

2017 Australian Financial Markets Report



BUILDING AUSTRALIA'S FINANCIAL MARKETS
by promoting efficiency, integrity and professionalism



Our financial markets are highly competitive, with a good spread of participants from both Australia and overseas. Innovation by participants in our financial markets is helping to more efficiently meet the investment needs of superannuation funds, the funding needs of business and the capital requirements of infrastructure projects. It is important that this endogenous change occurs within the framework of a clear government strategy to further develop the financial markets as a means to promote the most productive use of our economic resources.

Foreword

THE 2017 AUSTRALIAN FINANCIAL MARKETS REPORT offers a unique and valuable insight into activity and trends in Australia's financial markets over the last year. The Report provides further evidence that our markets are performing well and contributing solidly to the growth of the Australian economy. Every Australian has a stake in the success of our financial markets, whether it be through direct investments in financial instruments such as shares and bonds, indirect investments in superannuation and retirement income products or through access to the capital needed to fund business expansion.

Financial markets are a cornerstone of the financial system, which is a critical link in the chain of production that forms our national economy. A financial system that works well provides the basis for a successful economy but if it is impaired it will constrain economic growth and development.

Financial markets play an essential role in the operation of the financial system by:

- Promoting the efficient use of economic capital by providing accurate price signals;
- Facilitating the intermediation of savings and investment; and
- Allocating liquidity and risk within the economy.

Efficient delivery of these services is vital to support the development of the economy and the productivity gains now keenly sought by governments and the broader community.

The amounts at stake are significant. For example, the amount of new capital raised by business on the ASX equity capital market in 2016-17 was \$52 billion. On the debt securities market, total issuance of investment grade bonds was \$133 billion over this period. Liquidity management through sale repurchase agreements alone was \$149 billion last year and the notional value of risk management transactions using derivatives is multiples of this.

Our financial markets are highly competitive, with a good spread of participants from both Australia and overseas. Innovation by participants in our financial markets is helping to more efficiently meet the investment needs of superannuation funds, the funding needs of business and the capital requirements of infrastructure projects. It is important that this endogenous change occurs within the framework of a clear government strategy to further develop the financial markets as a means to promote the most productive use of our economic resources.

The Australian Financial Markets Association (AFMA) provides the forum for industry participants to work with each other and government to improve the effectiveness of our markets. AFMA provides thought leadership on policy matters and provides practical leadership through its market conventions, conduct guidance and industry education programs. AFMA is leading an initiative to strengthen the industry structures to support professionalism in our markets. This is a demonstration of the industry's commitment to support the future development of our financial markets so they continue to be effective in servicing the needs of our economy.

The *2017 Australian Financial Markets Report* will be of interest to all who share an interest in the performance and future development of our markets including industry participants, researchers, policy analysts and government more generally.



A handwritten signature in black ink, which appears to read 'David Lynch'. The signature is fluid and cursive.

DAVID LYNCH
Chief Executive Officer

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Preface

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 was discontinued beginning with the 2016 report. In place of the previous survey methodology, the 2016 AFMR 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 in future as new sources of data become available. The AFMR no longer reports 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.

The 2016 AFMR referenced turnover data for government and non-government debt securities sourced from Austraclear, together with a reconciliation with the previous year's AFMA survey. This year, AFMA supplied Austraclear with a list of ISINs for Australian dollar debt securities for which turnover data was again extracted. As with last year's report, the data do not distinguish clearly between outright and repo turnover. The turnover data, along with the corresponding face value outstanding, are included in the spreadsheet accompanying this year's AFMR, but are not otherwise referenced in the report. Considerable caution should be used in interpreting these data.

The Australian Office of Financial Management has conducted its own dealer survey, which is broadly comparable in

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methodology to the discontinued AFMA member survey. According to the AOFM, turnover in Australian Treasury Bonds for 2016-17 was \$1,079,057 million. Turnover in Treasury Indexed Bonds was \$42,082 million.

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 sourced from DTCC. 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 derivative 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.

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; Jamie Crank and Jackie Slee, ASX Ltd; Michael Somes, Chi-X; Sue Black, Reserve Bank of Australia; Matthew Chan, DTCC; Marcus Robinson and Seán Quinlan, LCH Clearnet; Graham Harman, Russell Investments; Ray Attrill, NAB; Martin Whetton, ANZ; Chris Dalton, Australian Securitisation Forum; Steve Lambert, NAB; and Fiona Martyn.

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

Markets Overview

Stephen Kirchner, Economist, AFMA



A subdued growth, inflation and volatility environment weighed on financial market turnover during 2016-17.

Global Backdrop

The 2016-17 financial year began with global bond yields near record lows as inflation remained low and risk aversion was high in the aftermath of the Brexit referendum in the UK. Yet the start of the new financial year was also something of a turning point in global markets, with risk sentiment improving particularly into the turn of the calendar year. The

unexpected election of Donald Trump as President of the United States coincided with a rally in US equity markets as the US economy showed steady improvement, while measures of equity market volatility declined to historically low levels consistent with reduced volatility in economic growth. Global markets were less volatile than might have been expected given the political backdrop and this in turn weighed on turnover in global and domestic markets.

The US Federal Reserve set the tone for financial markets with 25 basis point increases in its Federal Funds rate in December 2016, and March and June 2017, taking the target range to 1.00-1.25%. The size of the Fed's balance sheet also came up for review. However, the market's pricing of future changes in

the Federal funds rate generally remained below that expected by the members of the US Federal Open Market Committee as US inflation remained mostly below the Federal Reserve's 2% target. Those who expected a significant increase in global interest rates and associated volatility in financial markets remained disappointed.

Australian Economy, Inflation and Monetary Policy

The Australian economy grew 1.8% in real terms over the financial year, continuing a run of below trend growth that also helped keep the inflation rate subdued. GDP per capita rose only 0.2% over the year, pointing to only modest growth in average living standards. The labour market showed solid employment growth,

but with the unemployment rate ending the year almost steady at 5.7%. Average earnings growth on a national accounts basis has been at multi-decade lows. This subdued economic performance set the tone for the performance of Australian dollar-denominated assets and financial market turnover.

The financial and insurance services sector outperformed the economy as a whole and most other sectors, with growth of 4.5% over the year. Employment in the sector fell from 435,800 people in May 2016 to 433,500 in May 2017. The sector remains the largest industry in the market sector of the Australian economy and has outperformed in terms of multi-factor productivity growth.

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The Reserve Bank of Australia lowered its official cash rate by 25 basis points at its August 2016 Board meeting to a new record low of 1.5% as inflation remained below the 2-3% medium-term target, setting the tone for the short-end of the Australian yield curve to start the year. Inflation accelerated modestly from a rate of 1.0% for the year-ended June 2016 to 1.9% for the year-ended June 2017. Markets generally priced a neutral monetary policy outlook, as inflation remained below target with the RBA forecasting a subdued inflation outlook. The forecasts contained in RBA's August 2017 Statement on Monetary Policy do not have inflation returning comfortably to the mid-point of the target range until mid-2019, having mostly undershot the target range since the end of 2014.

Interest Rates and Debt Markets

Australian government bond yields trended higher into the end of calendar 2016 and peaked in mid-March 2017, reflecting

trends in global debt markets, before declining into the end of the financial year. The 10-year bond yield began the year at 1.96% rose to peak just under 3.00% before ending the year at 2.6%. The yield curve followed a similar pattern, steepening into March 2017 before flattening again to end the year at 78 basis points on the 10-year/2-year spread. Research by the Australian Office of Financial Management suggests that the secular decline in Australian government bond yields has primarily been driven by a falling term premium, a trend also seen in overseas bond markets¹. The term premium is estimated to have been negative over 2016-17, implying investors do not see additional risk in investing in long-term versus short-dated Australian

government debt securities.

The face value of CGS on issue rose from \$420.4 billion or 25.4% of GDP in 2015-16 to \$501 billion or 28.6% of GDP in 2016-17. Persistent budget deficits around 2% of GDP saw a continued rise in the Commonwealth's funding requirement and net debt. The increased issuance found no shortage of demand, with Australian residents increasing their share of the stock of Australian Government Securities. The share held by non-residents continued to fall to stand at 53.6% as at June 2017. Although the non-resident share of holdings of Commonwealth Government Securities fell over the year, the volume held by non-residents increased in absolute terms.

The stock of outstanding semi-government bonds over 2016-17 was little changed at around \$240 billion, although the composition of the stock changed with the relative economic performance of the various states. Western Australia increased its issuance profile, while New South Wales retired debt. The stock of semi-government bonds is expected to increase in 2017-18.

The Australian Office of Financial Management has conducted its own dealer survey, which is broadly comparable in methodology to the discontinued AFMA member survey. According to the AOFM, turnover in Australian Treasury Bonds for 2016-17 was \$1,079,057 million. Turnover in Treasury Indexed Bonds was \$42,082 million.

Equity Market Developments

Australian equities underperformed their US counterparts again this year, with the benchmark S&P/ASX 200 posting a 9.3% gain on a price return basis. However, the Australian equity market shared in the global trend to lower volatility, with the S&P/ASX 200 VIX measure of volatility averaging lower levels than in 2015-16. Average domestic market capitalisation rose 9.8% to \$1,747 billion. The primary market saw a 24.8% decline in cash equity raisings, although the number of companies with quoted securities rose 1.8% to 2,051. The daily average of value traded on ASX and Chi-X rose 13.8% to \$6.8 billion while the daily average number of trades rose 22.3% to 1.6 million. A record 1.7 million trades were matched on 9 November 2016 as Donald Trump was elected President of the United States. Average trade size continued to fall to stand at \$4,134.

Australian Dollar Exchange Rate and Foreign Exchange Markets

The Australian dollar exchange rate largely tracked US dollar developments through the year while volatility in global foreign exchange markets was at historically low levels. The Australian dollar was generally supported by higher commodity prices and the terms of trade, which rose 14.9% over the year on a national accounts basis. Interest rate differentials offered less support, with the Australia-US 10 year bond spread on a narrowing trend for much of the year, although the spread widened again into financial year-end, supporting a late rally in the currency that has persisted into the 2017-18 financial year. Also supporting the currency is a narrowing in the current account deficit to its lowest share of GDP since 1980. This has reduced Australia's external funding requirement

and the associated capital inflows.

Foreign exchange turnover for 2016-17 fell by nearly 9% over 2016-17 to \$A37 trillion and remains below its pre-GFC peak of \$A47 trillion in 2006-07. Weakness was seen across AUD and non-AUD turnover and spot, swap and forward markets. Only non-AUD swap and forward markets saw an increase in turnover. With AUD maintaining a narrow range against major currency pairs over the year, hedging demand was reduced and this was reflected in market turnover.

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 2016-17 was \$47.2 trillion, a 3.4% decrease on the same period last year, largely driven by a decline in interest rate derivatives outstanding (-5.1%). With the Australian monetary policy outlook steady for much of 2016-17 and into 2017-18, the demand for interest rate hedging has declined. The number of contracts fell 4.3%.

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 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.

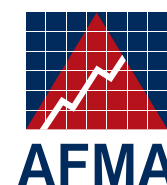
The Reserve Bank of Australia's April 2016 survey of OTC interest rate derivatives activity in Australia found average daily turnover of \$US 49.3 billion, a 25.5% decline on the previous survey in April 2013. This largely reflects a 26% decline in the AUD-USD exchange rate over the same period. Holding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

Industry Developments

The federal government introduced a Major Bank Levy in its May 2017 Budget for ADI's with liabilities of at least \$100 billion. These institutions will be levied six basis points on around three-quarters of their liabilities. The levy is expected to subtract from liquidity in a number of key financial markets, including the cash and repo markets.

Following a highly competitive process which commenced in July 2016, in December 2016 ASX was selected as the party to which administration of the BBSW benchmark rate would transfer effective 1 January 2017. AFMA through its market committees will continue to play an important role in promoting best practice and maintaining the conventions in the short term debt securities market underpinning the benchmark rate. During the year, AFMA had significant dialogue with Treasury and ASIC in relation to the development of a regime for regulation of benchmarks in Australia.

AFMA contributed to the development of the Global FX Code of Conduct and provided forums for members to interact with the Deputy Governor of the Reserve Bank in his capacity as one of the main architects of the Global Code. ■



¹ Fraser Jennison, 'Estimation of the Term Premium with Australian Treasury Bonds,' Australian Office of Financial Management Working Paper, 2017-01, March 2017.

Equity Market Overview

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

The 2016-17 financial year was an eventful and profitable period for investors in Australian shares.

P OINT TO POINT, the S&P/ASX 200 price index delivered a capital gain of 9.3% through the year, whilst the corresponding total return index (including reinvested dividends) was up 14.1%. The tax benefits of franking credits are additional to these numbers. That was a significant lift on the lacklustre performance of the previous financial year, although with a year-end index value of 5,721, the market was still left trading well below its all-time highs. The overall value of listed Australian shares showed a similar healthy increase, rising 9.6% from \$1.620 trillion to \$1.777 trillion.

These very solid full-year results included some significant ebbs and flows through the course of the year. The market was up by over 6% by early August 2016, but then struggled to deal with local company profit downgrades, and weaker economic conditions. The Reserve Bank of Australia (RBA) crystallised these anxieties on 2 August 2016, with a 0.25% cut in interest rates, accompanied by RBA commentary regarding the sub-par pace of global economic growth, still-depressed commodity prices, and “very subdued” wage and price inflation.

Geo-political uncertainties also beset the market, through the spring. The election of Donald Trump as US President on 8 November initially disconcerted equity investors, and the Australian market was down slightly for the year by that date. Beyond that, a global lift in confidence dubbed the “Trump trade” took over sentiment, as market participants looked for more expansionary policies from

the White House and as Wall St rallied strongly. Simultaneous strength in key commodities in the lead-up to December - a traditional period of gains for Australian shares - enabled a striking 12% jump in the subsequent two months to early January 2017; and the market then drifted gradually lower, in an increasingly tight trading band, through to year end.

From a capital markets perspective, the volume of stocks traded on the Australian Stock Exchange continued to languish at post-Financial Crisis lows; indeed, volumes were down slightly on the previous year. Looked at in dollar terms, however, signs

improving investment opportunities going forward.

The Australian economic backdrop over 2016-17, despite initial anxieties, firmed steadily. Business confidence was strong and rising. This was in contrast to a gloomier personal sector, with a clear gap between business optimism and consumer pessimism a feature of much of the year. That gap was increasingly bridged by an improving labour market, with nearly a quarter of a million jobs created in the 12 months to June 2017 – well over twice the number that were created in the 2016 calendar year. Also supportive was ongoing

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of life are reappearing, with a 2% lift in turnover by value; this maintains an uptrend which has now been in place for the past five years and is consistent with a commensurate lift in the number of listed entities. Meanwhile, in an environment of low growth and suppressed capital spending, capital raisings were steady but unspectacular. Initial Public Offerings (“IPOs”) were down by about a third for the year, to \$15 billion; and secondary capital raisings, at \$37 billion, were also lower than in 2015-16. By year end, however, corporate management was becoming more upbeat, with increasing references to

health in the Australian housing sector, with prices holding up and defying the sceptics in the eastern states, despite some easing back in dwelling approvals.

The same unqualified positive characterisation cannot be made of the regulatory and competitive environment in which corporate Australia found itself. From a regulatory point of view, the swing of the political pendulum away from capital and the establishment, and towards populism and labour – which was beginning to emerge in 2015-16 – gathered momentum through 2016-17. The corporate sector found itself

increasingly isolated as the year progressed, culminating spectacularly in an arbitrary and unexpected Major Bank Levy in the May Federal Budget. Comments by the Federal Treasurer with reference to the banks, that “they (customers) already don’t like you very much” epitomised the newly unsympathetic tone in Government/corporate relations. The bank share price index lost more than 10% of its value over

Stronger sectors included Consumer Staples (up 12%); Capital Goods (up 26%); and Healthcare (up 13%). The Resources sector, buoyed by a resilient Chinese economy and soaring commodity prices through the year, had an excellent year and was up by just on 20%. With the big banks and miners doing well for the year, the small stock index lagged the overall market, with a return of 4%.

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the course of May 2017 alone. It was not all bad news for the sector, with low official cash rates and regulator-imposed quantity controls on home lending providing some offsetting support. The S&P/ASX 200 Banks index was up 12% for the year. Also affected (both positively and negatively) by the increasingly interventionist political mood were utility and energy companies, as soaring power bills and domestic shortages of gas burgeoned as a theme. Energy was up 6% and Utilities were up 15%.

Also causing some grief for corporate Australia were tough competitive conditions – including technologically disruptive trading platforms and the growing reach of internet shopping; together with a consumer constrained by minimal wage growth and by elevated debt levels. These factors combined to Retail down 5% for the year, and Real Estate Investment Trusts – notwithstanding their yield attraction, in a low interest rate environment – down 11%. Also beset by the internet and technological disruption was the Media sector, which was no better than flat for the year.

By 30 June, the Australian share market was trading on a price-to-earnings ratio of 15.5x, in line with historical experience. The trailing dividend yield at 4.2% (pre-franking), remained well above official cash interest rates of 1.5%. Moreover dividend payout ratios – which had been stretched, at a record 88% of earnings, as at June 2016 - settled back to more normal and sustainable levels by June 2017. ■

Exchange-Traded Markets – ASX Group



The Year in Review

Activity in local exchange-traded markets was generally subdued through the financial year. Overall capital raising weakened during FY2016-17 (despite the listing of 152 new entities – the most in six years) while average daily trading in equity and futures markets both rose.

Australia continues to have one of the world's highest rates of share ownership. The latest ASX Australian Investor Study (May 2017) showed that 37% of Australian adults, or 6.9 million people, hold investments that are available through a financial exchange.

ASX's major initiatives and outcomes in FY17 included:

- Investment in critical infrastructure to ensure world-class trading and post-trade systems, recognising that users depend upon the resilience of ASX's technical and operating systems.
- In March 2017, a new futures trading system replaced the platform that had been in place since the late 1990s. The new system is contemporary, uses global standard protocols and provides customers with richer functionality, improved performance and reduced development and maintenance costs.
- A major focus during the year was consultation with users of CHES to ensure ASX understands what users want from a replacement system, and that it meets the highest security, resilience and performance standards. ASX remains on track to make an assessment on the suitability of distributed ledger technology towards the end of 2017.
- New admission criteria were introduced in December 2016 which raised listing standards while maintaining a pathway for companies to list and access capital across their lifecycle. The ASX market remains an attractive option for innovation companies, with 40

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technology listings during the year.

- A strategy to raise the international profile of ASX's listings franchise had the effect of attracting 39 additional foreign companies to list, bringing the total number of foreign listings to 266. This number has doubled in the last four years.
- ASX received regulatory approval to expand the range of products retail clients can apply for and redeem through the mFund settlement service. Funds under management doubled to more than \$370 million.
- The operating hours of ASX's OTC Clearing business to clear interest rate swaps were extended to 24 hours a day. Value cleared in this service rose 88% during the year.
- ASX commenced as the administrator of the systemically important BBSW benchmark on 1 January 2017, and began calculating and publishing the rate in July 2017.

On a historical note, 2017 was the 30th anniversary of ASX's formation. The benefits of establishing a national market still resonate. It was a precursor to ASX's demutualisation and listing in 1998, and the merger with the Sydney Futures Exchange in 2006. The global scale,

connectivity and reputation of Australia's markets attracts increasing numbers of companies, traders and investors.

Primary markets

Overall, 152 new entities listed in FY17, a 23% 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 38% in FY17, from \$23.6 billion in FY16 to \$14.7 billion.

Viva Energy REIT had the highest capitalisation of new IPOs with \$1.5 billion. Inghams Group Limited and Charter Hall Long Wale REIT were also notable listings, with capitalisations of \$1.2 billion and \$826.7 million respectively.

Foreign listings have continued to gain traction, with 39 new listed entities with operations based predominantly overseas in FY17. At the end of FY17 there was 266 foreign companies, with 51 from New Zealand, 39 from the United States and 16 from Israel.

The information technology sector also continued its recent momentum with 40 new listed entities. The sector now

comprises the third largest on ASX by number of companies with over 200 listed companies in total.

Secondary raisings of equity capital in FY17 totalled \$37.2 billion, down 18% on FY16.

Secondary equity market

The Australian equity market benchmark index, the S&P/ASX 200, gained 9.3% in FY17, lagging both the MSCI World and S&P 500 indices, which gained 15.9% and 15.5% respectively. Including dividends, the S&P/ASX 200 returned 14.1%, as measured by the accumulation index. Despite an eventful year of geopolitical news and election outcomes that surprised markets, volatility moderated to near-record lows, with the S&P/ASX 200 VIX averaging 13.2 in FY17. Although this was 50 basis points higher than the CBOE VIX measure, it was a material reduction from the 19.7 average volatility in FY16.

Despite an eventful year of geopolitical news and election outcomes that surprised markets, volatility moderated to near-record lows, with the S&P/ASX 200 VIX averaging 13.2 in FY17. Although this was 50 basis points higher than the CBOE VIX measure, it was a material reduction from the 19.7 average volatility in FY16.

Consolidated on- and off-market average daily turnover in the cash market increased 5.7% to \$6.1 billion for all venues. ASX matched 87.5% of lit market trades and captured 80.9% of the gross traded and reported value in Australian equities in FY17. ASX Centre Point matched \$107.0 billion, which was an increase of 35% over FY16 and represented nearly 7% of equity trading across all venues. Over the year, a daily average of 1,053,096 trades were executed on the ASX, an increase of 13.4%. A record 1.7 million trades matched on the 9 November 2016 on ASX and 2.2 million across all venues.

ASX Exchange-Traded Options (ETOs)

Total ETO market volumes were up 2.2% year-on-year. This increase was led by an increase in single stock options (up 5.1%) which outweighed cash index options volume (down 13%), excluding Low Exercise Price Options (LEPOs). Over this period retail options usage was up 9% while institutional usage was down 6% (excluding Market Makers).

ASX launched weekly equity options in October 2016. They have traded 3.7 million contracts and on average are now 10% of option volume for the ETO classes covered.

ASX SPI 200® Futures and Options

The S&P/ASX 200 closed the year up 9.3% at 5721 points. ASX SPI 200® futures volumes were up 1.2%, whilst SPI

options volume was down 44.3%. The SPI options volume was impacted by an investor preference for XJO options (S&P/ASX 200 options traded on the ASX cash market platform) rather than SPI, as well as the low volatility environment and a transfer across to single stock options. At the end of FY17, ASX introduced Market Makers in SPI options to boost liquidity and volume.

ASX Warrants

The 25th anniversary of the introduction of warrants on ASX was celebrated in mid-2016. The birth of the warrants market was a significant development, representing product innovation and a diversification of offerings for investors.

In FY17, the number of new warrants listed was 1,828, contributing to the total number of 2827 warrants listed. Total value traded was \$1.7 billion, down 24% on FY16. MINI-style warrants remain the most popular, representing 51% of the total number of warrants on issue and 66% of total value traded.

Exchange-Traded Products (ETPs)

ETPs continued to see significant growth, both in number of products and funds under management, with 38 new funds commencing trading on ASX. AMP Capital, Australian Corporate Bond Company, BetaShares, Blackrock (iShares), ETFS, Magellan, Schroders, Switzer, UBS and VanEck all issued new funds.

Market capitalisation of traded market ETPs grew 31.2% to reach around \$29.5 billion of funds under management. The average number of monthly trades also rose, from 65,593 in FY16 to 74,707 at the end of FY17. Monthly value traded was up 21.4% to almost \$2.2 billion.

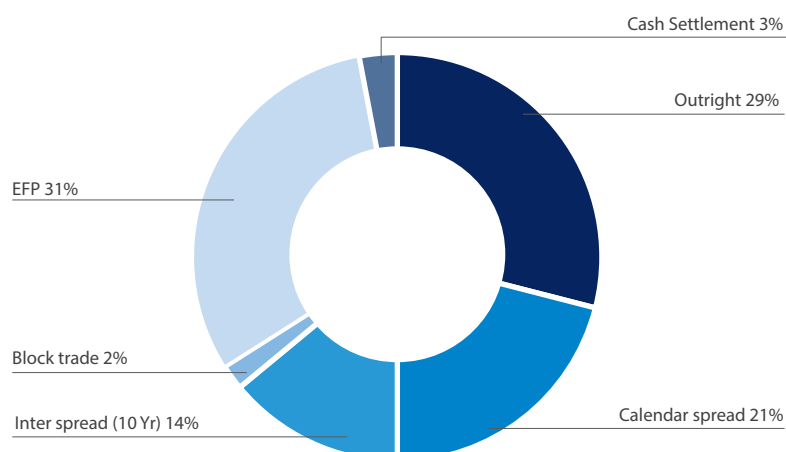
ASX-Quoted Bonds

ASX Bonds include Government bonds (Treasury Bonds and Treasury Indexed Bonds) and corporate bonds (fixed and floating rate). At 30 June 2017, a total of 43 Government and corporate bonds were available to retail investors with maturities extending to March 2047. The average monthly turnover for these products during FY17 was 2,955 trades with an annual turnover value of over \$1.1 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 FY17 increasing 40.9% to \$8.5 billion. Total market capitalisation for the sector was up 13.2% to more than \$43.3 billion.

FIGURE 1:

20 Year Treasury Bond Futures Volume Breakdown in FY17

Bond futures activity remained strong during the year. 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 207,940 contracts, an increase of 6.7% on FY16.

ASX 24 Interest Rate Futures

ASX 24 interest rate futures volumes were moderately stronger in FY17 compared to the previous financial year. Increases in market activity were primarily centred on the medium- and long-dated futures contracts.

Due to the low interest rate environment, low volatility, and the RBA continuing to signal no change to interest rate policy in the near term, activity in the 30 Day Interbank Cash Rate Futures product was down 40.3% on the prior period. There was a 2.2% decrease in volumes year-on-year for 90 Day Bank Bill Futures. Spreads and depth levels continued to improve in the second, third and fourth-year contracts due to the ongoing support of Market Makers.

Bond futures activity remained strong during the year. 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 207,940 contracts, an increase of 6.7% on FY16. Activity in 10 Year Treasury Bond Futures continues to demonstrate strong growth with a 15.6% increase during the year (ADV of 162,880 contracts). Greater market participation, in particular from new offshore entities, in the 10 Year Bond Futures contract contributed to growth in volume and open interest.

ASX's newest bond futures contract, the 20 year Treasury Bond Futures that listed in 2015, saw a 29% increase in the number of participants. In FY17, activity reached 545,000 contracts. Figure 1 shows the breakdown of activity by trade type.

Exchange-for-physical transactions increased 23% on FY16 and contributed to 10% of total interest rate futures activity.

**Trading activity in a 24 hour trading day**

The ASX Trade24 trading system permits near-24 hour trading of ASX's futures contracts, making the market accessible at any time from the major global financial centres across 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 mainly correlates with the early trading in the European and US markets. Night session activity represented 31% of total trading activity during FY17, increasing from 30% 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 830 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 decline in FY17, decreasing by 1.9% to \$1,860.3 billion at year end from \$1,895.6 billion at the end of FY16. This decline was mainly due to floating rate notes falling by 17%. Treasury bond issuances, however, were up by 20% on FY16.

Austraclear membership decreased marginally from 855 at the end of FY16 to 838 at the end of June 2017. There were 62



new participants admitted to Austraclear during FY17, 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), which acts as a clearing house.

ASX Energy Derivatives

The ASX Australian electricity market rallied dramatically across all regions

and base load calendar month futures. The most actively traded states were Victoria and Queensland at 38% each, followed by New South Wales at 23%. South Australia only had 1% of traded volume.

ASX Agricultural Derivatives

FY17 broke Australian grain production records across wheat, barley and canola. However, once grain was harvested there was a sustained period of low prices and low price volatility which, when combined

The retirement of coal-fired generation and the disruptive nature of new technologies have seen a very volatile FY17 with robust traded volume. Similar levels of volatility in the New Zealand market due to hydrology storage swings have also seen an increase in volumes.

through FY17, before easing in the final few months of the financial year. Calendar 2018 base load strip futures were up 53% in New South Wales to \$84.29/MWh, up 104% in Victoria to \$101.37/MWh, up 22% in Queensland to \$76.50/MWh and up 32% in South Australia, ending the year at \$124/MWh.

The retirement of coal-fired generation and the disruptive nature of new technologies have seen a very volatile FY17 with robust traded volume. Similar levels of volatility in the New Zealand market due to hydrology storage swings have also seen an increase in volumes. In Australia, some \$26.3 billion in face value, or 392.4 TWh of energy was traded, representing 217% of the underlying NEM system demand. The ADV of energy traded was 1.6 TWh with a face value of \$103 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 6%. The remaining activity was distributed between peak load calendar quarter futures

with Australian grain pricing competitively into export markets, reduced the need for derivatives to manage price risk. ASX Grains futures and options traded 91,302 contracts, which equates to 1,846,740 tonnes of Australian grain, 31.1% lower than FY16. Trading activity has increased at the beginning of FY18 with open interest of Eastern Australia Wheat futures at 13,202 contracts (264,040 tonnes) at the end of July 2017, an increase compared to wheat futures open interest at the end of July 2016. ■

www.asx.com.au

Chi-X Australia



The 2016/2017 financial year saw the further consolidation of the Chi-X market as the provider of cost efficient and reliable market infrastructure for the trading of Australia's leading securities and investment products.

While the challenge of providing technology resilience and robustness became evident in the broader market during the year, Chi-X continued to provide reliable and stable system performance on its trading and investment product platforms

At a high level, trading in Australian cash equities during the 2017 financial year featured market wide upward trends in the first half and narrow range bound trading in the second half. It also featured the continued growth of Chi-X as an established execution platform for Australian listed cash equities (see the total market share figures in Figure 2). On the whole, cash equities trading on the Chi-X market continued trend lines 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 3);
- (ii) the market share of principal trading/market making firms continued on a downward trend and now accounts for approximately 10% of the counterparties to all executed transactions (see Figure 3, 4 and 5);
- (iii) institutional trading sustained its dominant market share in both passive and aggressive liquidity (see Figure 3, 4 and 5).

A further feature of the Chi-X market during FY 2017 was its increasing market share of trading in particular securities. Figure 1 provides market share and price improvement statistics for June 2017.

Chi-X also continued to innovate, including the delivery of the following in response to specific customer demand:

- (i) on 1 May 2017, Chi-X commenced calculating closing prices;
- (ii) on 24 April 2017, Chi-X extended trading hours for specified quoted warrants; and
- (iii) during 2016/17 Chi-X implemented various technology upgrades of its technology systems, including those relating to significant product developments and platform improvements.

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

- (i) record monthly Total Market Turnover of \$29.5B in March 2017;

- (ii) record monthly continuous Trading Market Turnover of \$14.2B in March 2017;
- (iii) record daily continuous trading market share for FY 2017 of 21.08% on 3 May 2017;
- (iv) record monthly ETF trading value of \$ \$1.1bn in Jun-2017 (see Figure 6)
- (v) record monthly ETF market share of 40.7% in February 2017 (see Figure 6);
- (vi) an increase in the number of quoted investment products solely available for trading on Chi-X from 341 in July 2016 to 725 in June 2017; and
- (vii) a 13.6% YOY increase in the annual traded value of cash equity trading on Chi-X. ■

FIGURE 1:

Symbol	Value Continuous Trading (\$)	Market Share Continuous Trading(%)	% with Price Improvement	Average PI bps
S32	\$225,697,906	24%	32%	24.74
STO	\$185,155,175	29%	15%	21.60
SCG	\$168,128,048	26%	28%	16.03
TLS	\$604,055,041	34%	29%	14.61
FMG	\$481,440,099	23%	18%	14.54
AMP	\$153,491,798	26%	19%	13.16
QAN	\$230,790,434	23%	18%	12.86
IAG	\$164,286,765	29%	20%	11.24
ORG	\$165,724,104	25%	20%	10.03
WFD	\$170,523,795	25%	16%	8.46

FIGURE 2:

CXA Total Market: Value Traded & Market Share

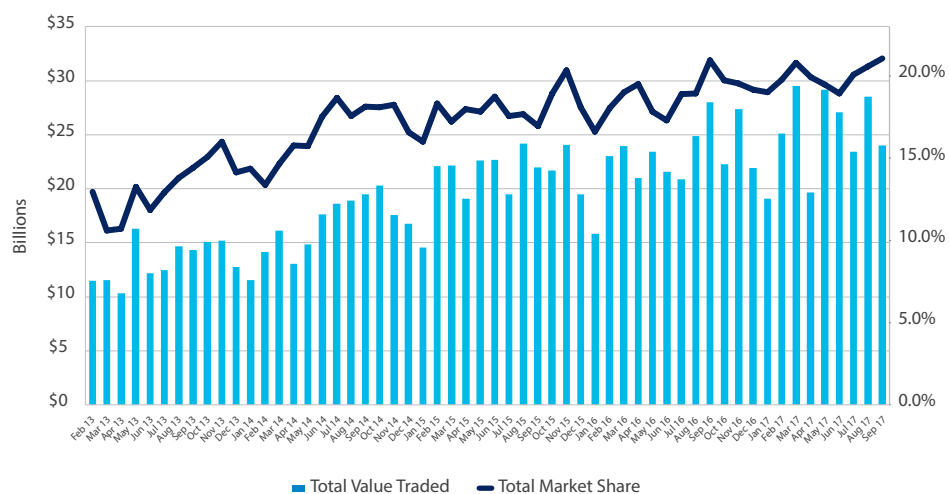


FIGURE 3:

Participant Aggressive Flow Breakdown

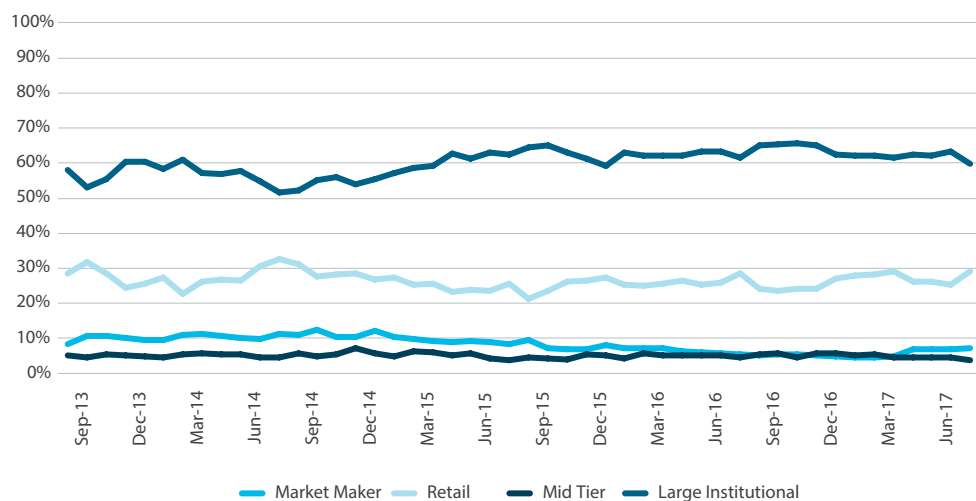


FIGURE 4:

Participant Passive Flow Breakdown

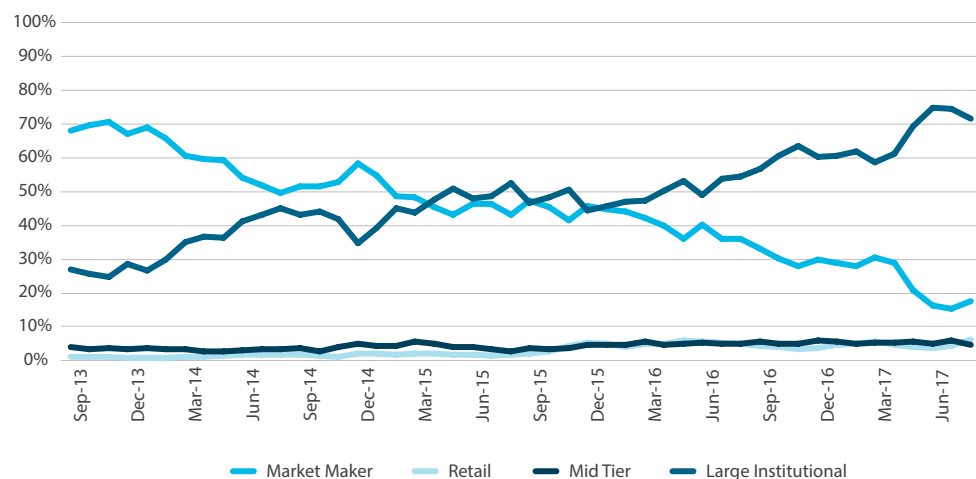


FIGURE 5:

Executed Order Flow by Segment

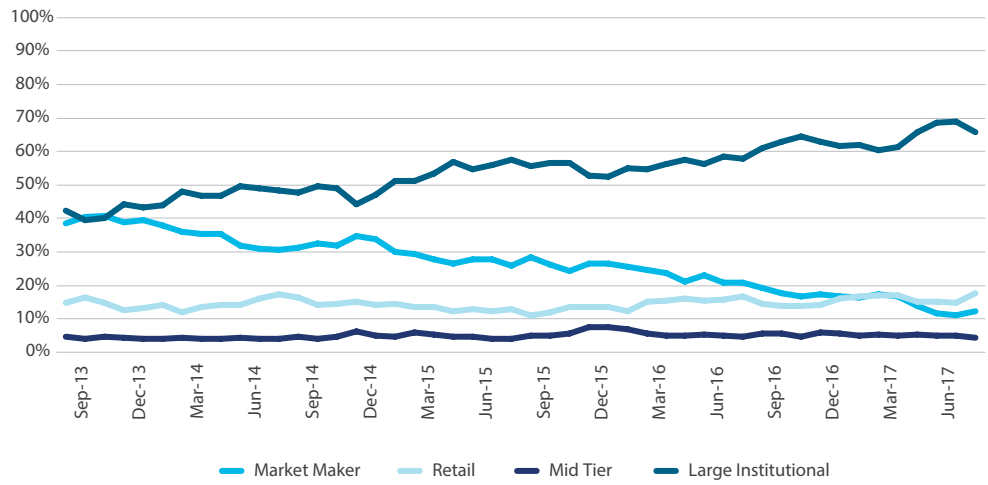
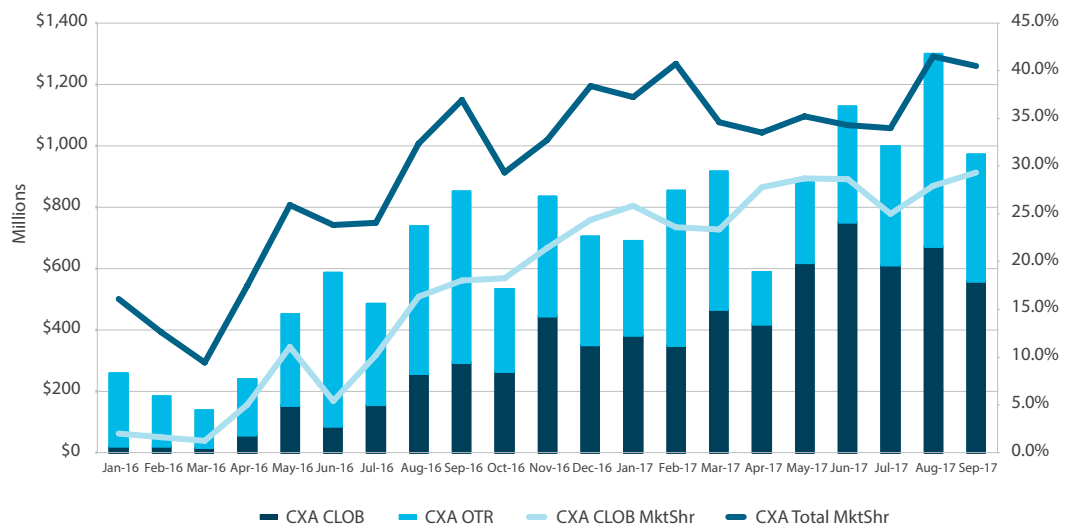


FIGURE 6:

ASX Fund Trading on CXA: Value Traded & Market Share



Primary Market Activity

NEW CAPITAL RAISINGS FOR CASH (A\$ M)

	Floats	Secondary raisings*	Total Cash Equity Raisings
2014-15	38,917	38,785	77,702
2015-16	23,585	45,298	68,882
2016-17	14,652	37,160	51,812
% change	-37.9%	-18.0%	-24.8%

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

COMPANIES LISTED ON ASX AT 30 JUNE 2017

	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
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
2016-17	2,051	1,896,945	1,921	1,776,745	925
% change	1.8%	9.7%	1.4%	9.7%	8.2%

Secondary Market Activity

EQUITY TRADING ON ASX

	Annual value (A\$m)	Trades ('000)	Average daily trades	Average daily value (A\$ m)
2014-15	1,112,449	190,647	750,578	4,380
2015-16	1,204,149	235,923	928,829	4,741
2016-17	1,246,850	266,433	1,053,096	4,928
% change	3.5%	12.9%	13.4%	3.9%

EQUITY TRADING ON CHI-X

	Annual value (A\$m)	Trades ('000)	Average daily trades	Average daily value (A\$m)
2014-15	234,906	53,269	209,734	926
2015-16	259,875	67,832	266,862	956
2016-17	295,243	92,894	367,171	1,167
% change	13.6%	36.9%	37.6%	22.1%

TURNOVER AS % OF AVERAGE MARKET CAP (A\$ B)

	Equity turnover	Average Domestic Market Cap	% Liquidity
2014-15	1,348	1,632	83
2015-16	1,464	1,592	92
2016-17	1,542	1,747	88
% change	5.3%	9.8%	-4.1%

Equity Derivatives

TURNOVER BY CONTRACT VOLUME ('000)

	ASX Trade	ASX Trade 24	
	Total Contracts*	SPI 200® Futures	SPI 200® Options
2014-15	120,504	10,301	454
2015-16	101,469	12,105	363
2016-17	103,683	12,255	202
% change	2.2%	1.2%	-44.3%

* 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
2014-15	267.9	590.6	6.3	1,396	62
2015-16	197.1	649.5	5.6	1,549	46
2016-17	211.0	566.6	6.5	1,703	28
% change	7.1%	-12.8%	16.9%	9.9%	-40.3%

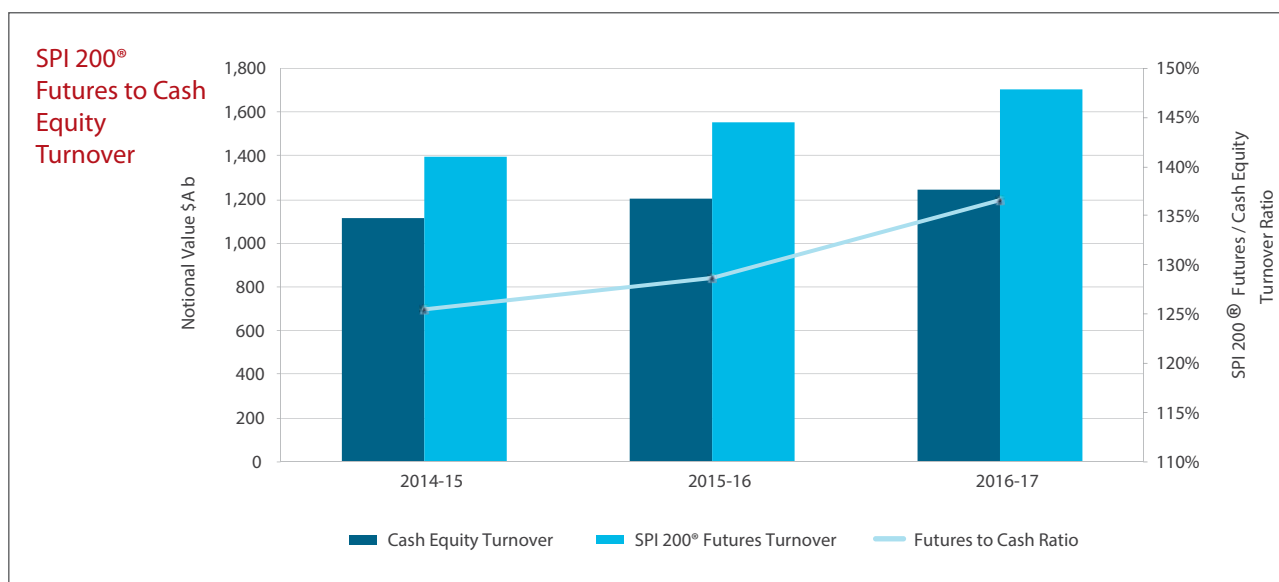
* Includes Cash Index LEPOs

WARRANTS: NO. ON ISSUE, TURNOVER BY NUMBER OF TRADES AND CONTRACT VALUE

	No. on Issue	Trades ('000)	Contract Value (A\$ m)
2014-15	2,998	318	2,651
2015-16	2,874	329	2,365
2016-17	2,827	272	1,866
% change	-1.6%	-17.4%	-21.1%

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



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										
2010-11	6,195	20,729		38,832	15,230		209	0	10,513	91,708
2011-12	5,334	21,652		42,503	17,220		179	289	11,816	98,992
2012-13	4,780	25,866		47,499	21,211		161	353	10,270	110,141
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
2016-17	2,455	28,931	1,422	53,233	41,697	545	344	91	12,357	141,075
% change	-40.3%	-2.2%	-25.7%	6.2%	15.6%	28.8%	33.7%	-30.8%	0.9%	4.6%
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										
2010-11	18,586	20,729		3,883	1,523		16.5	0	1,222	45,959
2011-12	16,001	21,657		4,250	1,722		17.4	1.3	1,238	44,888
2012-13	14,340	25,877		4,750	2,121		17.9	2.0	1,201	48,309
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
2016-17	5,499	28,829	1,305	5,228	4,117	26	28.9	0.4	1,680	46,715
% change	-55.4%	-2.5%	-31.9%	4.3%	14.1%	24.9%	40.9%	-41.3%	8.1%	-13.5%
Options										
2010-11	0	52		410	0.8		6.2	0	44.1	514
2011-12	0	25		235	0.3		7.3	0.05	49.9	318
2012-13	0	7		388	2.0		5.5	0.04	39.9	443
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
2016-17	0	2	0	109	2.17		8.1	0.00	28	149
% change		-42.9%		-31.6%	358.3%		71.8%	-100.0%	-40.3%	-30.5%

FUTURES AND OPTIONS OPEN INTEREST (AT 30 JUNE 2017)

	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
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
2016-17	197,617	1,056,737	142,777	950,143	959,231	23,959	83,965	10,959	408,027	3,833,415
% change	-4.6%	19.1%	5.0%	23.9%	13.6%	28.1%	15.2%	16.9%	14.0%	16.2%
% change	17.0%	5.5%	8.8%	27.6%	29.5%	n/a	24.3%	-17.3%	11.5%	18.4%

** Includes NZ Energy securities

*** includes SPI 200, VIX and sector futures, mini-ASX SPI 200

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)					
2014-15	28	\$403.8	\$65.8	602,533	1,335
2015-16	29	\$469.8	\$134.0	1,215,776	2,170
2016-17	31	\$549.7	\$136.7	1,265,275	2,207
% change	6.9%	17.0%	2.1%	4.1%	1.7%
% change	3.6%	16.3%	103.5%	101.8%	62.5%
Corporate Bonds - Fixed Rate					
2014-15	2	\$0.4	\$45.9	431,926	1,264
2015-16	5	\$0.6	\$44.1	419,733	1,159
2016-17	6	\$0.6	\$61.5	600,511	2,859
% change	20.0%	0.0%	39.5%	43.1%	146.7%
% change	150.0%	51.0%	-4.0%	-2.8%	-8.3%
Corporate Bonds - Floating Rate (FRNs)					
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
2016-17	6	\$3.5	\$957.5	9,438,146	30,390
% change	-25.0%	-43.5%	-52.0%	-53.6%	-61.4%
% change	-65.2%	-57.3%	-29.3%	-28.0%	-29.4%
Preference shares					
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
2016-17	41	\$37.2	\$6,774.3	72,948,567	392,995
% change	2.5%	25.7%	28.4%	23.8%	44.4%
% change	5.3%	3.5%	-20.4%	-4.0%	9.0%
Convertible notes					
2014-15	14	\$1.3	\$313.0	19,574,732	12,905
2015-16	11	\$1.1	\$139.9	5,441,797	8,989
2016-17	10	\$0.9	\$191.9	5,136,356	9,950
% change	-9.1%	-18.2%	37.2%	-5.6%	10.7%
% change	-21.4%	-28.9%	-17.1%	-55.4%	-22.0%
Hybrid securities					
2015-16*	13	\$7.6	\$602.1	6,719,584	33,879
2016-17	10	\$5.4	\$1,515.9	16,108,483	66,266
% change	-23.1%	-28.9%	151.8%	139.7%	95.6%

* commenced February 2016

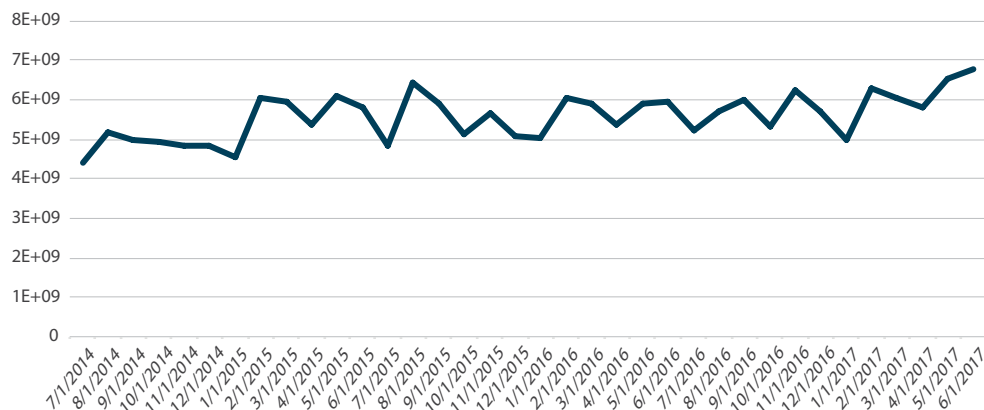
Number and Market Cap are as at 30 June. Value, volume and number of trades are the totals for the financial year.

EXCHANGE TRADED PRODUCTS AND INVESTMENT FUNDS

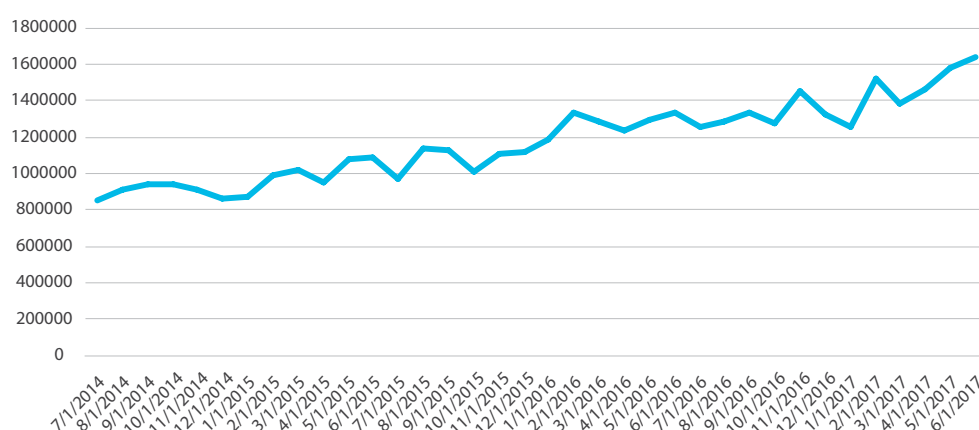
	Market cap (A\$ b)	Number admitted	12 month average transactions	12 month average value (\$b)
Exchange Traded Products (ETPs)				
2014-15	18.5	123	45,272	1.5
2015-16	22.4	137	65,593	1.8
2016-17	29.3	162	74,707	2.2
% change	30.6%	18.2%	13.9%	21.7%
% change	3.6%	16.3%	103.5%	101.8%
mFunds				
2014-15	46.0	95	119	4.0
2015-16	150.5	161	379	10.0
2016-17	370.7	174	982	25.0
% change	146.3%	8.1%	159.1%	149.0%
% change	150.0%	51.0%	-4.0%	-2.8%
Listed Investment Companies (LICs)				
2014-15	28.4	79	43,546	0.3
2015-16	29.5	90	49,364	0.3
2016-17	33.1	102	59,793	0.4
% change	12.3%	13.3%	21.1%	34.5%
% change	-65.2%	-57.3%	-29.3%	-28.0%
Australian Real Estate Investment Trusts (A-REITs)				
2014-15	115.2	49	1,282,375	8.0
2015-16	138.0	49	1,498,216	8.6
2016-17	130.0	52	1,752,516	9.6
% change	-5.8%	6.1%	17.0%	11.6%
% change	5.3%	3.5%	-20.4%	-4.0%
Infrastructure funds				
2014-15	51.2	9	698,071	3.9
2015-16	69.7	8	688,683	4.2
2016-17	65.1	7	838,068	4.8
% change	-6.6%	-12.5%	21.7%	13.7%
% change	-21.4%	-28.9%	-17.1%	-55.4%

Exchange-Traded Market Trends

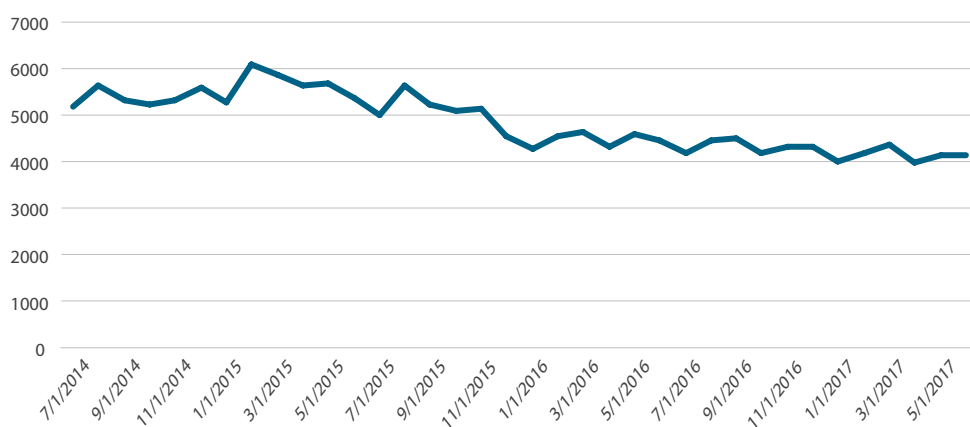
Value traded (\$),
daily average, ASX
& Chi-X



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



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



Foreign Exchange Market

Ray Attrill, Head of Foreign Exchange Strategy, National Australia Bank

2016-17 proved to be a largely trendless year for the Australian dollar, encompassing a relatively narrow annual trading range, a decline in intraday spot market volatility, lower options-implied volatility and not unrelated, a significant fall in FX market turnover in the Australian market.

Against the US dollar, the AUD began the year very close to 75 cents and ended just below 77 cents. The high for the year of 0.7778 came on 8 November, just in front of news that Donald Trump had been elected President of the United States, and the low of 0.7176 was some six weeks later on 23 December. This decline needs to be seen in the context of a broad-based US dollar rally in the aftermath of Trump's victory, with markets enamoured at the prospect of the new US administration delivering on election promises related to infrastructure spending, tax and regulatory reform. Much of this market optimism faded from January onwards, alongside which expectations for additional Federal Reserve monetary policy tightening later in 2017 progressively eroded. These factors brought the US dollar back down, in the process lifting the AUD-USD exchange rate back towards its pre-US election highs. In trade-weighted terms, AUD rose from 62.50 to 65.30 over the whole financial year, a 4.5% gain assisted by a 15% rise in Australia's terms of trade.

The six cent high-low range in AUD-USD in 2016-17 compares with a 10 cent range in 2015-16 and 20 cents in 2014-15. The average intra-day spot market range of 66 pips was down from 88-90 pips seen over the two preceding years. One month

options-implied volatility in AUD-USD declined to 9.3% from 12% in 2015-16. In this context, it is hardly surprising that FX turnover in the Australian market declined in 2016-17, in total by just under 9% across spot, forwards and swaps (from \$40.4 trillion in 2015-16 to \$36.8 trillion). Spot volumes fell by a third, forwards by 6% while FX swaps activity actually rose, by about 2%.

The decline in spot FX volumes can be explained at least in part by the reduction in macroeconomic or fundamental trading opportunities and hence a further reduction in the role of leveraged, speculative players in the spot market. This is a phenomenon that had earlier been observed in the Bank for International Settlements (BIS) triennial survey of global FX turnover covering the period between 2013 and 2016 (Downsized FX market: causes and implications, BIS, 11 December 2016). A downtrend in participation by hedge funds and other proprietary trading firms looks to have continued through 2017, evidenced by the steeper decline in spot turnover involving non-financial institutions than between reporting dealers.

The lack of volatility and absence of any strong directional trends in AUD exchange rates also reduced incentives for Australian importers and exporters to hedge forward foreign exchange exposures. This is reflected in sharply reduced volumes in forward foreign exchange transacted on behalf of non-financial institutions relative to the overall universe of FX forward activity, both in AUD and non-AUD currencies.

Structural changes in the FX market are also relevant in explaining the disproportionate decline in spot volumes

relative to FX derivatives. This can be dated to the extreme volatility following the Swiss National Bank's abandonment of the EUR-CHF peg in January 2015, which the BIS notes 'sent shockwaves through the prime brokerage industry, causing prime brokers to raise fees and cut clients.' This reduced participation by hedge funds and other leveraged players (including High Frequency Trading firms), as well as reductions by some banks in their exposure to retail margin brokerages. Some banks have also been retreating from spot market making activities, reverting to agency-type business rather than acting as principal. While this has occurred alongside the growth of non-bank liquidity providers, the overall capacity of the market with regards to risk warehousing shrank between 2013 and 2016, and may have further reduced in the Australian market in 2016-17.

In contrast to the decline in spot and forward FX volumes, FX swap activity actually rose last year, up 2% on 2015-2016. This however disguises a sharp fall in swap activity by non-financial institutions (principally pension funds and other institutional investors) suggesting less hedging activity than in prior year and where again, the absence of volatility or strong directional trends are doubtless relevant. Holding up overall FX swap volumes therefore was a rise in activity among financial institutions. This likely owes something to the opportunities evident in FX swap markets for some institutions to enhance their returns on lending Australian dollars or other currencies, most notably against the Japanese Yen. ■

The lack of volatility and absence of any strong directional trends in AUD exchange rates also reduced incentives for Australian importers and exporters to hedge forward foreign exchange exposures.

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	592	2838	428	3857
2016-17	547	2228	268	3043
% change	-7.6	-21.5	-37.3	-21.1
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	720	6770	218	7708
2016-17	570	4062	52	4683
% change	-20.8	-40.0	-76.2	-39.2

cont...

FOREIGN EXCHANGE TURNOVER IN AUSTRALIA^a (AUD\$ BILLION) cont...

	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
2016-17	822	381	383	1587
% change	-9.1	-16.3	-34.6	-18.4
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	921	103	1162
2016-17	170	1072	84	1327
% change	23.8	16.5	-18.3	14.2

cont...

FOREIGN EXCHANGE TURNOVER IN AUSTRALIA^a (AUD\$ BILLION) cont...

Transactions by foreign exchange dealers with:	Financial institutions local	Financial institutions overseas	Non-financial institutions	Total
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	3643	8965	326	12934
2016-17	3402	8193	244	11838
% change	-6.6	-8.6	-25.1	-8.5
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	1564	11016	204	12785
2016-17	1603	12661	76	14341
% change	2.5	14.9	-62.7	12.2

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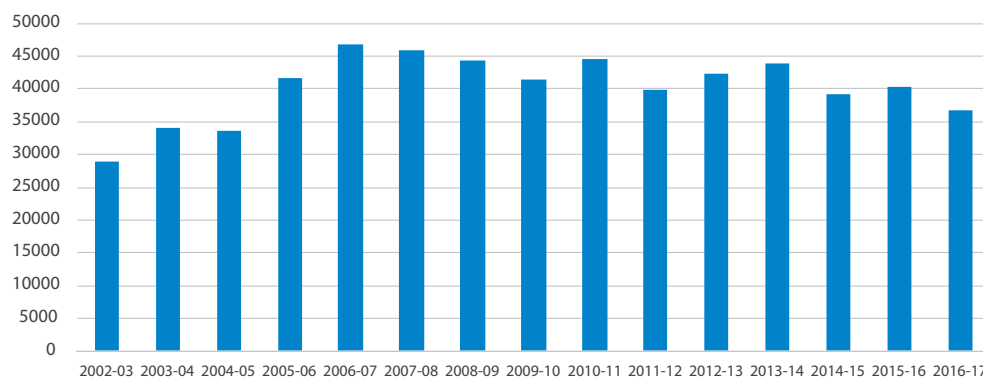
FOREIGN EXCHANGE TURNOVER IN AUSTRALIA^a (AUD\$ BILLION)

Transactions by foreign exchange dealers with:	Financial institutions local	Financial institutions overseas	Non-financial institutions	Total
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	7560	30965	1866	40391
2016-17	7114	28597	1108	36819
% change	-5.9	-7.6	-40.6	-8.8

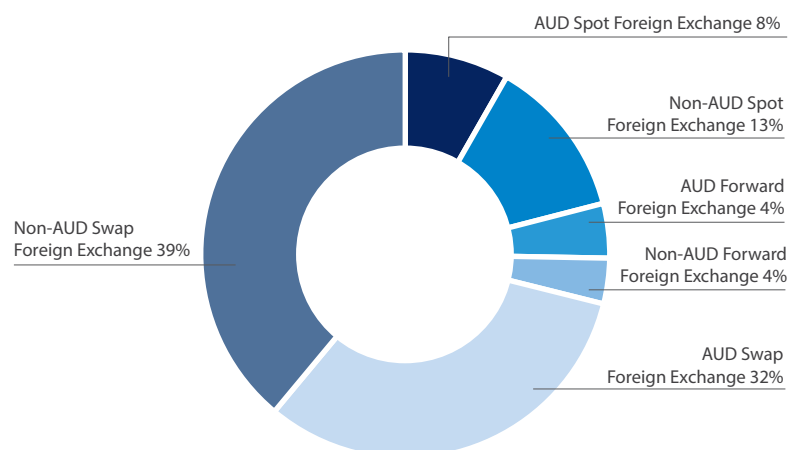
^a The Reserve Bank of Australia reduced the frequency of its survey data collection from monthly to quarterly in January 2013. As such, the 2012-13 total is based on reported monthly data for July-December 2012 and January and April 2013, with estimates used for the remaining months (February, March, 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

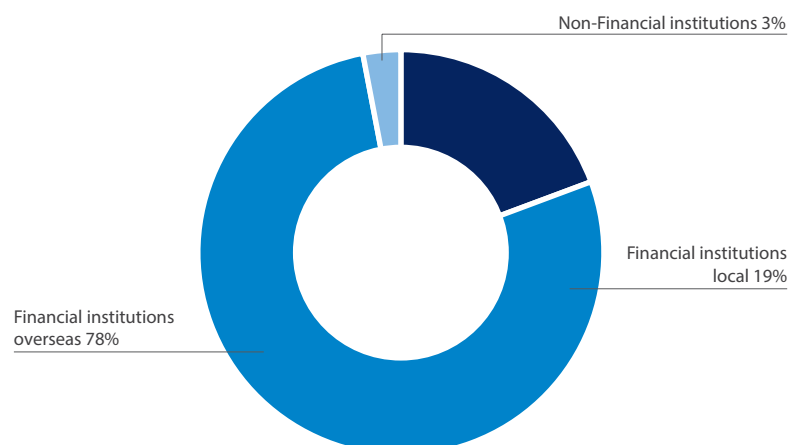
Foreign Exchange
Turnover in
Australia
(AUD billion)



Foreign Exchange
Turnover by
Instrument



Foreign Exchange
Turnover by
Institutional Type



The Foreign Exchange Global Code of Conduct

Mark McCarthy, Director of Markets, AFMA

The FX Global Code was launched in May 2017 and provides a common set of guidelines to promote the integrity and effective functioning of the wholesale foreign exchange market.

The establishment of the Code was facilitated by the Foreign Exchange Working Group (FXWG) which operated under the auspices of the Bank for International Settlements' Markets Committee and was comprised of central banks from sixteen jurisdictions around the globe. The FXWG was chaired by the Reserve Bank of Australia's Deputy Governor, Dr. Guy Debelle.

The effort to create the Global Code was a collaborative one and developed by a broad cross section of the foreign exchange market after the FXWG formed a Market Participants Group (MPG), which included representatives from interbank counterparties, institutional investors, service providers and market regulators. Successive drafts were prepared by the FXWG and the MPG and those drafts were provided for comment by regional Foreign Exchange Committees sponsored by FXWG members and certain industry groups with the aim of obtaining input from a diverse group of market participants.

The Global Code does not impose legal or regulatory obligations on market participants nor does it substitute for regulation. It is intended to serve as a

supplement to local laws, rules, and regulation by identifying global good practices and processes. The guidance provided through the Code applies to the everyday conduct of business in the foreign exchange market and will support the integrity and effectiveness of the market. The Code sets collective industry values for the market and reduces areas of potential uncertainty about market practice through many useful practical examples.

Widespread adoption of the Code is vital to the effective functioning of the foreign exchange market. Given the Code's voluntary nature, it will only be effective in strengthening conduct standards if market participants embrace, adopt and adhere to it. A Global Foreign Exchange Committee (GFXC) comprised of central bank and private sector delegates was established in May 2017 to promote and maintain the Code. The GFXC supports market-led mechanisms that raise awareness of the Code and aim to promote the Code's widespread adoption.

The Global Code does not impose legal or regulatory obligations on market participants nor does it substitute for regulation. It is intended to serve as a supplement to local laws, rules, and regulation by identifying global good practices and processes.

Market participants are expected to sign a "Statement of Commitment" to demonstrate their recognition of and commitment to adopting the good practices set forth in the Code and the GFXC is promoting the development of "public registers" for market participants to post their Statement of Commitments. The

registers will facilitate market participants declaring their attendant recognition of, and commitment to, adopting the good practices set forth in the Code and assist interested parties in identifying market participants that have done so.

AFMA has welcomed the launch of the Code and acknowledges the extensive work undertaken by FXWG and by Dr Debelle to develop the Code and bring it to implementation. A well-functioning FX market is very much in the interest of all market participants and the broader community. The Code is in alignment with AFMA's industry guidance for the broader Australian financial markets, including through our Code of Conduct. AFMA encourages adherence to the Code by FX market participants and will actively promote the Code to our members. ■

Fixed Income

Martin Whetton, Senior AUD Rates Strategist, ANZ

The 2016-17 financial year saw several significant events and milestones in the Australian interest rate market.

The new financial year started with Australia's sovereign rating put on outlook negative from Standard & Poor's. The ratings change came as commodity prices started to weaken and the economic outlook softened. While the shift on the rating did not cause issues for Australian Commonwealth Government Bonds, it came at a time when the Federal government had announced a record amount of sovereign debt to issue in a year, at AUD100bn.

In terms of monetary policy, the RBA followed its official cash rate cut in May

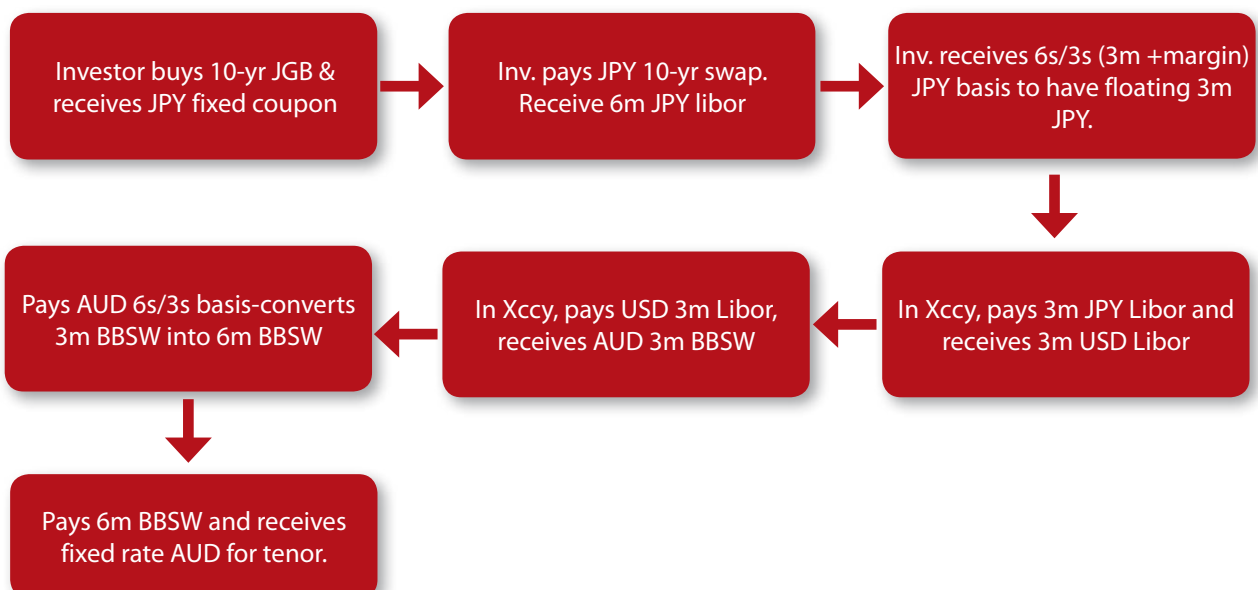
with a further 25bp cut to 1.5% in August 2016. This was part of a move to counter the weakness in inflation and particularly wage growth. Market expectations for cuts had lifted substantially ahead of the cut, with pricing suggesting 50bp more of cuts would come over the following year. After the August rate cut, market pricing did not move above 0bp of cuts until mid-December.

The cut in the official cash rate brought about the historic lows in Australian bond yields, with the benchmark 10 year rate dropping to 1.90% later in the month. However, the global backdrop was changing noticeably, and yields started to rise across markets. A change in the global inflation outlook as commodity prices recovered saw bond markets challenged sharply. This was reinforced with the unexpected election of Donald Trump as US President. Trump's agenda was to pursue a high spending, infrastructure

focussed government that was expected to drive inflation higher, leading to an interest rate response from the US Federal Reserve. Global markets anticipated a faster pace of Fed funds rate tightening and an expedited move to reduce the size of the Fed's balance sheet. This environment created a perfect storm for rates markets and Australia, with a relatively large borrowing program, saw a widening in bond spreads to the US.

A major structural development for the Australian markets took place in this period, with the successful issuance of a 30-year Australian government bond. While long tenor issuance was commonplace many decades ago, this issue was the first of modern times to extend to 30 years. The AOFM issued AUD7.6bn of the new 30-year maturity and saw a book of almost AUD14bn. The successful deal attracted significant global interest, with 65% allocated to offshore investors, the UK, US and Japan.

FIGURE 1:
JGB Asset Swap Repack



Source: ANZ Research

FIGURE 2:



Source: Bloomberg, ANZ

By extending the sovereign yield curve to 30 years, and with the intention to continue to support long dated issuance, the AOFM has opened the door for domestic issuance in longer tenors. Previously, borrowers seeking long dated debt have had to seek liquidity via the USD private placement (PP) market, which involves significant costs.

The heavy presence of Japanese investors in this deal, as well as many other long dated deals should also be noted. Japanese insurance mandates have held AUD assets for many years, in turn offering AUD-denominated policies for their investors. One of the more interesting manifestations of Japanese demand comes via the synthetic exposure to Australian dollar assets. The 'JGB asset swap repack' as it is known, involves a series of trades to convert a Japanese government bond (or JGB) into a fixed rate AUD asset.

As the chart below shows, there are a number of legs to the trade which while complex, have become a key component of Japanese exposure to AUD interest rate risk.

In the semi-government bond market, the AAA rated states of NSW and Victoria saw their spreads narrow to the Australian Commonwealth Government Bond curve

One of the other key developments in the Australian fixed income markets during the financial year was the impact of regulatory changes on the repo market. Long considered as a vital part of financial market plumbing, repo rates diverged noticeably from unsecured rates.

as the housing market strength provided strong tailwinds in the property taxes of these states. Moreover, the sale of assets by the states provided additional support for these markets as supply remained low and the governments had a reduced debt issuance profile. Other states benefited from tighter spreads, but the narrowing was less pronounced.

As the financial year ended, state governments were coming back to the borrowing markets for the first time in a number of years, which brought about a general widening in spreads and steepening in semi-government bond yield curves.

One of the other key developments in the Australian fixed income markets during the financial year was the impact of regulatory changes on the repo market. Long considered as a vital part of financial market plumbing, repo rates diverged noticeably from unsecured rates. Several

factors have contributed to this. On the regulatory side, the reduction in balance sheet usage for low yielding, capital intensive businesses came to the fore in this period and brought about higher funding costs. In terms of markets, the increased float of Australian Commonwealth Government bonds on issue combined with low yields has brought about more investors using repo to augment portfolio returns and an increase in bonds held domestically. As Figure 2 shows, the spread of the RBA's open market operation (OMO) repo rate widened to the OIS rate in mid-2016 and this differential has been maintained. A third factor that has driven repo rates higher has been the use of the market to facilitate a cross currency basis swap arbitrage. The raising of AUD cash via lending bonds, has contributed to an ongoing stickiness in the secured lending rates. ■

TURNOVER IN AUSTRALIAN GOVERNMENT TREASURY BONDS, BY TENOR, \$M

Treasury Bonds

Tenor	Total (\$m)
0-2 years	175,198
2-5 years	335,857
5-9 years	226,949
9-12 years	241,862
12+ years	99,191
Total	1,079,057

Treasury Indexed Bonds

Tenor	Total (\$m)
0-5 years	17,760
5-10 years	14,451
10-20 years	7,648
20+ years	2,223
Total	42,082

Source: AOFM

Current Themes in Australian Capital Markets

Steve Lambert, Executive General Manager Corporate Finance, Corporate & Institutional Banking, National Australia Bank

For the past five years, Australian capital markets have been characterised by themes of volatility but also innovation. Volatility has seen markets closed at various times due to many factors, often global in nature. Innovation has been driven by both how to deal with this volatility, but also due to changing investor preferences.

The last financial year mixed this up. Since the resolution of the Brexit vote, apart from a two week period around the US election, markets have been open and quite stable. Capital markets have dealt with a range of geopolitical issues from the Middle East, South China Sea, Russia and North Korea, as well as concerns over Australia sovereign ratings in their stride. It will be interesting how long this will continue.

Australian corporate borrowers were less active in 2016 than in 2015. The syndicated loan markets were down approximately 20% in the year to June 2016 compared to 2015. The corporate bond market in 2016 experienced a slightly smaller decline. Partly this decline is due to the transition of Australia's economy post the mining boom; challenges in the construction industry and; the debate over foreign investment. Overall the bond markets produced similar volumes domestically year on year.

There are three key themes we are seeing in the Australian domestic market. Firstly, the continued rise of the importance of Asian investors; secondly, the rise of the power of self-managed superannuation with the growth of non-institutional investors in the domestic bond market. Both of these themes also impact on our third theme, increased innovation.

Australia continues to run current account deficits; hence we need to borrow money overseas to create a capital account surplus. The importance of Asian investors in funding Australia has been consistent since the Global Financial Crisis, be it through loans and/or bonds. The importance of the offshore market cannot be underestimated. Every year, the percentage of the domestic market that is purchased from Asian investors grows and the number and the variety of the investors from Asia are becoming more diverse both geographically and from the type of institution. We are also seeing more activity from the Asian offices of a number of European or US fund managers. I don't see this changing anytime soon.

The other big theme is the power of self-managed superannuation and the growth of non-institutional investors in the domestic bond market. Traditionally we saw this demand in the hybrid and convertible market but increasingly these investors are providing liquidity in senior debt of all types. 2016 was the year where this went from a consistent, albeit small, bid for new issues, into being a more significant part of most book builds. A number of infrastructure related issuers saw strong bids in 10 year FRN's from this sector and I think this will be a continuing theme as more self-managed superannuation move towards fixed income, a seriously underweight asset class.

Innovation is weaved into both of these themes. NAB issued the first green bond from any commercial bank globally at the end of 2014. In 2015, that transaction was replicated by other banks both domestically and offshore. In 2016, the green bond market stepped up another level, we arranged the first green certified securitisation transaction for Flexigroup and the first green bond from an Australian Government Authority, Treasury Corporation of Victoria. This was followed in March 2017, when Queensland Treasury Corporation issued a green bond and NAB printed the first offshore green bond from an Australian issuer. This market is certainly becoming more topical for Australia and a reflection on the growing investor appetite for assets that are socially responsible.

In April 2017 NAB launched a world first, an AUD500mn Gender Equality Social Bond. This market will continue to grow as investors continue to have the desire for investments that are attractive in their own right and equally have purpose.

Loan markets

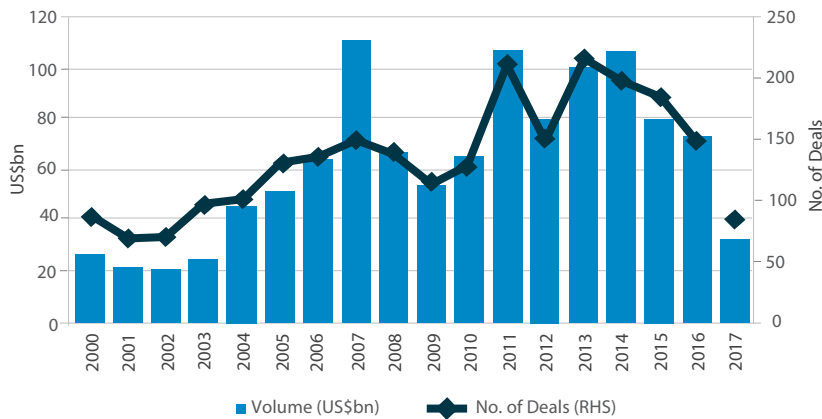
Looking at overall statistics year to date, the Australian loan market has been subdued versus previous years with YTD volume down approximately 20% YOY, which is a similar experience across the Asia Pacific region.

The decline has been due to a combination of factors, principally:

- Low credit growth resulting in a lack of demand by the corporate sector for credit;
- Reduced level of refinancing due to significant refinancing occurring over the last few years; and
- Increased loan pricing making it less

FIGURE 1:

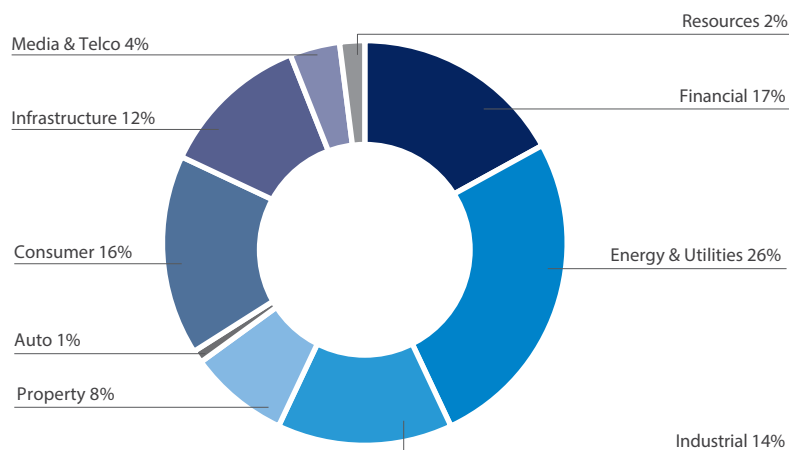
New Loan Market Volume (US\$bn)



Source: Thomson Reuters, LPC Data

FIGURE 2:

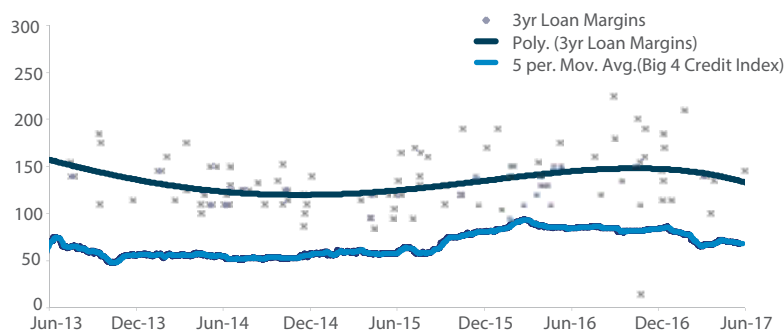
Loan deals by sector



Source: Thomson Reuters, LPC Data

FIGURE 3:

3 yr transactions in the S&P A- to BBB- equivalent band vs Big4 Credit Index



Source: Thomson Reuters, LPC Data

conducive for borrowers to refinance early compared to previous years.

Although loan volume was down significantly, the year was active with an increase in new money deals that have been a combination of additional funding raised by corporates; M&A and privatisation. These transactions have been meaningful in volume with strong support by banks.

Consistent with previous years, market liquidity has remained strong, with all syndicated facilities coming to market oversubscribed. This year has been highlighted by more event driven transactions (acquisition and privatisation) than prior years and transactions have supported a wide variety of sectors which is a key feature of the loan market.

The loan market also experienced an increase in new banks establishing a branch in Australia, improving local liquidity available to Australian borrowers. Most of the banks that established a presence were of Taiwanese origin. A few transactions have additionally been syndicated into the Asian region, which have also been well supported by banks in key regions of Singapore, Taiwan, Hong Kong/China and regional Japan.

Drivers of change

Unlike previous credit cycles, where an increase in loan pricing was associated with a tightening in market liquidity, the market experienced increased pricing without any noticeable contraction in credit availability. The catalyst for this was the market volatility experienced in Q4 2015 impacting on funding costs of banks globally resulting in loan pricing widening in the order of 20 – 30 basis points.

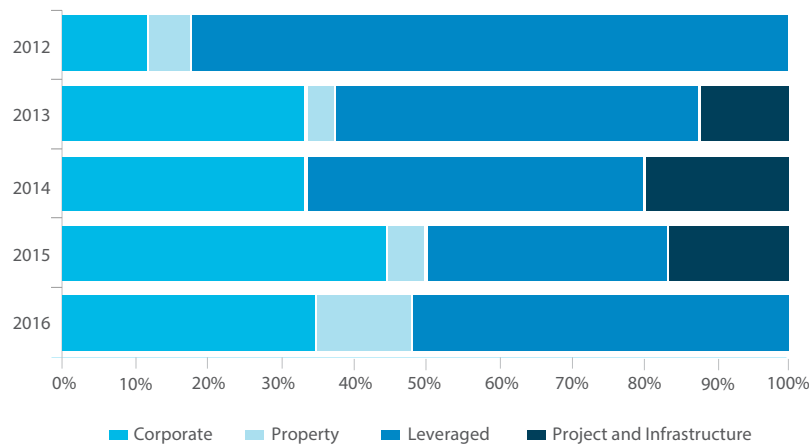
Australian Loan Market pricing

Banks have also been increasingly affected by the cost of additional capital raised to meet increased prudential requirements imposed by regulators.

The ability of banks to pass on increased costs has been limited due to continuing strong liquidity and subdued market volume. Banks have been increasingly balancing the level of commitment provided to borrowers with the overall relationship, given the increased cost of capital. This is resulting in syndicate composition broadening, to include other banks or non-bank investors

FIGURE 4:

Breakdown of funds participating in loan transactions



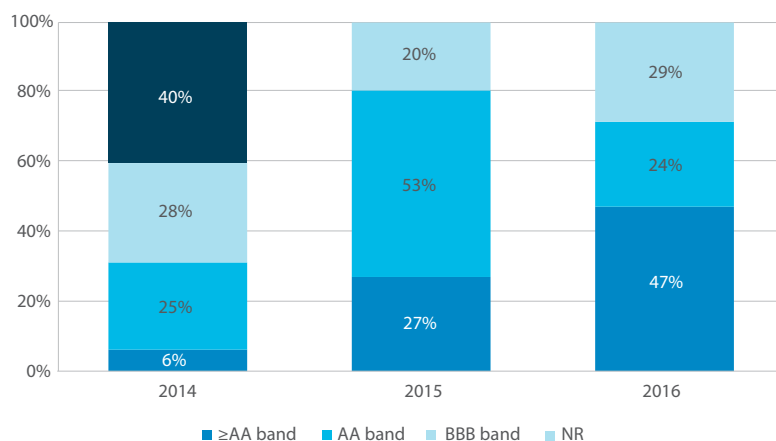
Source: Thomson Reuters, LPC

FIGURE 5:

	July 15-June 16	July 16 - July 17
IG Corporate Debt Markets	122.8	133.5
Financials	62.4	56.9
Corporates	11.4	10.6
Govt	49.0	66.0
Securitisation	23.9	31.4
RMBS	18.3	26.5
ABS	5.6	4.9
Syndicated Loans	73.1	60.0

FIGURE 6:

Recent A\$ corp issuance by rating



Source: NAB Corporate Debt Markets

(institutions and funds) from across the region. Often these new investors are more passive. This approach allows for a more balanced lender group to support clients in meeting their funding and maturity needs.

The loan market is expected to continue to exhibit surplus liquidity relative to demand for credit over the next 12 months. Foreign banks based in Australia and offshore will continue to show active interest to deploy capital as Australia remains a favoured destination particularly in regard to the infrastructure and utility sectors.

2017 will reveal more on how banks deal with regulatory change and increased prudential requirements with the consequent impact of increased funding and capital costs. Each bank will manage this in different ways through either:

- Being more selective of their target market and available capital to deploy;
- Reduced hold commitments and increased distribution of loan assets in primary or the secondary market; and
- Increased securitisation of loan assets.

The growing involvement of institutional investors and funds in the loan market will be complementary to both banks and borrowers.

AUD Corporate Bonds

Total Issuance in the Australian Investment Grade bond markets was AUD 133.5 bn for the year ending June 2017 versus AUD 122.8 bn for the prior period. The increase was primarily due to increased issuance by government borrowers.

Corporate bond issuance did not fall as much as the drop in the syndicated loan markets. In fact, the fall was approximately half as much, and as a result we actually saw a number close to parity between the two debt options.

Financial issuance also dropped year on year. The main driver of this was lower credit growth experienced by the banking sector. We have also seen less AUD Kangaroo bond issuance from US bank holding companies due to US regulatory changes. This accounted for most of the drop.

The market that saw the biggest uptick was in the securitisation market, particularly residential mortgage backed security (RMBS). This market recorded a record level of AUD 26.5 bn, up an astounding 45% on the previous year. This was driven

recently by increased opportunities in the non-bank space as they competed in parts of the mortgage market that the domestic banks stepped away from. This was a result of a number of factors including bank responses to regulatory change and to prudential guidance. This market is likely to see continued growth in 2018.

Asian interest in Australian Capital Markets

Asian buyers of Australian debt have options beyond what we would normally consider in the domestic Australian Capital Markets. They can participate in bilateral loans (if they have an Australian branch) and the syndicated loan markets as well as participating in a number of the AUD offshore bond markets. That is on top of any USD or local currency issuance by Australia borrowers.

Because of this optionality, looking at Asian buyers in any one market, such as the domestic loan market, will typically understate their overall influence.

At around the time of the GFC, Asian demand for Australian debt was primarily driven by Asian-based commercial banks or the Australian branches of Asia based commercial banks. This is still the most important segment of Asian debt demand for non-government debt. However, its importance is changing, as is its shape. Since the GFC, more Asian based banks have created branches in Australia and those that had been here for some time have grown their assets significantly. This has been especially true of the three Japanese mega-banks, but also the Chinese, Taiwanese and Singaporean banks with branches in Australia.

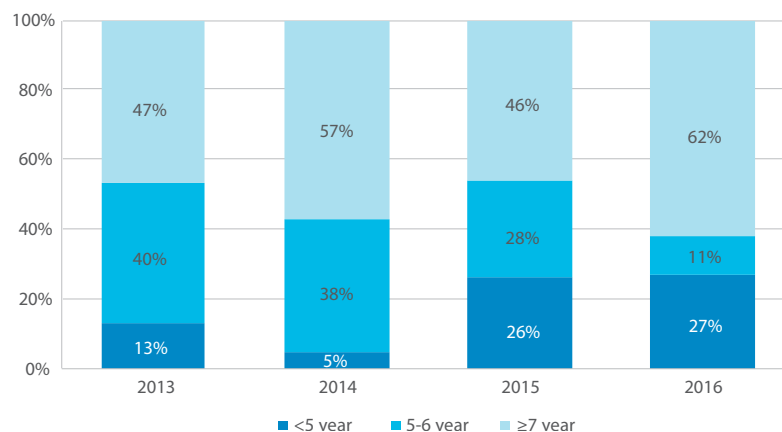
The non-bank demand has come primarily from Asian insurance companies and fund managers as well as from US and European fund managers, mainly based in Asia, managing both global and regional debt mandates.

Non-bank demand has been growing strongly the last 3-4 years and while it is still not as significant as the bank-led demand it can be the largest component of certain deals. We have seen this in two main areas – demand for financial issuers and also in longer dated (>7 years) tenors.

With domestic options subdued in some North Asia Markets, we expect to see a

FIGURE 7:

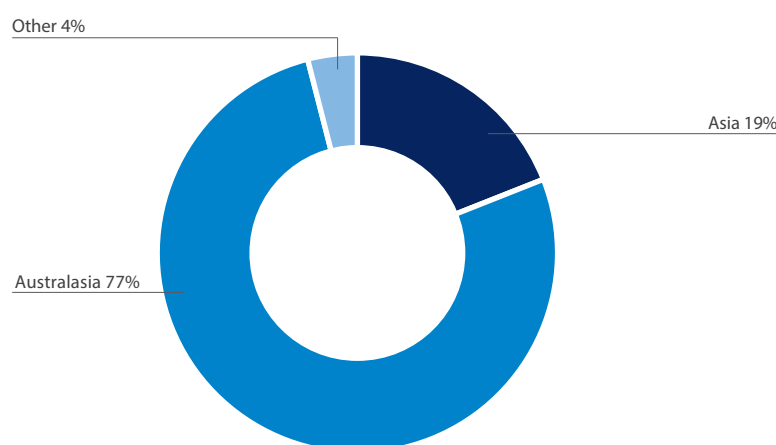
Historical A\$MTN issuance by tenor



Source: NAB Corporate Debt Markets

FIGURE 8:

Asia is a key role in A\$MTN distribution (2016)



Source: NAB Corporate Debt Markets

continued strong bid from the region for Australian paper in many forms. This will also be underpinned by more Asian banks establishing branches in Australia.

Growth in the non-institutional Fixed Income Market

One of the fastest growing and influential parts of the domestic market over the past GFC period, but particularly relevant since 2014, has been the increased bid from

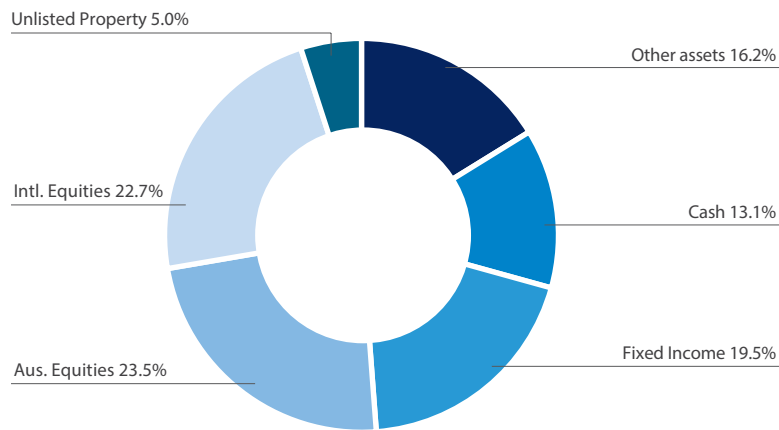
non-institutional investors. This is a very broad group that includes SMSFs, the traditional “middle market” composed of faith-based groups, councils, and family offices, as well as financial advisors and other private wealth channels outside of superannuation.

There have been a number of reasons why this broad group has become significant. Firstly, the total size of the investor pool is huge. Including the AUD 700 bn in SMSFs, this group would have

FIGURE 9:

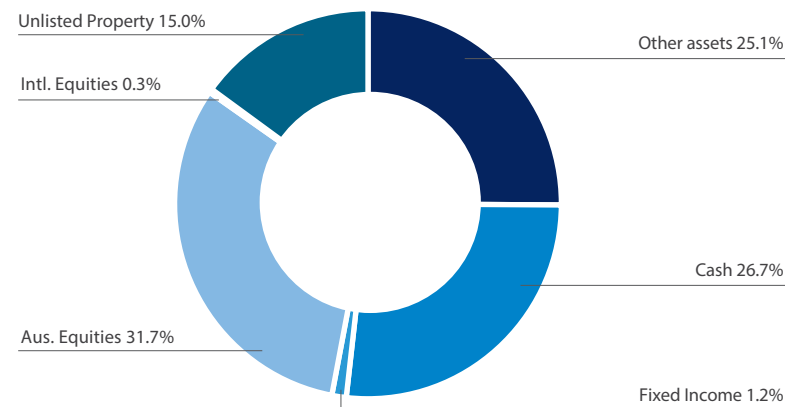
The asset class gap between a professionally managed super fund and a typical SMSF.

Professionally managed super fund



Source: APRA as at June 2015

SMSF



Source: ATO as at June 2015

recent spate of higher yielding, non-rated issuance from names such as NextDC, Centuria Fund Management, Peet Limited, Seek Limited and Qube, all of whom issued in the year to June 2017.

The great positive about the non-institutional bid growing is that we are finally seeing some real investor differentiation domestically. This is good for the market. It embraces liquidity and it helps to remove some of the market volatility. While individual bids may be small, the combination of many such bids, along with the consistency of the bid, does mean that the issuer gets a more diversified investor buyer.

We expect that this market will continue to grow over to next 3-5 years, driven by both the insight of money moving into the sector and by a rebalancing of asset allocation. We believe that the key factor driving markets in the next few years will come from the supply side – not the demand side of the market. ■

over AUD 1 trillion in total investments.

Secondly, demographic change, specifically the aging of the population, has increased awareness of sequencing risk and the need for greater asset diversification.

Thirdly, there has been increased supply of borrowers into the market, beyond the usual hybrid issuance and this has helped awareness of the fixed income.

Lastly, there has been a great deal of

focus, from both regulators and from market participants to educate the market about fixed income. It appears that this is starting to have a positive effect.

One of the interesting features of this market is the gap between professionally-managed and self-managed super fund exposure to fixed income. We have seen increased demand, from a very low base, and this has been the main driver of the

Securitisation

Chris Dalton, CEO, Australian Securitisation Forum

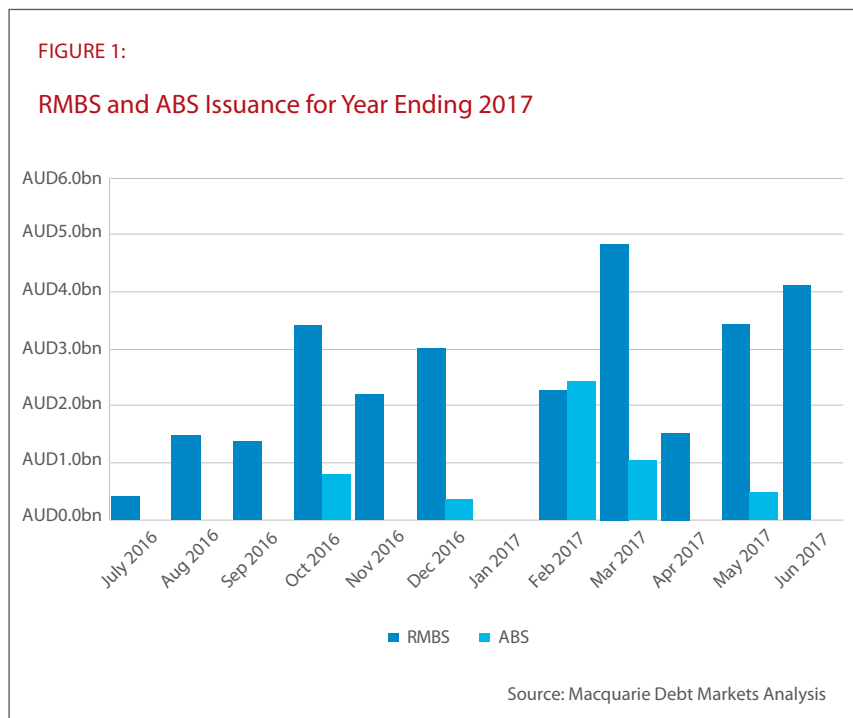
A sustainable Securitisation Market

The Australian securitisation market has rebuilt itself from the impact of the financial crisis of ten years ago. During the year ending 30 June 2017, the issuance volumes of mortgage and asset-backed securities denominated in Australian dollars has returned to the levels that prevailed in the pre-crisis years of 2006 and 2007. However, issuance in non-Australian dollars is only a shadow of pre-crisis volumes largely due to the increased costs and regulatory changes that make the use of cross currency swaps generally uneconomic for issuers.

During the 12 months ending 30 June 2017, issuance volumes of RMBS and ABS continued to remain strong with margins on the securities contracting from the elevated levels that prevailed in early 2016. For the 12 months ending 30 June 2017, total issuance of RMBS and ABS totalled \$33.5 billion.

Issuance of prime residential mortgage-backed securities (RMBS) has dominated the issuance volumes with regular issuance of non-conforming RMBS and asset-backed securities (ABS) throughout 2017. Total issuance of RMBS has exceeded \$28.5 billion, with the ABS market witnessing \$5.0 billion of issuance. The timing of issuance is heavily influenced by local and global credit market conditions with January typically a lay month for activity. The pattern of issuance is illustrated in Chart 1 below.

During FY2017, issuers of RMBS included the major Australian banks (Medallion 2017-1), regional banks, mutual banks and non-banks. A trend throughout the year has been the regular issuance by non-bank lenders such as Pepper, Resimac, Firstmac and Liberty Financial. Funding by securitisation is critical to the business models of these lenders and they have taken advantage of more settled and predictable market



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conditions throughout the year. ANZ Bank returned to the RMBS market after a 12-year absence with its Kingfisher 2006-1 transaction in November 2016. This \$2.0 billion transaction was structured to achieve regulatory capital relief with domestic and overseas investors participating.

Latitude Financial was a new ABS issuer to come to market in March 2017, issuing \$1.1 billion of credit card ABS through its

Australia Credit Card Master Trust. The transaction was notable as the first master trust structure to be established since the financial crisis and the first credit card ABS transaction in Australia for many years. A second issue through its master trust was completed in September 2017.

Chart 2 illustrates the rise and decline of the Australian residential mortgage-backed securities (RMBS) market from its

FIGURE 2:

Australian RBS Issuance

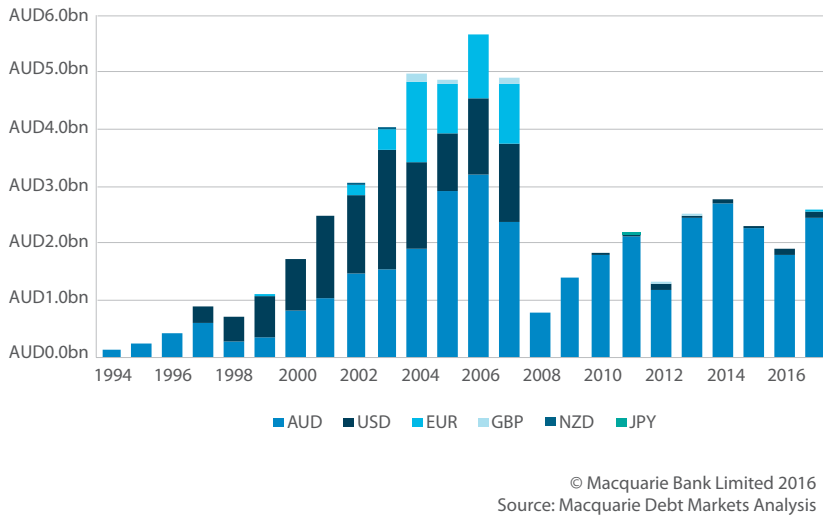
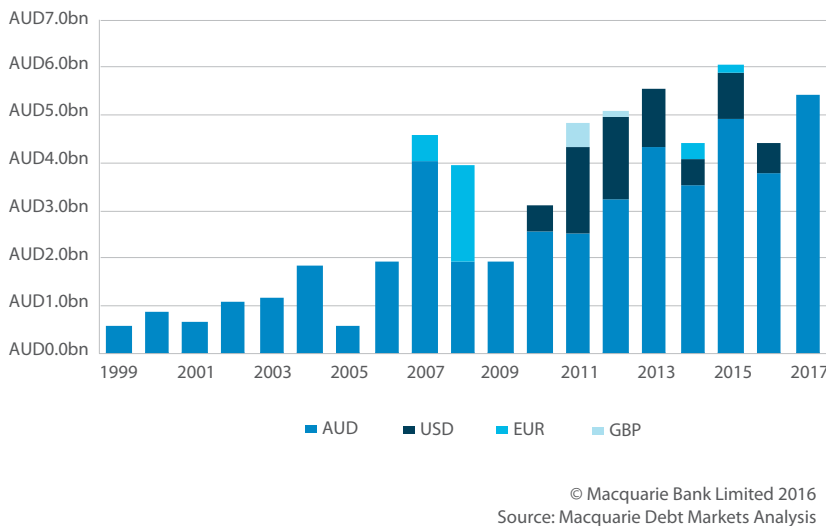


FIGURE 3:

Australian ABS Issuance



inception to the pre-crisis peak through to August 2017.

Chart 3 below illustrates the pattern of issuance of asset-backed securities (ABS) from the instigation of this segment of the market. While this is a smaller part of the securitisation market than RMBS, it is interesting to note that it did not suffer the same contraction that the RMBS sector

did. This was due to the limited supply of new securities, the short tenor of the security and the strong credit performance of the collateral. ABS issuers have been able to issue some securities denominated in currencies other than Australian dollars. ABS issuers such as the Macquarie Group's SMART program has issued ABS in US dollars as the short tenor of the underlying

assets while the margin on the receivables makes the swap from Australian dollars to US dollars economic.

The Australian securitisation market is different in character than its pre-crisis form. While residential mortgages continue to be the dominant asset class, with auto and equipment receivables continuing to provide attractive diversification opportunities for investors, casualties of the financial crisis and its aftermath have been the commercial mortgage-backed, SMEs and asset-backed commercial paper sectors which have effectively disappeared as a result of both changes in risk appetite and regulatory reform.

Today's market is characterised by a wider variety of ADI issuers from the major banks, regional banks, mutual banks and non-banks. With support from the AOFM from late 2008 to early 2013, the Australian RMBS market is one of the few markets that has continued to function with relatively regular issuance since 2008. In the first half of 2017, Australian RMBS issued in the public markets has reached AUD equivalent of \$13.65 bn, up from last year's \$7.3 bn and at a similar level to 2014.

The domestic investor base for RMBS/ABS can be classified into the institutional credit and fixed income managers, bank liquidity books, bank balance sheet and a small but growing sector of new specialist credit funds and even private high net worth investors. There has also been a notable increase in investor participation from Asia. The inclusion of RMBS and ABS as eligible assets under the Reserve Bank of Australia's (RBA) committed liquidity facility (CLF) underpins the demand for new securities.

Regulatory reform of Australia's Securitisation Market

The financial crisis of ten years ago sparked a firestorm of regulatory reform of global securitisation markets. The crisis highlighted deficiencies in the origination, distribution, investment and regulation practices of certain securitisation markets (primarily the United States).

The regulatory response of key regions such as the United States and Europe have been varied and somewhat uncoordinated. Australia's securitisation market did not exhibit similar problems witnessed in

the U.S. and Europe during the financial crisis. However, the primary regulation of securitisation by Australia's regulated financial institutions, APRA's APS 120, was shown to need an overhaul to provide a more comprehensive and contemporary framework for the market. This reform spanned several years and was only recently concluded in late 2016.

Australia's Regulatory Response

After two lengthy consultations, APRA released the final version of its prudential standard governing securitisation, APS 120, in November 2016 (Standard). In April 2017, it released the final version of the practice guide APG 120 and in May 2017, the reporting requirements under ARS 120, to compliment the Standard. The new Standard will be effective from January 2018.

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APRA defines a securitisation to be where the cash flow from a pool of financial receivables is used to service obligations to two or more tranches/classes of "creditors" (i.e. debt obligations), with each tranche reflecting different levels of credit risk.

The new standard governs an Australian Deposit taking Institution's (ADI) exposure to a securitisation whether it is as an:

- issuer;
- an investor; or
- a facility provider (e.g. warehouse

facility or interest rate swap).

Unlike other jurisdictions, the Australian prudential framework is not prescriptive. It is principle-based and intended to operate in the nature of broad guidelines. It also governs public securitisations and private securitisation (e.g. warehouse facilities and internal securitisations).

The focus of the current version of APS 120 (which will be superseded in January 2018) is on what requirements an ADI needs to meet to achieve full regulatory capital relief for the transaction. APRA's interest to date has been that depositors of an ADI are not exposed to any risk arising from the transfer of assets to a bankruptcy remote special purpose vehicle (SPV). Under the new Standard, this is now expressed as a quantitative threshold:

- An ADI can retain no more than 20% of non-senior securities issued (in aggregate, and of any tranche);

achieve capital relief;

- An ADI cannot repurchase non-senior securities once sold other than to effect a 10% clean up call (no date-based calls are allowed for capital relief deals);
- Funding through securitisation must be in place for the life of the underlying pool (i.e. securities issued are sufficient to fund securitised assets up to their longest contractual maturity date);
- APRA expects originating ADIs to "measure, monitor and manage liquidity risk of call options";
- Retained securities and other securitisation exposures (e.g. swaps) are risk weighted or deducted from CET1 capital (depending on rating);
- Cap on total capital requirement: no more than would have been held against assets had they not been securitised.

The new Standard provides guidelines for:

1. funding-only securitisations where no capital relief arises from the transaction;
2. capital relief transactions that can achieve up to 80% reduction in regulatory capital;
3. master trust structures; and
4. internal securitisations that are established to provide a portfolio of securities which can in certain circumstances access liquidity from the RBA.

Notably the new Standard explicitly permits the issue of securitisations where the originating ADI does not desire to achieve regulatory capital relief in respect of the securitised assets. The new Standard provides much needed and welcome clarity on this.

Where the transaction is a funding-only securitisation, the securitised assets are included when calculating regulatory capital for credit risk, subject to the requirements of APS 112 or APS 113. The new Standard clarifies that an ADI does not need to have regard to the interposed structure when assigning risk weights to securitised assets. An ADI does need to hold regulatory capital (credit risk) for facilities or exposures to the securitisation SPV where those relate to the securitised assets (e.g. interest rate swaps).

While the new Standard adopts a pragmatic approach to funding-only securitisations, it does not provide complete flexibility for such securitisations. It maintains restrictions on any form

- An ADI cannot hold or fund the acquisition of non-senior securities and provide other loss positions or credit enhancements which represent more than 20% of the loss cover for senior securitisation exposures, at any time;
- Non-senior securities must be sold to third parties. APRA wants to see a clean transfer of these and not have originating ADIs relying on (in APRA's eyes) less reliable synthetic techniques, hedges or credit risk mitigation to

of implicit support, restrictions on the ability to repurchase underlying assets, requirements and limitations in relation to the provision of services and facilities, and a regulatory stance remains that frowns on excessive purchases of senior securities by the originating ADI (although the revised '20% rule' is now in guidance only, to which APRA has indicated they will take a pragmatic approach).

The market is currently absorbing the detail and implications of the new prudential Standard and is transitioning to revised structures and facility terms and conditions to be ready to meet the requirements of the new Standard on 1 January 2018. The good news is that Australia now has, in contrast to Europe and to a lesser extent the United States, a settled regulatory framework within which to operate in future years.

The new Standard includes the provision to allow an ADI to incorporate a date-based call in the structure. This is important advancement for Australian securitisations as it will attract those investors who prefer to invest in a bullet-style security. To incorporate a date based call, the non-senior securities must share pro rata loss allocation and have the same maturity (i.e. no credit tranching of non-senior securities). A call date can be changed post-issuance.

An originating ADI must retain discretion to exercise a call, and cash flows from securitised assets must be able to meet any margin step-up if the call is not exercised. APRA requires that an ADI cannot structure a call to avoid allocating losses to investors, credit enhancements. A soft bullet (i.e. date-based call) can be funded by the originating ADI, but it should be noted that for LCR purposes they are modelled as an outflow at the earliest exercise date.

A major push by industry over recent years has been to have the new Standard allow master structure structures to be used by ADIs. Under the new APS 120, APRA has allowed such structures defining them as 'securitisation of revolving credit facilities'. In such structures, the 'seller

interest' cannot be subordinated with respect to cash flows or losses to other senior securitisation exposures. That is, the seller interest must rank *pari passu* with senior notes issued to investors. The senior interest must be retained by the issuing ADI. Hence, from 2018 onwards, ADIs will be able to issue securities with a soft bullet maturity date which is effected by a date-based call. This will permit multiple

series of securities to be backed by the same pool of underlying assets.

Conceptually, master trusts could fund not just mortgages but credit cards and other revolving assets. However, the way the new APS 120 is drafted makes it more challenging to construct a master trust for revolving assets such as credit cards. The management of seller interest, dealing with volatility in prepayment rates, and so on in master trust structures is likely to be best suited to larger ADIs.

Market outlook for FY2018

The market is currently absorbing the detail and implications of the new prudential Standard and is transitioning to revised structures and facility terms and conditions to be ready to meet the requirements of the new Standard on 1 January 2018. The good news is that Australia now has, in contrast to Europe and to a lesser extent the United States, a settled regulatory framework within which to operate in future years. Costs associated with securitisation are expected to increase largely as a result of the increases in the regulatory capital discussed above. Notwithstanding these challenges,

securitisation will remain a useful part of most ADIs funding plans.

The outlook for the Australian securitisation market in 2017/18 is buoyant. It is expected that over the next 18 months, there will be a healthy supply of RMBS and a growing amount of ABS issued. RMBS will continue to be the dominant asset class and will be supported by the Australian central bank's acceptance of RMBS as security for its secured liquidity facility as part of Australia's implementation of the liquidity provisions of Basel III.

This optimism also stems from an increase in fund allocation to domestic Australian fixed income and credit funds which is in line with investor risk reappraisal, a recognition by investors of the benefits of fixed income as an asset class amidst the continuing volatility in equity markets. Domestic funds are re-entering the market for quality RMBS as the secondary supply reduces and compelling value propositions develop.

The more medium-term challenge is for the market to attain economic pricing of cross currency swaps to be able to issue tranches of RMBS and ABS in currencies other than Australian dollars and thus have greater access to a wider investor base. Attracting further global investors, particularly investors seeking securities denominated in U.S. dollars, to the Australian securitisation market will assist issuers to diversify and increase their funding options and provide greater certainty to pursue business planning. It will also improve the number of investors participating in Australian securitisation transactions and will improve liquidity for investors. ■

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

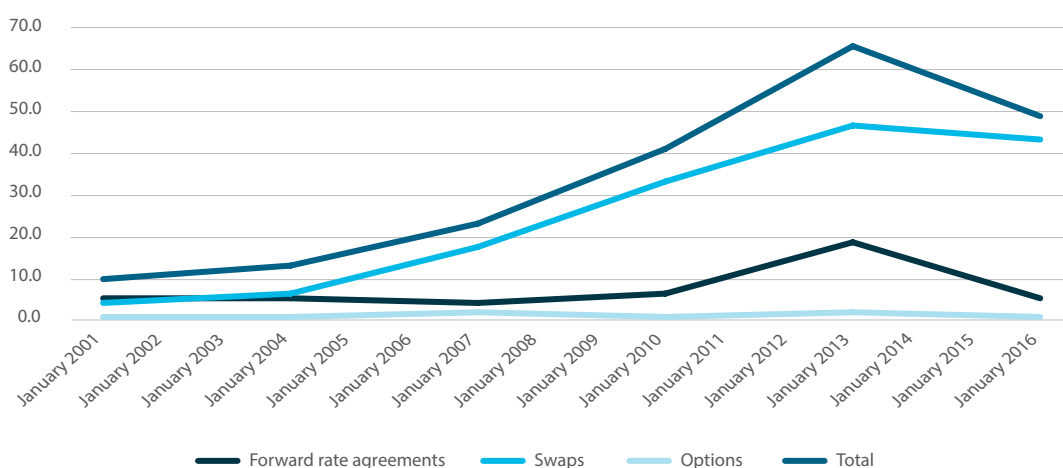
*Indicates less than US\$50 million

(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

Asset Class	Week Ending	Gross Notional (AUD)	Contracts	Week Ending	Gross Notional (AUD)	Contracts	% change in gross notional, FY 2016-17	% change in number of contracts, FY 2016-17
Commodity	4-Jul-16	0	407,067	3-Jul-17	0	61,154		
Credit	4-Jul-16	378,322,102,962	19,142	3-Jul-17	335,409,122,089	16,797	-11.3	-12.3
Equity	4-Jul-16	212,705,719,364	165,068	3-Jul-17	434,545,665,244	207,878	104.3	25.9
Foreign Exchange	4-Jul-16	8,239,442,060,490	745,696	3-Jul-17	8,437,613,853,184	956,510	2.4	28.3
Interest Rate	4-Jul-16	40,076,750,547,335	344,887	3-Jul-17	38,015,078,106,002	367,163	-5.1	6.5
Grand Total	4-Jul-16	48,907,220,430,151	1,681,860	3-Jul-17	47,222,646,746,519	1,609,502	-3.4	-4.3

Source: DTCC

LCH

The Markets' Partner

Continued growth

LCH, the global multi-asset clearing house, continues to be a leader in the market for cleared interest rate derivatives (IRDs) in Australia, clearing 86% of all cleared Australian dollar IRDs in the first half of 2017 via its SwapClear service. Of the entire AUD IRD market (i.e. cleared and non-cleared) currently outstanding, SwapClear's cleared outstanding notional represented 90% of this total¹.

SwapClear clears 18 currencies globally, and in the five Asia-Pacific (APAC) currencies it clears, LCH has witnessed strong growth in volumes in past year; up 26% to 30 June 2017, with AUD notional cleared up 48%.

The continued growth in cleared volumes has been coupled with a 63% increase in the number of Asia-Pacific based clients accessing clearing at SwapClear this year. The service now has clients domiciled in 12 Asia-Pacific countries.

AUD is now the fourth largest currency cleared by SwapClear, as measured by notional cleared, with 64 members and 139 client groups actively clearing AUD-denominated IRD in H1 2017. This activity demonstrates the liquidity and breadth of counterparties clearing AUD at SwapClear.

LCH's members and their clients also continue to actively reduce their notional outstanding through compression services, with six members and a record 55 clients using compression services at LCH in APAC. In 2016, LCH compressed over USD384 trillion in notional across all currencies, which we understand enabled members to make capital savings of up to AUD \$21 billion. Focussing on AUD, over AUD 6.1 trillion was compressed in H1 2017, a 15% increase on the same period in 2016. And in the past year, LCH has enhanced its compression offering to include inflation swaps and to extend multilateral compression to clients.

Service expansion and enhancements

In 2017, LCH has continued to enhance its service in Australia and the broader region. As part of these efforts, LCH has delivered further collateral enhancements in Australia. Commonwealth Bank of Australia was added as the first Australian Protected Payments System (PPS) Bank, allowing LCH to make and receive Australian Dollar payments in the local time zone. This has now been extended to two other Australian banks who are now

settling AUD variation margin through the local Australian payment systems.

In February, responding to customer demand, the SwapClear service extended its operating hours to expand its coverage of Asia-Pacific trading hours.

Regional licences

In September 2016, LCH was granted designated CCP status and authorisation as an Automated Trading Services provider for SwapClear and ForexClear by the Hong Kong Securities and Futures Commission, enabling firms subject to the Hong Kong Interest Rate Swap clearing mandate to comply by clearing at LCH SwapClear.

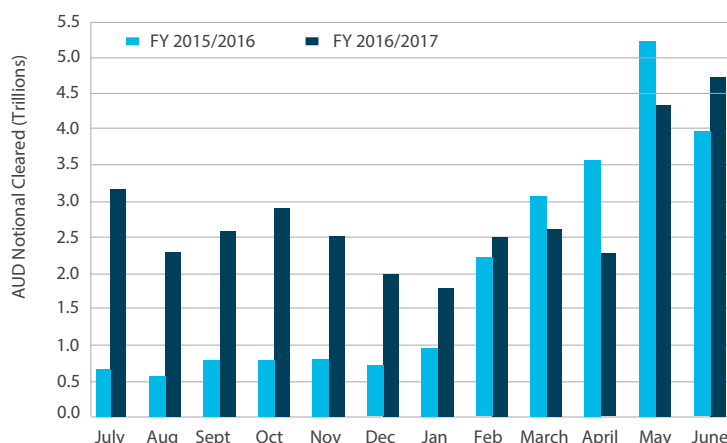
This comes in addition to existing LCH SwapClear licences in Australia, Singapore and Japan, allowing members from across these markets to have access to global liquidity in 18 currencies through SwapClear and 12 NDF currency pairs through the ForexClear service. ■

¹ Total AUD IRD outstanding notional - AUD\$ 23.16trn, as per the DTCC Global Trade Repository.

FIGURE 1:

Financial Year 2015/2016 vs FY 2016/2017 monthly cleared AUD notional at SwapClear

- AUD 22.2 trillion in cleared notional outstanding (as of 30 June 2017)
- Largest day - 3,022 AUD trades cleared on 14 June 2017
- 85,000 AUD trades cleared in H1 2017



LCH

The Markets'
Partner

INTEREST RATE DERIVATIVES ANNUAL TURNOVER SUMMARY BY PRODUCT CATEGORY (AUD MILLION)

1 July 2016 to 30 June 2017	Asset Manager	Bank	Hedge Fund	Other	TOTAL
Interest Rate and Tenor Basis Swaps	13,080,742	279,582,834	57,459,083	1,005,886	351,128,546
Inflation-Linked Swaps	285,219	2,973,154	163,789	569	3,422,732
OIS	7,689,147	239,323,974	106,173,483	-	353,186,604
FRAS	595,653	304,780,648	31,186,597	-	336,562,898
TOTAL	21,650,761	826,660,611	194,982,952	1,006,455	1,044,300,780

INTEREST RATE DERIVATIVES ANNUAL TURNOVER BY PRODUCT (AUD MILLION)

1 July 2016 to 30 June 2017	Asset Manager	Bank	Hedge Fund	Other	TOTAL
Fixed/Floating Swaps – AUD	473,175	11,628,732	1,807,755	750	13,910,411
Tenor Basis Swaps – AUD	6,683	699,510	38,994	-	745,187
Non-AUD Single Currency (in AUD)	12,415,601	244,596,853	49,531,225	1,004,244	307,547,923
Inflation-Linked Swaps – AUD	-	-	-	-	-
Overnight Index Swaps – AUD	398,325	14,011,562	4,642,654	-	19,052,541
Overnight Index Swaps – NZD (in AUD)	-	-	-	-	-
Overnight Index Swaps – Other (in AUD)	7,290,822	225,312,412	101,530,829	-	334,134,063
AUD FRA	-	-	-	-	-
USD FRA (in AUD)	268,558	174,716,619	23,945,698	-	198,930,875
NZD FRA (in AUD)	-	-	-	-	-
OTHER FRA (in AUD)	327,095	130,064,030	7,240,899	-	137,632,024
TOTAL	21,180,258	801,029,717	188,738,054	1,004,994	1,011,953,023

INTEREST RATE DERIVATIVE REVERSED OR TERMINATED BY PRODUCT CATEGORY (AUD MILLION)

1 July 2016 to 30 June 2017	Asset Manager	Bank	Hedge Fund	Other	TOTAL
Interest Rate Swaps – including Tenor Basis Swaps	10,752,963	222,358,486	52,051,565	824,644	285,987,658
OIS	4,088,368	149,187,513	93,684,452	-	246,960,333
FRAS	257,462	128,085,933	24,011,935	-	152,355,330
TOTAL	15,254,283	499,832,866	169,855,646	825,026	685,767,822



INTEREST RATE DERIVATIVES ANNUAL TURNOVER SUMMARY BY PRODUCT CATEGORY (AUD MILLION)

1 July 15 to 30 June 16	Bank	Asset Manager	Hedge Fund	Other	TOTAL
Interest Rate and Tenor Basis Swaps	228,025,316	9,320,235	44,620,229	821,017	282,786,797
Inflation-Linked Swaps	698,786	38,444	4,180	149	741,558
OIS	189,880,273	3,211,113	84,634,551	0	277,725,936
FRAS	268,099,541	1,554,958	17,132,271	0	286,786,770
TOTAL	686,703,916	14,124,749	146,391,231	821,165	848,041,061

INTEREST RATE DERIVATIVES ANNUAL TURNOVER BY PRODUCT (AUD MILLION)

1 July 15 to 30 June 16	Bank	Asset Manager	Hedge Fund	Other	TOTAL
Fixed/Floating Swaps – AUD	8,517,099	392,669	1,397,118	0	10,306,886
Tenor Basis Swaps – AUD	876,676	28,670	49,775	0	955,120
Non-AUD Single Currency (in AUD)	219,330,327	8,937,340	43,177,516	821,165	272,266,348
Inflation-Linked Swaps – AUD	0	0	0	0	0
Overnight Index Swaps – AUD	9,006,950	479,196	2,652,034	0	12,138,180
Overnight Index Swaps – NZD (in AUD)	0	0	0	0	0
Overnight Index Swaps – Other (in AUD)	180,873,323	2,731,917	81,982,517	0	265,587,756
AUD FRA	0	0	0	0	0
USD FRA (in AUD)	132,559,346	214,831	9,855,578	0	142,629,754
NZD FRA (in AUD)	0	0	0	0	0
OTHER FRA (in AUD)	135,540,196	1,340,127	7,276,693	0	144,157,016
TOTAL	686,703,916	14,124,749	146,391,231	821,165	848,041,061

INTEREST RATE DERIVATIVE REVERSED OR TERMINATED BY PRODUCT CATEGORY (AUD MILLION)

1 July 15 to 30 June 16	Bank	Asset Manager	Hedge Fund	Other	TOTAL
Interest Rate Swaps – including Tenor Basis Swaps	177,029,856	7,440,221	42,703,279	516,512	227,689,869
OIS	76,243,962	2,027,937	76,816,029	0	155,087,928
FRAS	72,372,180	162,979	13,154,201	0	85,689,360
TOTAL	325,645,998	9,631,137	132,673,509	516,512	468,467,157

Repurchase Agreements

REPO AND STOCK LENDING SALES, MARKET VALUE OUTSTANDING (AUD MILLION)

	Banks/RFCs	RBA	Non-resident institutions	Other counter-parties	Total
All securities					
Jun-16	35457	82350	13808	5876	137491
Jun-17	39764	85229	16091	7985	149069
% change	12.1	3.5	16.5	35.9	8.4
AGS					
Jun-16	29598	31123	7175	3146	71042
Jun-17	32801	41368	9158	6650	89977
% change	10.8	32.9		111.4	
Semis					
Jun-16	3663	6901	621	1652	12837
Jun-17	4640	5498			
% change	26.7		-31.4	-61.6	-12.8
Other securities					
Jun-16	2196	44326	6012	1078	53612
Jun-17	2323	38363	6507	701	47894
% change	5.8	-13.5	8.2	-35.0	-10.7

Source: RBA

REPO AND STOCK LENDING PURCHASES, MARKET VALUE OUTSTANDING (AUD MILLION)

	Banks/RFCs	RBA	Non-resident institutions	Other counter-parties	Total
All securities					
Jun-16	33955	35	63625	19306	116921
Jun-17	36864	12	74164	17966	129006
% change	8.6	-65.7	16.6	-6.9	10.3
AGS					
Jun-16	27110	35	32421	13357	72923
Jun-17	30429	12	39249	9908	79598
% change	12.2	-65.7	21.1	-25.8	9.2
Semis					
Jun-16	4291		4066	2692	11049
Jun-17	3606		3884	4447	11937
% change	-16.0		-4.5	65.2	8.0
Other securities					
Jun-16	2554		27138	3257	32949
Jun-17	2829		31031	3611	37471
% change	10.8		14.3	10.9	13.7

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, since 2016, the 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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