which, subject to final regulatory approvals, are due to launch in the first quarter of 2017.

Other noteworthy trading metrics for Chi-X in the past financial year include the following:

BY THE END OF THE FINANCIAL YEAR, CHI-X HAD QUOTED OVER 314 INVESTMENT PRODUCTS AND HAD SEEN COMPETING OPERATORS CUT RELEVANT ISSUER FEES BY OVER 60%.

Chi-X continued its focus on innovation during the year, introducing technology changes that will facilitate the gradual roll out of new investment products, removing the burden on participants of having to complete multiple upgrades each time a new product is launched. The changes introduced included attributed trading for exchange traded funds (ETFs) and by the end of the financial year, Chi-X had achieved a record daily turnover in

- (i) total market share of 38.45% on 5 November 2015;
- (ii) total daily value of \$2.77 billion on 29 October 2015;
- (iii) continuous trading value of \$1.13 billion on 25 August 2015; and
- (iv) continuous trading market share of 18.92% on 21 April 2016. ■

FIGURE 1:
Chi-X Monthly Total Market
Share %

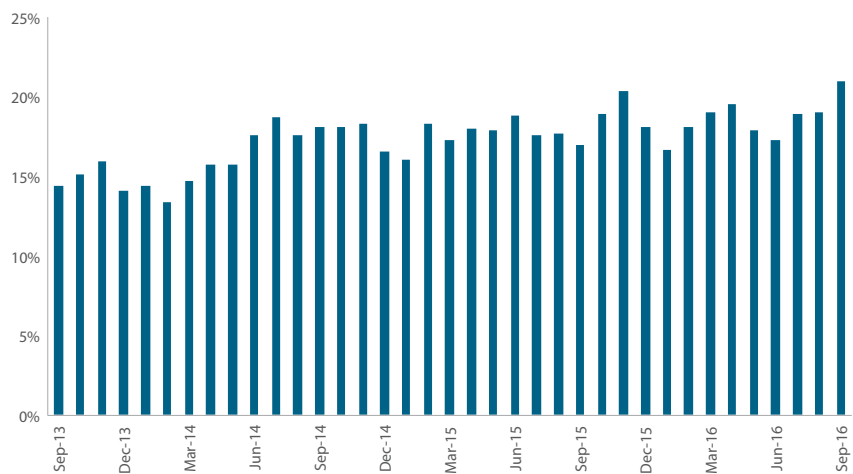


FIGURE 2:
Participant Aggressive
Flow Breakdown

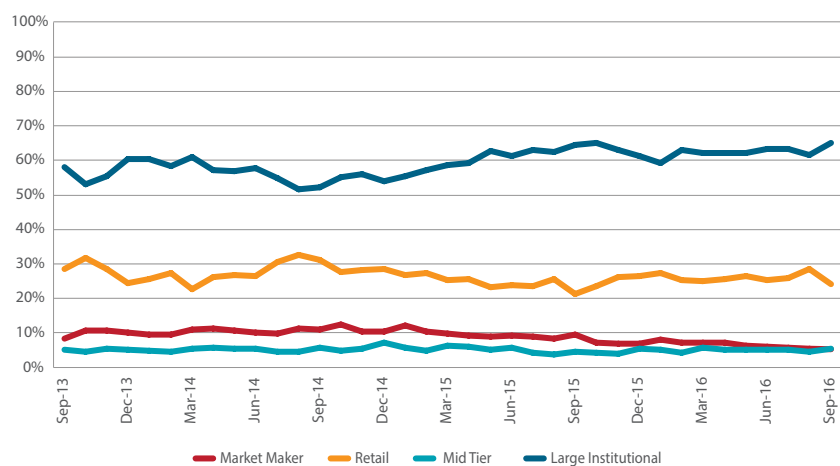
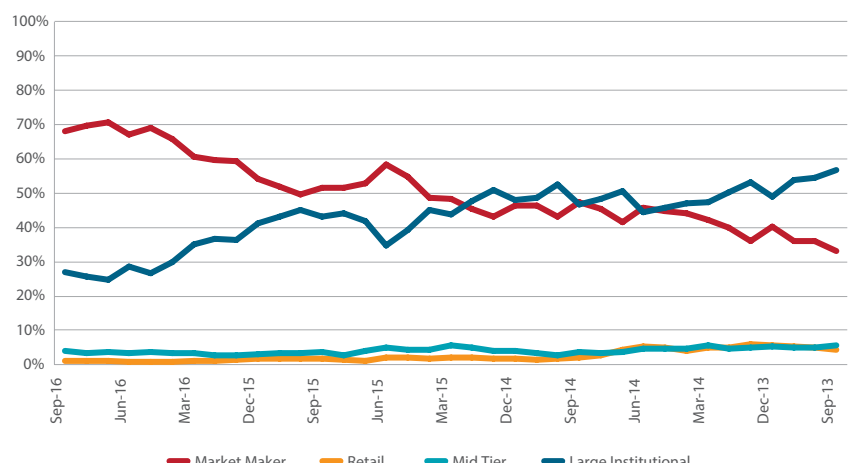


FIGURE 3:
Participant Passive Flow
Breakdown



PRIMARY MARKET ACTIVITY

New capital raisings for cash (A\$ m)

	Floats	Secondary raisings*	Total Cash Equity Raisings
2013-14	27,659	33,378	61,037
2014-15	38,917	38,785	77,702
2015-16	23,585	45,298	68,882
% change	-39.4%	16.8%	-11.4%

* Includes rights issues, placements, calls, options, employee share plans, DRPs and Share Purchase plans

Companies listed on ASX at 30 June 2016

	No. of Companies with Quoted Securities	Market Capitalisation of all Listed Equities	Domestic Companies with Quoted Equities	Market Capitalisation with Listed Domestic Equities	Market Value of Average Domestic Company
2013-14	1,991	1,633,536	1,891	1,551,594	821
2014-15	2,016	1,698,709	1,906	1,611,911	846
2015-16	2,014	1,729,523	1,894	1,619,670	855
% change	-0.1%	1.8%	-0.6%	0.5%	1.1%

SECONDARY MARKET ACTIVITY

Equity trading on ASX

	Annual value (A\$m)	Trades ('000)	Average daily trades	Average daily value (A\$ m)
2013-14	1,008,897	181,861	718,817	3,988
2014-15	1,112,449	190,647	750,578	4,380
2015-16	1,204,149	235,923	928,829	4,741
% change	8.2%	23.7%	23.7%	8.2%

Equity trading on Chi-X

	Annual value (A\$m)	Trades ('000)	Average daily trades	Average daily value (A\$m)
2013-14	178,818	42,857	169,394	707
2014-15	234,906	53,269	209,734	926
2015-16	259,875	67,832	266,862	956
% change	10.6%	27.3%	27.2%	3.2%

Turnover as % of average market cap (A\$ b)

	Equity turnover	Average Domestic Market Cap	% Liquidity
2013-14	1,188	1,517	78
2014-15	1,348	1,632	83
2015-16	1,464	1,592	92
% change	8.6%	-2.5%	11.4%

EQUITY DERIVATIVES

Turnover by Contract Volume ('000)

	ASX Trade	ASX Trade 24	
	Total Contracts*	SPI 200® Futures	SPI 200® Options
2013-14	124,592	9,715	473
2014-15	120,504	10,301	454
2015-16	101,469	12,078	363
% change	-15.8%	17.2%	-20.0%

* Includes Stock Options, Cash Index Options and LEPOs

Turnover by Notional Value (A\$ b)

	ASX Trade			ASX Trade 24	
	Equity Options	Cash Index Options *	Equity LEPOs	SPI 200® Futures	SPI 200® Options
2013-14	273.5	409.7	13.8	1,280	62
2014-15	267.9	590.6	6.3	1,396	62
2015-16	197.1	649.5	5.6	1,549	46
% change	-26.4%	10.0%	-11.5%	11.0%	-25.3%

* Includes Cash Index LEPOs

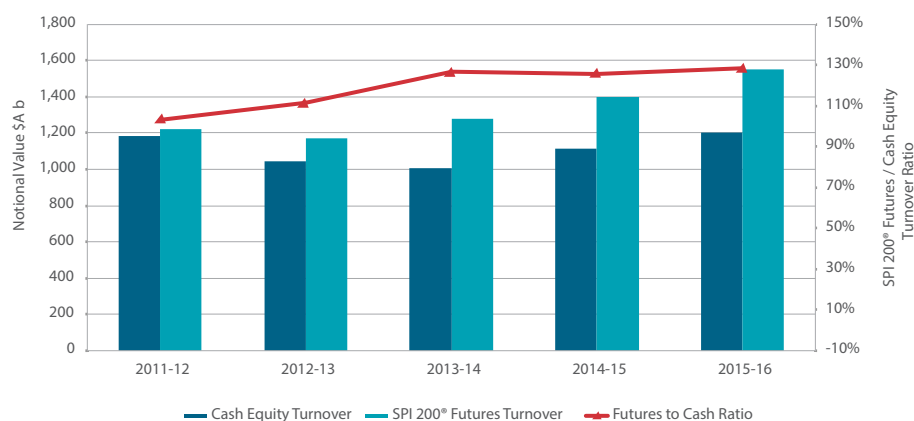
Warrants: No. on Issue, Turnover by Number of Trades and Contract Value

	No. on Issue	Trades ('000)	Contract Value (A\$ m)
2013-14	3,564	360	3,900
2014-15	3,050	318	2,651
2015-16	3,131	329	2,365
% change	2.7%	3.5%	-10.8%

Data from previous years has been reviewed and some figures have been adjusted.

Cash Equity Turnover has increased as has SPI 200 notional value turnover

SPI 200® Futures to Cash Equity Turnover



INTEREST RATE AND ENERGY DERIVATIVES

ASX Trade 24

Turnover by Contract Volume ('000 contracts)

	30 Day (IB)	90 Day Bills (IR)	NZD 90 Day Bills (BB)	3 Year Bonds (YT, YS, YO, YD)	10 Year Bonds (XT, XS)	20 Year Bonds (XX)*	Electricity**	Grain	Other ***	Total Exchange
Futures										
2013-14	3,517	25,903	1,157	47,886	25,520	-	165	181	9,734	114,063
2014-15	3,678	28,706	1,394	49,717	29,498	-	225	135	10,408	123,761
2015-16	4,112	29,567	1,915	50,105	36,079	423	257	132	12,242	134,832
% change	11.8%	3.0%	37.4%	0.8%	22.3%	n/a	14.4%	-2.4%	17.6%	8.9%
Options										
2013-14	0	4	0	3,466	25		19	2	473	3,990
2014-15	0	0	0	2,067	25		27	7	454	2,581
2015-16	0	4	0	1,595	5		23	2	363	1,991
% change	n/a	n/a	n/a	-22.8%	-80.9%	n/a	-14.8%	-71.6%	-20.1%	-22.8%

Turnover by Contract Value (A\$ b)

	30 Day (IB)	90 Day Bills (IR)	NZD 90 Day Bills (BB)	3 Year Bonds (YT, YS)	10 Year Bonds (XT, XS)	20 Year Bonds (XX)*	Electricity**	Grain	Other ***	Total Exchange
Futures										
2013-14	10,551	25,904	1,157	4,789	2,552	-	16.8	1.0	1,282	46,252
2014-15	11,035	28,706	1,394	4,972	2,950	-	20.9	0.8	1,428	50,507
2015-16	12,337	29,567	1,915	5,010	3,608	21	20.5	0.7	1,555	54,034
% change	11.8%	3.0%	37.4%	0.8%	22.3%		-1.8%	-6.0%	8.9%	7.0%
Options										
2013-14	0	4	0	347	3		6.0	0.01	62	421
2014-15	0	0	0	207	2		3.8	0.04	62	275
2015-16	0	4	0	160	0.47		4.7	0.01	46	215
% change	-	-	-	-22.8%	-80.9%		23.1%	-71.0%	-25.3%	-22.0%

Futures and Options Open Interest (at 30 June 2016)

	30 Day (IB)	90 Day Bills (IR)	NZD 90 Day Bills (BB)	3 Year Bonds (YT, YS)	10 Year Bonds (XT, XS)	20 Year Bonds (XX)*	Electricity**	Grain	Other ***	Total Exchange
2013-14	170,400	935,972	67,595	731,156	601,216		57,553	19,418	314,841	2,898,151
2014-15	176,989	840,466	124,999	600,793	652,186		58,641	11,337	321,083	2,786,494
2015-16	207,041	887,062	135,998	766,702	844,450	18,705	72,894	9,373	358,049	3,300,274
% change	17.0%	5.5%	8.8%	27.6%	29.5%	n/a	24.3%	-17.3%	11.5%	18.4%

* introduced September 2015

** Includes NZ Energy securities

*** includes VIX and sector futures, ASX SPI 200, mini-ASX SPI 200, NZD denominated interest rate securities

Data from previous years has been reviewed and some figures have been adjusted.

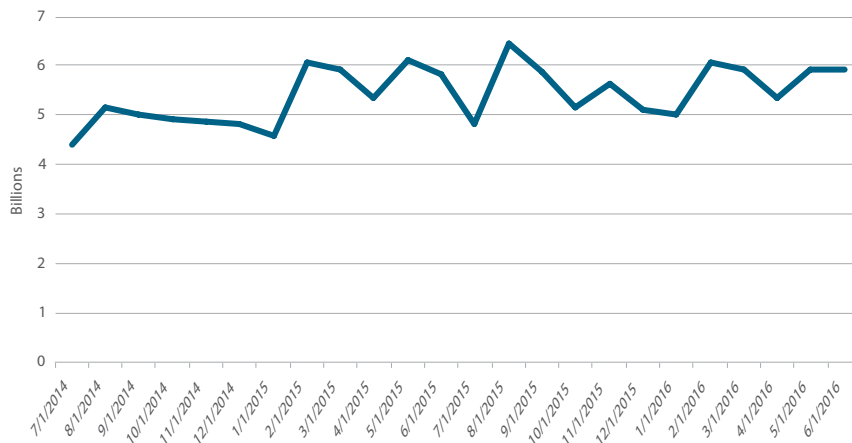
BONDS AND HYBRIDS

	Number	Market cap (A\$ b)	Value (A\$ m)	Volume	Total trades (#)
Australian Government Bonds (AGBs)					
2013-14	26	\$347.8	\$53.8	481,172	1,173
2014-15	28	\$403.8	\$65.8	602,533	1,335
2015-16	29	\$469.8	\$134.0	1,215,776	2,170
% change	3.6%	16.3%	103.5%	101.8%	62.5%
Corporate Bonds - Fixed Rate					
2013-14	4	\$0.3	\$39.8	382,501	1,612
2014-15	2	\$0.4	\$45.9	431,926	1,264
2015-16	5	\$0.6	\$44.1	419,733	1,159
% change	150.0%	51.0%	-4.0%	-2.8%	-8.3%
Corporate Bonds - Floating Rate (FRNs)					
2013-14	24	\$14.6	\$3,020.5	30,478,678	114,246
2014-15	23	\$14.5	\$2,819.9	28,212,016	111,440
2015-16	8	\$6.2	\$1,994.0	20,326,752	78,671
% change	-65.2%	-57.3%	-29.3%	-28.0%	-29.4%
Preference shares					
2013-14	34	\$26.3	\$5,264.1	52,175,470	209,994
2014-15	38	\$28.6	\$6,629.1	61,342,954	249,701
2015-16	40	\$29.6	\$5,275.9	58,911,834	272,134
% change	5.3%	3.5%	-20.4%	-4.0%	9.0%
Convertible notes					
2013-14	14	\$1.8	\$377.4	43,865,423	16,535
2014-15	14	\$1.3	\$313.0	19,574,732	12,905
2015-16	11	\$1.1	\$139.9	5,441,797	8,989
% change	-21.4%	-28.9%	-17.1%	-55.4%	-22.0%

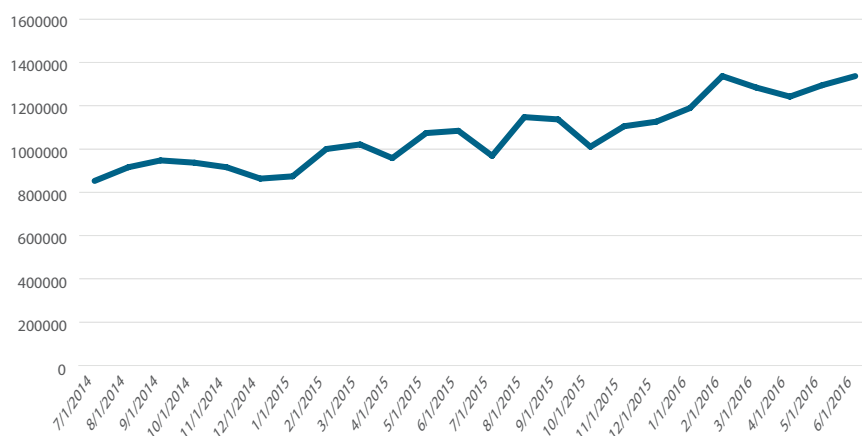
Number and Market Cap are as at 30 June. Value, volume and number of trades are the totals for the financial year.

EXCHANGE-TRADED MARKET TRENDS

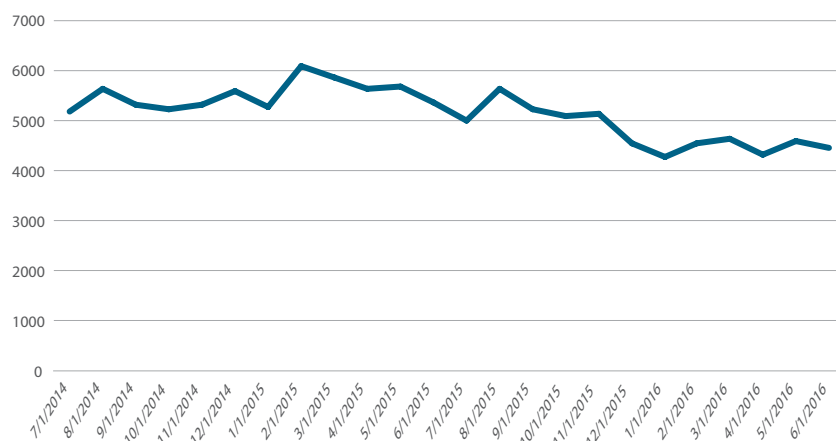
Value traded (\$), daily average, ASX & Chi-X



Number of trades, daily average, ASX & Chi-X



Average trade size (\$), ASX & Chi-X



Source: ASIC

Foreign Exchange Market

Ray Attrill, Global Co-Head of Foreign Exchange Strategy, National Australia Bank

2015-16 marked the end of a roller-coaster ride for the Australian dollar that had commenced back in 2006 near the peak of the China-driven global commodity price boom. AUD-USD started the financial year near 0.77 and finished it just below 0.75, encompassing a range of barely 10 cents (0.6828 to 0.7835) versus the 20 cent range in 2014-2015. Daily volatility also declined if only a little, with an average intra-day range of 88 pips versus the prior year's 90 pips. In trade-weighted terms, the AUD was also little changed over the year, the RBA's TWI starting at 63.8 and ending at 62.5, a fall of 2%.

The peaks and troughs in the AUD coincided with extremes in global market volatility-risk appetite, confirming that the Australian currency continues to be one that performs well when risk sentiment is in the ascendancy and suffers during periodic bouts of 'risk-off'. Thus the two (brief) periods that AUD-USD spent below 70 cents – in September 2015 and again in January 2016 – coincided with the year's extremes in global risk aversion and as proxied by the S&P 500 volatility index (VIX).

The proximate cause of these volatility spikes was the same on both occasions, namely relatively sharp moves lower in the Chinese Yuan and which instilled fears that the Chinese authorities might be about to countenance a more significant devaluation of its currency. The Australian dollar continued to be characterised as a proxy-hedge against broader depreciation pressures in Asian Emerging Market currencies, a feature seen to derive from the close trade links between China and Australia and the superior liquidity available in the AUD. In both cases, these fears proved unfounded, risk sentiment subsequently recovering and with that the AUD.

A common denominator underpinning these recoveries in risk sentiment and the AUD was that expectations for tightening in monetary policy from the US Federal Reserve were significantly scaled back. In July 2015 just before the weakening in the Yuan and the global stock market sell-off, markets were pricing in some 50 basis points of Fed tightening before the end of 2015 and just before the second bout of Yuan-led global volatility at the start of 2016, another 50 basis points in 2016. These expectations were subsequently revised dramatically lower, taking the US dollar down in their wake.

Also relevant to the AUD's fortunes was the cut to the RBA's Cash Rate in May (to 1.75%) and expectations for a cut to 1.5% later in the year – subsequently borne out. It was the much weaker than expected Australian March quarter inflation

outcome published in late April that was the catalyst for the shift in RBA policy expectations and from which the move down in the AUD-USD from above 0.77 to below 0.72 by late May can be dated. A contribution to the modest overall decline in the AUD during the year also came from an ongoing weakening in Australia's terms of trade which fell by a little over 5% and encompassing a fall in the spot price of iron ore by around 9%.

There were only a couple of double-digit cross-rate movements for the AUD against major currencies, namely AUD-JPY (-22.8%), AUD-GBP (+12.4%). The Japanese Yen reversed more than half of its 2012-2015 appreciation in moves that began after the Bank of Japan took policy rates into negative territory in January – triggering a sharp decline in the fortunes of financial sector stocks and driving significant underperformance by broader Japanese equity indices. The British Pound undertook its sharpest ever one day decline in late June in the immediate wake of the 'Brexit' referendum outcome.

The 2016 BIS Triennial Central Bank Survey of Foreign Exchange and OTC Derivatives Markets published at the start of September revealed a decline in the value of global daily foreign exchange turnover – from \$5.4 trillion in 2013 to \$5.1 trillion. When adjusted for US dollar valuation effects, this translated into a 4% rise in volumes. Daily average turnover in AUD, measured in USD terms and across spot, forwards, swaps and options, declined by 27% to \$266bn. from \$364bn. Yet since the AUD declined by a similar magnitude between the two (April) survey periods, the fall can be entirely attributed to AUD valuation effects. The 2013 BIS survey was snapped when the AUD TWI was close to its cyclical peak, and fell by some 20% between the two survey periods (and AUD-USD by 27%). This will also have been the cause of much (or all) of the decline in Australia's reported share of global foreign exchange volumes in the BIS survey, from 2.7% in 2013 to 2.1%.

The BIS reported a decline in foreign exchange turnover by the hedge fund

sector and other proprietary traders, who accounted for only 8% of global turnover in 2016 down from 11% in 2013. While this will likely have included some reduction in 'speculative' turnover in the AUD, an opposite effect is likely to have come from the Australian funds management industry, whose assets under management rose by about 25% between 2013 and 2016 to over A\$2.6tn. – at least 20% of which are estimated to be invested offshore.

The RBA's own data on foreign exchange within Australia reveals a 6% rise in the past year (and little overall change

in the past three years) driven by a 7.4% increase in turnover in the spot AUD market and 20.5% rise in non-AUD forwards. The rise in AUD spot volumes relative to AUD forwards (the latter down by 7.8%) appears to reflect shifts in behaviour by Australian exporters and importers. Exporters, frustrated by the failure of the AUD to sustain the falls seen in September 2015 and January 2016 – against prevailing consensus market expectations – look to have increased their use of 'just in time' spot market transactions to convert foreign currency receivables. The reduction in

the AUD-USD forward discount due to diverging RBA-Fed monetary policy trends also slightly reduced incentives for exporter forward hedging.

Importers meanwhile, many of whom responded to the sharp fall in the AUD between September 2014 and early 2015 by increasing the average tenor of their forward hedges (fearful of still steeper declines) accordingly had less need to undertake additional forward hedges in 2015-2016. ■

Foreign Exchange Turnover in Australia^a (AUD\$ billion)

Transactions by foreign exchange dealers with:	Financial institutions local	Financial institutions overseas	Non-financial institutions	Total
AUD Spot Foreign Exchange				
2002-03	1532	1542	657	3731
2003-04	1849	2324	908	5080
2004-05	1318	2077	875	4270
2005-06	1283	2492	1148	4923
2006-07	1271	2830	1248	5350
2007-08	1309	2960	1454	5724
2008-09	1399	2918	1460	5776
2009-10	1025	2881	1311	5217
2010-11	855	2833	1208	4896
2011-12	778	2941	1229	4949
2012-13	774	2687	851	4312
2013-14	828	2907	463	4198
2014-15	556	2654	477	3688
2015-16	608	2925	428	3961
% change	9.3	10.2	-10.3	7.4
Non-AUD Spot Foreign Exchange				
2002-03	1398	3147	303	4848
2003-04	1619	4033	401	6053
2004-05	1066	4038	313	5417
2005-06	1077	5584	422	7083
2006-07	1016	5876	365	7257
2007-08	982	7693	587	9262
2008-09	931	8119	709	9759
2009-10	765	7753	945	9463
2010-11	880	5651	425	6957
2011-12	804	4891	199	5895
2012-13	853	5715	192	6759
2013-14	944	5787	179	6910
2014-15	672	7149	273	8095
2015-16	750	7002	218	7970
% change	11.6	-2.1	-20.1	-1.5

cont...

Transactions by foreign exchange dealers with:	Financial institutions local	Financial institutions overseas	Non-financial institutions	Total
AUD Forward Foreign Exchange				
2002-03	241	253	507	1001
2003-04	242	420	539	1201
2004-05	334	472	397	1203
2005-06	468	728	466	1662
2006-07	580	946	491	2017
2007-08	501	517	348	1366
2008-09	543	565	295	1402
2009-10	459	466	246	1172
2010-11	498	520	310	1328
2011-12	523	501	410	1434
2012-13	605	468	509	1581
2013-14	841	548	503	1892
2014-15	1010	480	621	2110
2015-16	904	456	586	1946
% change	-10.5	-5.0	-5.6	-7.8
Non-AUD Forward Foreign Exchange				
2002-03	126	305	419	850
2003-04	126	348	265	739
2004-05	77	616	99	792
2005-06	102	1066	130	1298
2006-07	157	1495	129	1781
2007-08	165	1287	76	1528
2008-09	153	909	53	1115
2009-10	135	521	43	700
2010-11	171	694	81	946
2011-12	173	551	84	808
2012-13	171	635	127	932
2013-14	173	566	126	865
2014-15	192	659	124	975
2015-16	138	934	103	1175
% change	-28.2	41.7	-16.9	20.5
AUD Swap Foreign Exchange				
2002-03	3920	4495	763	9177
2003-04	4083	5961	844	10888
2004-05	4063	6268	1039	11370
2005-06	4757	7087	1195	13039
2006-07	5845	8287	1208	15340
2007-08	5894	8307	704	14906
2008-09	4961	7059	601	12621
2009-10	3912	8399	431	12742
2010-11	3878	11928	574	16380
2011-12	4149	10012	827	14988
2012-13	3418	10611	728	14757
2013-14	4690	10849	402	15941
2014-15	4098	9086	361	13545
2015-16	3797	9206	333	13336
% change	-7.4	1.3	-7.7	-1.5

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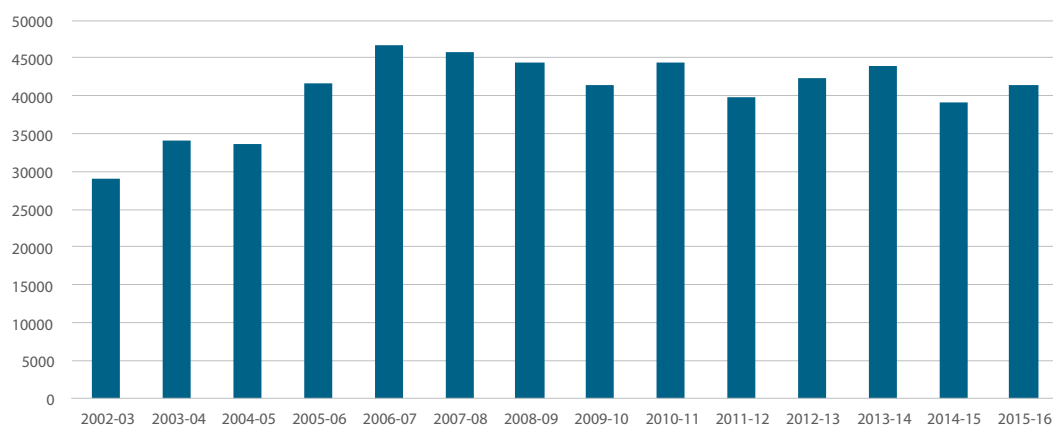
FOREIGN EXCHANGE MARKET

Transactions by foreign exchange dealers with:	Financial institutions local	Financial institutions overseas	Non-financial institutions	Total
Non-AUD Swap Foreign Exchange				
2002-03	2621	6451	254	9326
2003-04	2598	7118	387	10103
2004-05	2240	7890	436	10566
2005-06	3134	9923	627	13684
2006-07	3766	10482	697	14945
2007-08	3582	9143	326	13052
2008-09	3660	9555	414	13629
2009-10	2872	8901	369	12142
2010-11	2725	10864	422	14011
2011-12	1465	9811	573	11850
2012-13	1599	11607	855	14061
2013-14	1787	11847	406	14040
2014-15	1495	8957	224	10676
2015-16	1584	11260	205	13048
% change	6.0	25.7	-8.4	22.2
Total Foreign Exchange Spot, Forward and Swap Turnover				
2002-03	9837	16192	2903	28933
2003-04	10517	20203	3344	34064
2004-05	9097	21361	3159	33618
2005-06	10821	26880	3989	41689
2006-07	12636	29917	4137	46690
2007-08	12433	29908	3496	45837
2008-09	11647	29125	3532	44303
2009-10	9169	28922	3345	41436
2010-11	9007	32491	3019	44517
2011-12	7893	28708	3322	39923
2012-13	7419	31721	3262	42403
2013-14	9262	32505	2079	43847
2014-15	8023	28986	2080	39089
2015-16	7780	31782	1874	41436
% change	-3.0	9.6	-9.9	6.0

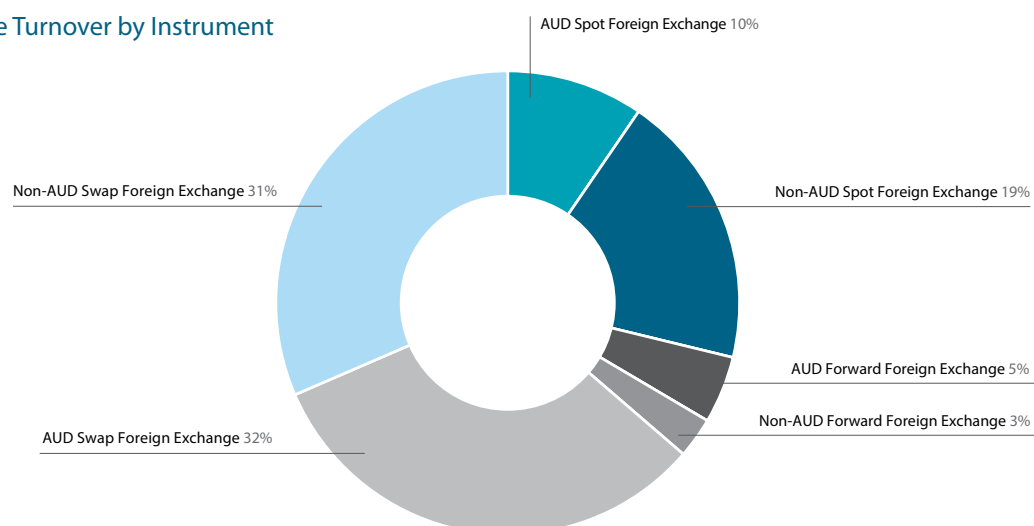
^a The Reserve Bank of Australia reduced the frequency of its survey data collection from monthly to quarterly in January 2013. As such, the 2012-13 total is based on reported monthly data for July-December 2012 and January and April 2013, with estimates used for the remaining months (February, March, May and June 2013). These estimates are based on historical seasonal patterns in the reported monthly data. Data for the 2013-14 financial year and onwards represents monthly data collected on a quarterly basis (for January, April, July and October) and annualised.

Source: RBA

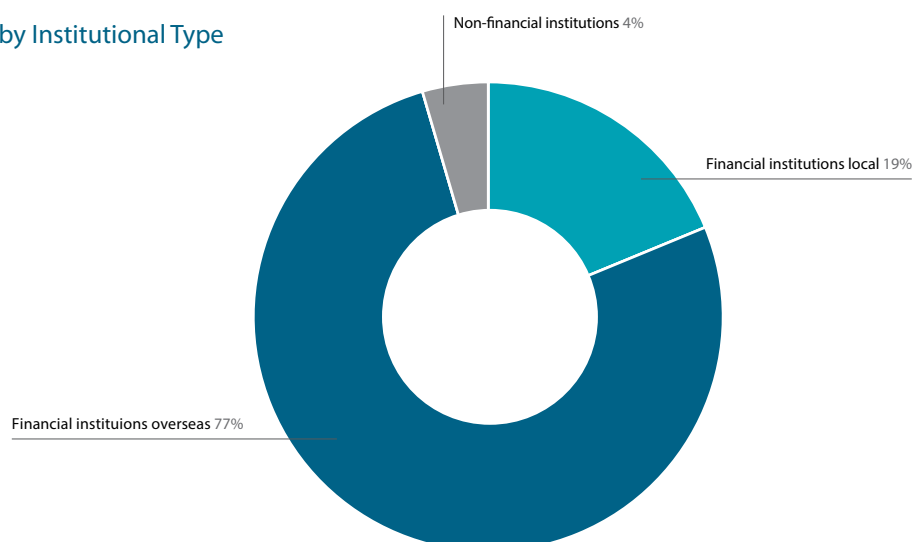
Foreign Exchange Turnover in Australia (AUD billion)



Foreign Exchange Turnover by Instrument



Foreign Exchange Turnover by Institutional Type



Fixed Income

Martin Whetton, Senior AUD Rates Strategist, ANZ

The Australian rates market has concluded the 2015-16 financial year with the sixth consecutive record low in the RBA's policy rate. The policy rate was cut to 1.75% in May (and has subsequently fallen to 1.5% in August) as Australia's inflation rate remained below the RBA's target band. The move lower in policy rates and the expansion of central bank balance sheets from Japan and Europe drove a contemporaneous shift lower in market rates for bonds and swaps. These instruments also achieved record low yields, providing a windfall for retail and corporate borrowers, the sovereign issuance arm the AOFM as well as fixed income investors.

The shift lower in yields followed a pattern repeated over recent years, both in Australian and other major global markets. Despite falls in unemployment, low inflation and modest growth have combined with demographic needs for 'safe' asset classes and have pulled yields lower and curves flatter. This past year, together with the expansionary policies of the European Central Bank (ECB) and Bank of Japan (BoJ), yields have plumbed new lows. The zero lower bound for cash rates and bond yields evaporated as new policies were adopted. Indeed between May and June 2016 as some central banks adopted negative cash rates, yields fell below 0% in around 45% of the developed market bond curves, accounting for as much as USD13.4 trillion of sovereign debt.

In Australia, rates markets saw a number of shifts in rate cut expectations. In late 2015, rate cut expectations dropped to as little as 12bp of cuts priced for the year ahead as the unemployment

The same cannot be said of the BBSW market which reflects the true cost of funding (rather than just expectations of monetary policy). A rise in funding costs across the banking system due to the implementation of regulatory requirements and reforms in the US money market has manifested itself in a wider BBSW/OIS spread. The need for banks to issue longer dated bills for funding drove a steeper money market funding curve and represents the structural shift in the regulatory landscape which bifurcates market and funding rates.

In debt issuance, the AOFM's borrowing task rose in line with the ongoing budget deficit. A revised program saw AUD90.5bn of ACGB debt issued, AUD86bn of which came in nominal debt. The AOFM issued a June 2039 bond as an extension of the nominal curve and an August 2040 index linked bond. Interestingly, the 2039 bond was the first bond issued by the AOFM that came at a spread above swap.

THE AUSTRALIAN RATES MARKET HAS CONCLUDED THE 2015-16 FINANCIAL YEAR WITH THE SIXTH CONSECUTIVE RECORD LOW IN THE RBA'S POLICY RATE.

rate fell and positions were trimmed. Moreover, the anticipation of the first rate hike from the Fed in almost a decade brought about an unwinding of carry trades in the front end of the market. This all changed as a low inflation print in April 2016 saw the market push expectations towards 50bp of cuts (which were later delivered). While levels of cuts priced into the market have oscillated over the last year and indeed last few years, pricing has been consistent in expecting some sort of cut.

The shift in swap spreads became a significant market issue in late 2015 as the ACGB curve shifted above the swap curve down to the 10 year maturity. While this nominally suggests that bank credit is better than sovereign credit, the reality is that the ability of banks to warehouse inventory has been sharply reduced in the wake of global banking reforms. Combined with a shift in derivative products to be 'on exchange' rather than bilateral agreements, sovereigns are now seeing their debt issued above the level of swaps for longer maturities.

Semi government borrowers faced a different problem. The strong housing markets on the east coast and the sale or privatisation of state owned assets allowed state governments to reduce their borrowings as revenue surged. Semis remain an asset class that are deemed as a High Quality Liquid Asset (HQLA) and are therefore held by bank balance sheets for their liquidity. A reduced program of Semi issuance saw a strong contraction

of Semi spreads to the government curve given the supply/demand dynamics. Other investors also shifted their preferences away from ACGBs towards Semis and SSA debt and the foreign holdings of ACGBs (while rising in absolute terms) fell as a percentage of debt outstanding. A weaker AUD and a peaking in global foreign exchange reserves by central banks is also part of this story.

For borrowers, the 2015-16 financial year offered many opportunities to secure

funding. With domestic policy rates at historic lows, swap rates also fell and the yield curve flattened sharply. Investor demand for credit bonds brought about record issuance and spreads tightened notably. For borrowers issuing debt in the EUR or USD market, the multi-year lows in the cross currency basis market allowed for the cheapest access in those currencies since 2011. ■

Government and Non-Government Debt Securities, NTI, Repo and Collateral Turnover (\$b)

	2014 - 2015	2015 - 2016	% change
CGS - Outright	5,588	7,325	31.1
CGS - Fixed/Floating	5,360	7,067	31.8
CGS - Index Linked	228	257	12.8
Semi-Government - Outright	1,475	1,805	22.4
Foreign Government - Outright	190	164	-13.8
Government Total Outright	7,253	9,293	28.1
Bank Debt	1,233	1,125	-8.8
Corporate Debt	711	604	-15.1
Non-Government Debt	1,944	1,729	-11.1
NTI	1,349	1,293	-4.1
RBA Repo	1,727	1,617	-6.4
Market Repo	1,305	1,217	-6.8
Collateral	297	457	54.1
Total Repo/Collateral	3,329	3,291	-1.1
Physical Market	13,875	15,606	12.5

Source: Austraclear

Reconciliation of 2014-15 Turnover Data (\$b)

	AFMA 2014-15 Survey	Austraclear 2014 - 2015	% difference
CGS - Outright	1,094	5,588	410.9
Semi-Government - Outright	419	1,475	252.0
Foreign Government - Outright	317	190	-40.1
Government Total Outright	1,830	7,253	296.3
Bank Debt - Outright	277	1,233	345.5
Corporate Debt - Outright	511	711	39.2
Non-Government Debt	788	1,944	146.8
NTI	2,768	1,349	
RBA Repo		1,727	
Market Repo		1,305	
Collateral		297	
Total repo/collateral	8,124	3,329	-59.0
Physical Market	13,510	13,875	2.7

Source: AFMA and Austraclear

Interest Rate Derivatives

OTC Interest Rate Derivatives Turnover ^{(a)(b)} – daily average turnover (US\$ billion)

	April 2001	April 2004	April 2007	April 2010	April 2013	April 2016
Forward rate agreements	5.5	5.6	3.6	6.7	18.2	4.8
Swaps	4.0	6.7	17.8	33.6	46.7	43.5
Options	0.3	0.5	1.3	0.3	1.3	0.9
Total	9.8	12.8	22.7	40.6	66.2	49.3

(a) Adjusted for local inter-dealer double counting

(b) Totals may not sum due to rounding

Source: RBA

OTC Interest Rate Derivatives Turnover by Counterparty ^{(a)(b)} – daily average turnover (US\$ billion)

By type of transaction	April 2001	April 2004	April 2007	April 2010	April 2013	April 2016	% change 2013-16
Forward Rate Agreements	5.5	5.6	3.6	6.7	18.2	4.8	-73.6
Financial institutions - local	2.9	2.4	1.4	1.8	4.0	0.9	-77.5
Financial institutions - overseas	1.8	3.1	1.9	3.5	14.1	4.0	-71.6
Non-financial institutions	0.8	0.2	0.4	1.4	0.1	*	
Swaps	4.0	6.7	17.8	33.6	46.7	43.5	-6.9
Financial institutions - local	1.5	1.8	2.9	8.2	13.5	11.1	-17.8
Financial institutions - overseas	2.2	4.2	13.6	22.9	29.9	31.1	4.0
Non-financial institutions	0.3	0.8	1.3	2.5	3.3	1.3	-60.6
Options	0.3	0.5	1.3	0.3	1.3	0.9	-30.8
Financial institutions - local	0.1	0.1	0.1	*	*	0.3	
Financial institutions - overseas	0.1	0.4	0.1	0.3	1.1	0.5	-54.5
Non-financial institutions	*	*	1.2	*	0.1	*	
Total	9.8	12.8	22.7	40.6	66.2	49.3	-25.5
Financial institutions - local	4.5	4.3	4.3	10.1	17.5	12.2	-30.3
Financial institutions - overseas	4.1	7.7	15.6	26.7	45.2	35.7	-21.0
Non-financial institutions	1.1	1.0	2.8	3.9	3.5	1.4	-60.0

*Indicates less than US\$50 million

(a) Adjusted for local inter-dealer double counting

(b) Totals may not sum due to rounding

Source: RBA

OTC Interest Rate Derivatives Turnover^{(a)(b)} – daily average turnover (US\$ billion)

	April 2001	April 2004	April 2007	April 2010	April 2013	April 2016
AUD	7.7	10.7	15.3	33.6	54.7	39.3
USD	1.2	1.1	0.8	3.3	8.7	6.5
EUR	0.3	*	0.1	0.2	0.4	0.1
GBP	0.1	*	*	0.1	0.1	*
JPY	0.3	0.2	0.5	0.6	*	0.1
Other	0.3	0.7	6.1	2.8	2.2	3.3
Total	9.8	12.8	22.7	40.6	66.2	49.3

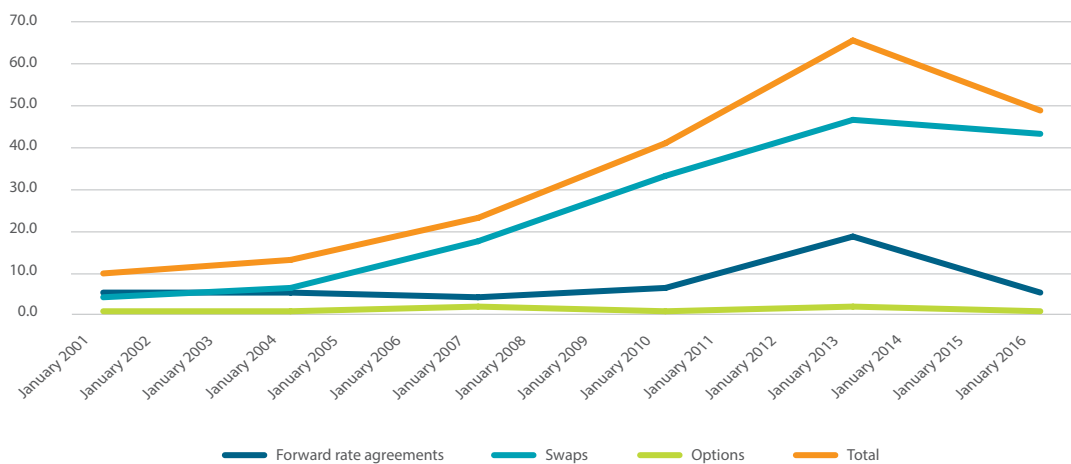
*Indicates less than US\$50 million

(a) Adjusted for local inter-dealer double counting

(b) Totals may not sum due to rounding

Source: RBA

OTC Interest Rate Derivatives Turnover – Daily Average Turnover (US\$ billion)



All OTC Open Positions by Asset Class (as at 3 July 2015)

Asset Class	Gross Notional (AUD)	Contracts
Commodity	0	26,514
Credit	187,182,901,849	9,768
Equity	74,119,417,372	31,295
Foreign Exchange	4,946,937,995,305	332,484
Interest rate	24,387,249,247,953	278,131
Grand Total	29,595,489,562,478	678,192

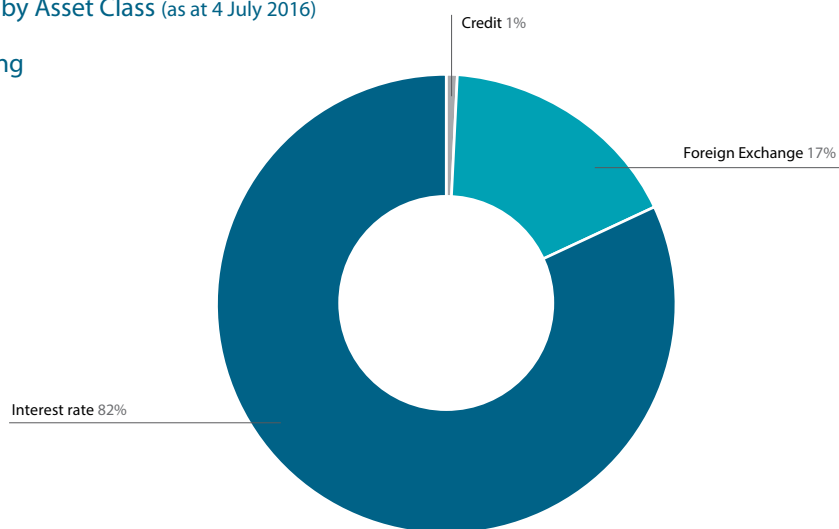
(as at 4 July 2016)

Asset Class	Gross Notional (AUD)	Contracts	% change in gross notional
Commodity	0	407,067	
Credit	378,322,102,962	19,142	102.1
Equity	212,705,719,364	165,068	187.0
Foreign Exchange	8,239,442,060,490	745,696	66.6
Interest rate	40,076,750,547,335	344,887	64.3
Grand Total	48,907,220,430,151	1,681,860	65.3

Source: DTCC

All OTC Derivatives Open Positions by Asset Class (as at 4 July 2016)

% of gross notional AUD outstanding



Source: DTCC

Significant growth

SwapClear, part of the global multi-asset clearing house LCH, continues to be a leader in the cleared market in interest rate derivatives (IRD) in Australia, clearing 90% of all cleared Australian dollar IRDs in the first half of 2016. Of the entire AUD IRD market (i.e. cleared and non-cleared) currently outstanding, SwapClear cleared 87% of this total¹.

In 2016, SwapClear has seen record growth in cleared AUD-denominated IRS, with 66 members and 115 clients clearing AUD. The average monthly cleared notional in H1 2016 rose to AUD \$3.17 trillion (12,892 trades per month): an increase of 334% (compared to the monthly notional cleared average of 2015).

Service expansion

In January 2016, responding to market demand, SwapClear expanded the range of AUD-denominated interest rate derivatives available for clearing by adding AUD-denominated Overnight Index Swaps (OIS). Since launch, SwapClear has cleared over AUD \$12.1 trillion in AUD OIS with AUD \$3.7 trillion of AUD OIS cleared in May alone. As well as OIS, SwapClear saw additional AUD growth as the market switched to trading AUD SPS (Single Period Swaps) as a cleared alternative to

FRAs. SPS now account for around 16% of cleared AUD monthly volume, up from 5% in 2015.

Between July 2015 and June 2016, over A\$7.7 trillion in notional and over 93,000 AUD IRS trades were compressed through the SwapClear and TriReduce compression services. This represents a significant capital saving for clearing members, as well as substantial operational efficiencies.

Additionally, SwapClear successfully supported its members and an increasing number of local clients in preparing for the IRD clearing mandate, which came into force in Australia in April 2016. The mandate captures certain IRS in the G4 and AUD currencies. SwapClear saw sharp increases in activity in the run-up to and following the deadline, with the total notional amount of AUD IRS cleared volumes during May topping AUD \$4.2 trillion. Take up of SwapClear's innovative proprietary compression services, alongside of those in partnership with TriOptima, remains strong. In H1 2016, SwapClear compressed a total of US\$180 trillion and AUD \$5.3 trillion in AUD-denominated IRS notional, in a period that saw an additional US\$346 trillion of gross notional cleared.

LCH's commitment to service improvements and expansion in Australia and the Asia-Pacific region has continued to set precedents. In April 2016, LCH

added Austraclear as another collateral location, for clearing members wanting to post Australian securities as collateral. We have also boosted our operational presence in the region with senior hires in Sydney and Tokyo.

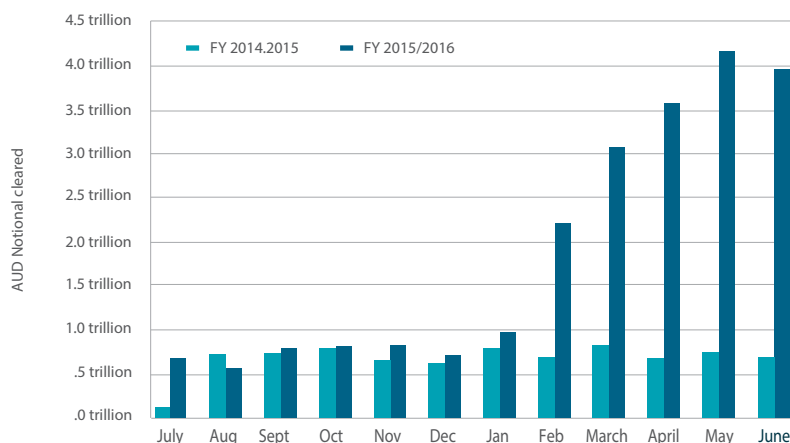
Regional licences

In April 2016, LCH became the first overseas clearing house that the Japanese Financial Services Agency granted a licence to clear non-Yen OTC interest rate derivatives for Japanese banks. The new licence will bring further integration of the global Interest Rate Swap market into Japan. Additionally this year, LCH received Recognised Clearing House status by the Monetary Authority of Singapore, which applies to CommodityClear (Freight Division), ForexClear and SwapClear services. The Hong Kong Securities and Futures Commission also granted LCH designated CCP status for SwapClear and authorisations as an Automated Trading Services provider for SwapClear and ForexClear. These three licences complement LCH's existing licences in Australia and around the world. ■

¹ Total AUD IRS Outstanding Notional, AUD \$23.05 trillion (from DTCC Global Trade Repository).

FIGURE 1: Financial Year 2014/2015 vs FY 2015/2016 monthly cleared AUD notional at SwapClear

- AUD 20.5 trillion in cleared notional outstanding (as of 30 June 2016)
- Largest day – 1,788 AUD IRS trades cleared on 29 June 2016
- Over 77,000 AUD IRS trades cleared in H1 2016
- AUD \$5.3 trillion in notional compressed in H1 2016



INTEREST RATE DERIVATIVES

Interest Rate Derivatives Annual Turnover by Product (AUD million)

	Bank	Asset Manager	Investment Manager	Hedge Fund	Insurance	Pensions	Corporate	Healthcare	Total
Fixed / Floating Swaps – AUD									
2014-15	5,829,835	192,185	0	1,596,654	0	0	0	0	7,618,674
2015-16	8,516,154	392,108	845	1,397,118	261	300	100	0	10,306,886
% change	46.1	104.0		-12.5					35.3
Tenor Basis Swaps – AUD									
2014-15	741,308	5,759	0	27,091	0	0	0	0	774,157
2015-16	876,676	28,670	0	49,775	0	0	0	0	955,120
% change	18.3	397.9		83.7					23.4
Non-AUD Single Currency (in AUD)									
2014-15	181,950,645	3,880,203	173,398	33,260,989	165,330	142	4,242	0	219,434,949
2015-16	219,307,015	8,645,406	860,506	43,153,402	260,051	18,732	18,959	2,278	272,266,348
% change	20.5	122.8	396.3	29.7	57.3	13,085.4	347.0		24.1
Inflation-linked Swaps – AUD									
2014-15	0	0	0	0	0	0	0	0	0
2015-16	0	0	0	0	0	0	0	0	0
% change									
Overnight Index Swaps – AUD									
2014-15	0	0	0	0	0	0	0	0	0
2015-16	9,006,950	479,196	0	2,652,034	0	0	0	0	12,138,180
% change									
Overnight Index Swaps – NZD (IN AUD)									
2014-15	0	0	0	0	0	0	0	0	0
2015-16	0	0	0	0	0	0	0	0	0
% change									
Overnight Index Swaps – Other (IN AUD)									
2014-15	143,190,835	969,449	0	59,274,282	0	0	0	0	203,434,566
2015-16	180,873,323	2,754,538	0	81,955,816	199	3,881	0	0	265,587,756
% change	26.3	184.1		38.3					30.6
AUD FRA									
2014-15	0	0	0	0	0	0	0	0	0
2015-16	0	0	0	0	0	0	0	0	0
% change									
USD FRA (IN AUD)									
2014-15	90,180,115	12,755	0	3,566,286	0	0	0	0	93,759,156
2015-16	132,559,346	214,831	0	9,855,578	0	0	0	0	142,629,754
% change	47.0	1,584.3		176.4					52.1
NZD FRA (IN AUD)									
2014-15	0	0	0	0	0	0	0	0	0
2015-16	0	0	0	0	0	0	0	0	0
% change									

cont'..

	Bank	Asset Manager	Investment Manager	Hedge Fund	Insurance	Pensions	Corporate	Healthcare	Total
Other FRA (in AUD)									
2014-15	131,408,215	172,518	0	8,530,815	0	0	0	0	140,111,549
2015-16	135,540,196	1,340,127	0	7,276,693	0	0	0	0	144,157,016
% change	3.1	676.8		-14.7					2.9
Total									
2014-15	553,300,953	5,232,869	173,398	106,256,117	165,330	142	4,242	0	665,133,051
2015-16	686,679,658	13,854,875	861,351	146,340,416	260,510	22,913	19,059	2,278	848,041,061
% change	24.1	164.8	396.7	37.7	57.6	16,028.5	349.3		27.5

Source: LCH SwapClear

Notes: Both side of the trade are reported. If, when reporting geographic activity, a trade is between one party based in Australia and the other with a party offshore, then only the Australia side is included. If the report is just covering volume or trade count then both sides are reported no matter where the parties are based.

Repurchase Agreements

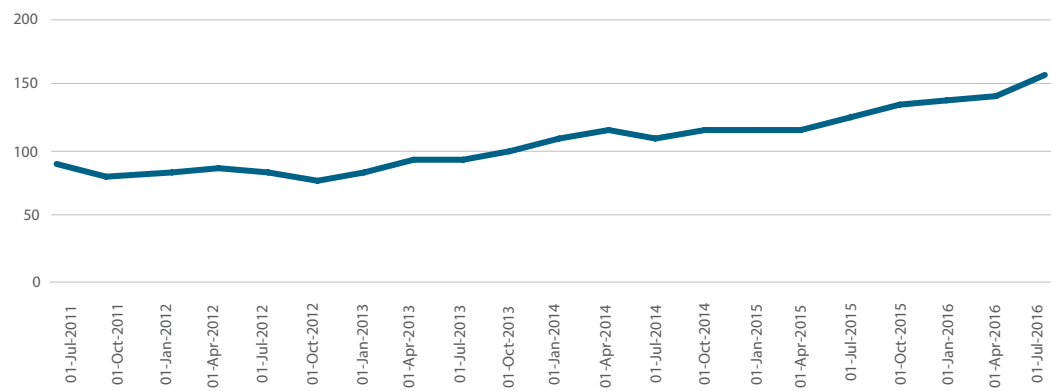
Survey of the Bond and Repo Market – Market value of outstanding repos (\$ billion)

Gross volume of repo (including RBA positions with those not surveyed)	Repo between survey respondents	Respondents borrowing cash						Respondents lending cash					
		Onshore institutions (not surveyed)			Offshore institutions (not surveyed)			Onshore institutions (not surveyed)			Offshore institutions (not surveyed)		
		Financial institutions*	RBA	Government/official sector (ex RBA)	Other	Government/official sector (ex RBA)	Other	Financial institutions*	RBA	Government/official sector (ex RBA)	Other	Government/official sector (ex RBA)	Other
13.7.2011	90	36	3.9	12.1	1.4	5.5	2.7	1.3	0.3	18.5	2.6	4.9	4.9
12.8.2011	81	33	2.3	12.7	1.1	1.6	1.4	1.7	0.6	16.0	1.8	7.9	7.9
15.2.2012	82	36	0.4	11.1	0.7	2.1	3.1	1.2	0.4	16.5	2.9	5.9	5.9
09.5.2012	85	29	0.8	24.4	2.7	0.1	1.7	1.5	0.2	15.7	3.5	4.1	4.1
15.8.2012	83	28	0.6	16.2	1.5	0.5	1.9	0.4	0.1	20.1	3.7	8.7	8.7
14.11.2012	77	27	2.8	17.1	1.1	2.0	0.9	2.1	0.0	18.1	0.6	4.2	4.2
13.2.2013	82	31	5.4	11.8	2.1	0.8	1.9	4.1	0.0	17.5	0.2	6.2	6.2
15.5.2013	94	33		24.3	1.7				0.1	17.7	1.1	6.4	6.4
14.8.2013	93	37	2.5	18.4	1.4	3.0	3.1	1.0	0.1	16.6	0.5	7.5	7.5
13.11.2013	101	34	3.1	19.6	2.1	4.3	5.3	0.4	0.0	18.4	0.5	10.5	10.5
12.2.2014	109				1.2	4.6	7.7	0.3	0.0	19.6	1.5	12.8	12.8
14.5.2014	115	21	4.6	39.1	1.1	7.0	4.8	0.4	0.0	20.3	0.3	13.8	13.8
13.8.2014	108	21	2.6	29.0	2.2	9.3	5.8	0.1	0.0	17.1	0.3	15.9	15.9
12.11.2014	115	24	2.7	37.7	3.2		3.0	1.2	0.0	22.3	1.7	13.3	13.3
11.2.2015	114	25	4.3	29.4	1.5	1.3	2.1	0.3	0.0	21.0	1.0	23.9	23.9
13.5.2015	116	22	3.4	37.7	1.3	2.0	2.9	0.3	0.0	16.7	5.0	22.1	22.1
12.8.2015	124	23	5.3	38.5	1.7	0.5	2.9	1.0	0.0	17.7	2.5	28.3	28.3
11.11.2015	136	22	5.6	43.0	1.6	1.1	2.3	9.5	0.0	11.3	4.2	8.0	8.0
10.2.2016	138	30	6.1	39.0	1.6	1.3	3.3	8.5	0.0	8.8	1.6	25.3	4.1
11.5.2016	140	26	5.4	45.1	0.0	1.5	3.7	11.9	0.1	0.1	2.1	27.1	5.7
10.8.2016	157	29	8.9	49.4	0.4	2.1	2.7	13.2	0.0	0.0	1.7	27.4	9.4

* Prior to November 2015 this category was named "onshore banks/securities dealers".

Source: RBA

Gross volume of repo (\$ bn) – including RBA positions with those not surveyed



Survey of the Bond and Repo Market – Respondents' positions in AUD securities (\$ billion)

	Long positions						Short positions						Net positions									
	AGS	Semi-gov- gov- ern- ment debt	Supranational, foreign agency and government guaranteed ADI securities	ADI issued debt securi- ties	Asset- backed debt securi- ties	Other debt securi- ties	Total	AGS	Semi-gov- gov- ern- ment debt	Supranational, foreign agency and government guaranteed ADI securities	ADI issued debt securi- ties	Asset- backed debt securi- ties	Other debt securi- ties	Total	AGS	Semi-gov- gov- ern- ment debt	Supranational, foreign agency and government guaranteed ADI securities	ADI issued debt securi- ties	Asset- backed debt securi- ties	Other debt securi- ties	Total	
13.7.2011	23.2	24.9	5.4				53.5	13.7	8.9		1.7			24.2	9.5	16.0	3.7					29.3
12.8.2011	18.7	22.3	5.9				46.9	9.6	8.9		1.9			20.4	9.1	13.4	4.0					26.5
15.2.2012	15.6	15.4	4.9				35.9	11.4	7.3		0.8			19.6	4.2	8.1	4.1					16.3
09.5.2012	14.9	10.9	2.8				28.7	8.9	7.1		0.9			16.9	6.0	3.8	1.9					11.8
15.8.2012	18.2	12.3	4.1				34.6	8.3	6.3		0.8			15.3	9.9	6.0	3.3					19.3
14.11.2012	18.3	13.9	3.4				35.6	8.2	6.9		0.9			16.0	10.1	7.0	2.5					19.6
13.2.2013	20.8	11.7	4.1				36.6	6.4	5.5		1.7			13.6	14.4	6.2	2.4					23.0
15.5.2013	26.7	13.3												14.6	20.7	5.8	2.4					28.8
14.8.2013	26.6	14.2	3.5				44.3	8.0	7.6		0.9			16.5	18.6	6.6	2.6					27.8
13.11.2013	33.7	13.2	4.1				50.9	8.8	7.4		0.8			17.1	24.9	5.8	3.3					33.8
12.2.2014	32.5						49.0	11.2	7.2		1.0			19.4	21.3	5.5	2.8					29.6
14.5.2014	36.1	11.7	3.3				51.1	6.5	6.0		0.6			13.1	29.6	5.7	2.7					38.0
13.8.2014	32.4	12.0	3.0				47.4	8.3	5.8		0.4			14.5	24.1	6.2	2.6					32.9
12.11.2014	32.9	15.1	4.3					10.5	5.3		0.4			16.2	22.4	9.8	3.9					36.1
11.2.2015	30.1	15.3	3.1				48.5	11.9	6.2		0.3			18.4	18.2	9.1	2.8					30.1
13.5.2015	31.6	13.0	3.7				48.2	10.8	6.5		0.3			17.7	20.8	6.5	3.4					30.5
12.8.2015	31.6	15.3	2.7				49.6	10.1	5.6		0.3			15.9	21.5	9.7	2.4					33.7
11.11.2015	30.1	14.6	2.8	3.4	1.7	2.8	55.4	12.1	5.7		0.5	0.3	0.0	0.2	18.8	18.0	8.9	2.3	3.1	1.7	2.7	36.6
10.2.2016	43.8	12.3	2.3	3.6	1.2	2.2	65.4	10.0	5.7		0.5	0.1	0.0	0.0	16.3	33.8	6.6	1.8	3.5	1.2	2.2	49.1
11.5.2016	46.8	10.4	2.6	3.9	0.8	1.5	65.9	9.3	4.7		0.5	0.2	0.0	0.1	14.8	37.4	5.7	2.1	3.7	0.8	1.4	51.0
10.8.2016	46.6	10.8	3.0	3.6	0.8	1.4	66.1	7.8	3.8		0.8	0.2	0.0	0.1	12.8	38.8	6.9	2.1	3.3	0.8	1.4	53.3

Source: RBA

Methodology

In previous years, the Australian Financial Markets Report was based on a survey of AFMA members in their capacity as market participants. Responses to the survey were aggregated to generate turnover figures for individual financial instruments, broader asset classes, exchange-traded and OTC markets.

The survey-based methodology has become increasingly difficult to implement in recent years and has been discontinued beginning with this report.

In place of the previous survey methodology, the 2016 AFMR has implemented a top down data collection process, drawing on the resources of financial system regulators and market participants. This creates a discontinuity with previously reported survey results.

As new data sources become available, AFMA will expand the scope and detail of the AFMR. ■

Glossary

Instrument	Definition
Government Debt Securities	
Commonwealth Government Bonds	Interest-bearing bonds that are debt obligations of the Commonwealth Government.
State Government Bonds	Interest-bearing State Government bonds (e.g. NSW TCorp) that are issued by states and territories.
Foreign Government Bonds	Interest-bearing bonds (denominated in any currency) that are issued by foreign sovereigns, supranationals or government agencies.
Non-Government Debt Securities	
Corporate Securities	Interest-bearing obligations issued by a corporation.
Bank Securities	Interest-bearing obligations (Negotiable certificates of deposit and transferable certificates of deposit) issued by an authorised deposit-taking institution (Australian-owned banks, foreign subsidiary or branches of foreign banks licensed under the Commonwealth <i>Banking Act 1959</i> and regulated by APRA).
Bank Securities Commonwealth Guaranteed	Interest bearing bonds issued by an authorised deposit-taking institution with the support of a Commonwealth Government guarantee.
Mortgage-Backed Securities	Residential Mortgage backed securities (RMBS) and commercial mortgage backed securities (CMBS). Australian RMBS are securitised prime and non-prime residential mortgages. CMBS reference a commercial mortgage loan pool.
Other Asset-Backed Securities (ABS)	Securities collateralised by assets other than mortgage loans, for example, receivables derived from motor vehicle loans, credit cards, personal loans and royalties.
Offshore AUD Issues	Australian eurobonds that are sold offshore and denominated in Australian currency (e.g. 'Uridashi' issuance).
Foreign Non-Government Issues	Kangaroo bonds (or notes) that are issued in the Australian domestic market by foreign non-government borrowers.
Covered Bonds	Covered bonds are debt securities backed by cash flows from mortgages and remain on the issuer's consolidated balance sheet.
Negotiable and Transferable Instruments	
Treasury Notes	Notes issued by the Commonwealth of Australia.
Semi-Government Paper	State government, Defence Housing Authority, Civil Aviation Authority, Federal Airports Corporation and other government instrumentalities' paper.
Bank Paper	Bank-accepted bills and negotiable certificates of deposits of banks licensed under the Banking Act.
Corporate Paper	Commercial bills and promissory notes.
Foreign Government Paper	Paper issued by foreign sovereigns, supranationals or government agencies in any currency.
Reciprocal Purchase Agreements	
Commonwealth Government Bonds	Bonds where interest is paid at a predetermined and unchanging rate for a specified period. Interest-bearing bonds that are debt obligations of the Commonwealth Government.
State Government Bonds	State government bonds (e.g. NSW TCorp) that are issued by states and territories.
Other Government Bonds	Foreign government bonds (e.g. supranationals).
Corporate and Bank Bonds	Long-term instruments including bonds and floating rate notes.
Treasury Notes	Includes notes issued by the Reserve Bank of Australia.
Semi-Government Promissory Notes	Includes state government instruments and Defence Housing Authority, Civil Aviation Authority, Federal Airports Corporation and other government instrumentalities' paper.
Corporate and Bank Paper	Short-term money market instruments, including bank bills, certificates of deposits and promissory notes.
Residential Mortgage-Backed Securities	Residential Mortgage-backed securities with maturities of greater than one year.
Asset-Backed Commercial Paper	Asset-Backed Commercial Paper with maturities of less than one year.
Swaps	
Fixed AUD: Floating AUD	One party makes fixed AUD interest payments and the other floating AUD.
Floating AUD: Floating AUD (basis swaps)	Both parties make floating AUD interest payment.
Fixed AUD: Non-AUD	One party makes fixed AUD interest payments and the other fixed or floating non-AUD.
Floating AUD: Non-AUD	One party pays floating AUD interest payments and the other fixed or floating non-AUD.
Non-AUD: Non-AUD	Both parties make non-AUD interest payment.
Inflation-linked Swaps	One party make payments linked to the inflation rate and the other pays fixed.
Overnight Index Swaps	An exchange of a fixed for floating interest rate with a designated overnight index tied to the floating rate.

Instrument	Definition
Forward Rate Agreements	
Forward rate agreements (FRAs) types include: AUD (in AUD), USD (in USD), JPY (in JPY), GBP (in GBP), Euro (in EUR), NZ (in NZD) and other (in USD).	
Interest Rate Options	
Bond Options	Where the buyer has the right to buy (call option) or to sell (put option) a given bond at a specified rate on or before a specified future date.
Swaptions	Where the buyer has the right to enter into a swap on a future date at a predetermined fixed rate.
Caps	A series of options which places a ceiling on the level of interest on a floating rate borrowing. On prescribed reference dates, the seller will compensate the buyer if the settlement index is greater than the strike rate.
Floors	A series of options which protects the buyer from a fall in interest rates below a specified rate. On prescribed reference dates, the seller will compensate the buyer if the settlement index is less than the strike rate.
Credit Derivatives	
Single Name Credit Default Swaps	One party pays a premium to transfer the credit risk of a single defined reference entity to a second party in return for a contingent payment should a defined credit event take place.
Total Rate-of-Return (TROR) Swaps	One party pays the positive credit and market performance on an underlying asset in return for receipt of a funding payment plus any negative credit and market performance on an underlying asset.
Credit Indices	Reference a portfolio of single name credit default swaps where the risk is additive rather than non-linear or correlated. It includes credit default swap indices.
Currency Options	
Currency pairs include: AUD/USD, AUD/JPY, AUD/GBP, AUD/NZD, AUD/EUR, all in AUD; and USD/JPY, USD/GBP, USD/NZD, USD/EUR and other all in USD.	
Foreign Exchange	
Local Financial Institutions	All financial institutions located in Australia including banks, currency funds, hedge funds and the Reserve Bank of Australia.
Overseas Financial Institutions	Foreign financial institutions.
Non-Financial Institutions	Institutions not identified above.
Electricity	
Swaps	The exchange of the difference between a fixed price per megawatt hour (MWh) of electric energy and a variable price that is referenced to the pool price, as determined by the market operator, in a stated reference node.
Caps	A series of options which places a ceiling on the pool price for electricity. The seller compensates the buyer, on the prescribed reference dates, if the pool price is greater than the strike rate.
Swaptions (receiver's/payer's)	The buyer of a call (put) swaption has the right, but not the obligation, to buy (sell) a swap on a future date at a predetermined fixed price. The fixed price of the swap is the strike price of the swaption.
Collars and Asian Options	A series of options with a floating strike price which is determined according to the unweighted arithmetic mean of the relevant price for each calculation period between 0000 and 2400 in the calendar month, that is the calendar month in which the last calculation period with respect to the settlement date falls.
Other options	All other options not included in the above definitions.
Environmental Products	
Forwards	The exchange of a specific quantity of RECs, NGACs or GECs at a fixed price at pre-nominated delivery date.
Options	Includes put and call options, swaptions, caps, floors and collars.

About AFMA



The Australian Financial Markets Association (AFMA) is a member-driven and policy-focused industry body that represents participants in Australia's financial markets and providers of wholesale banking services. AFMA's membership reflects the spectrum of industry participants including banks, stockbrokers, dealers, market makers, energy companies, market infrastructure providers and treasury corporations.

WELL-FUNCTIONING financial markets are critical to good economic performance. AFMA pursues the policy and industry conditions that best enable financial markets to support a healthy economy by:

- Advocating policies and regulation that support development of the financial markets and user confidence in them;
- Encouraging responsible conduct and efficient markets through industry codes, conventions, guides and preparing and maintaining standard documentation; and
- Promoting high professional standards through education and accreditation programs.

AFMA covers industry issues affecting the front, middle and back office functions of members. This includes matters concerning dealing, advising and operations for both the over-the-counter (OTC) and exchange markets for securities and derivatives.

Policy advocacy and industry representation

AFMA seeks to promote efficient regulation that inspires investor confidence in our markets. Our approach is built on constructive engagement with politicians and a credible approach to policy and regulatory matters. The Government and regulators regularly seek AFMA's views on public policy matters relevant to the financial markets.

The financial regulators oversee the day-to-day operation of banking and financial markets by administering government policy. AFMA has a unique relationship with the regulators that can handle a contest of ideas and views when necessary and is founded in a common interest in the efficient delivery of regulatory objectives.

Promoting market efficiency and Integrity

AFMA underpins official regulation by developing and promoting industry standards and guidance that support efficient and ethical practices across all of our financial markets.

In addition, AFMA's conventions and standard documentation for the OTC markets are widely accepted, covering front office activities operational aspects of financial transactions; notably confirmation, settlement, reconciliation and risk management processes.

Promoting market professionalism

AFMA encourages high standards of professional conduct in financial markets by delivering professional development and accreditation programs to improve individual expertise in OTC and exchange-traded markets. AFMA accords accreditation, which enjoys widespread industry acceptance, to individuals who achieve the required levels of competence.

Industry leadership

AFMA's strategy is set by a Board comprising industry leaders at CEO level. The advocacy, industry standards and conventions process is supported by member firms through our committees. They regularly assess suitability of the policy and regulatory settings for our financial markets and the degree of professionalism exhibited by market participants.

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