7 December 2012 | 25 pages

Australia/NZ

APAC Developed Markets Rates Strategy

Christmas carry-rolls

- Following this week's RBA rate cut and weak Q3 GDP report we still see value in front-end AUD flattening trades. We favour paying AUD 3m1y versus 3y1y given attractive entry levels and carry considerations

- Vol continues to be sold, but AUD gamma looks increasingly cheap versus vega. We suggest 6m expiries as protection against adverse US fiscal scenarios or a generally more uncertain global economic backdrop next year

- Demand for semis is likely to be robust across the curve. We expect asset swapping flows to support outperformance in long-end semis relative to swap and this is also likely to put upward pressure on the 3s10s swap EFP box.

- A buy on dips strategy in NZD rates looks appropriate given the more cautious forecasts in the latest RBNZ monetary policy statement. We expect the extension of low rate guidance to anchor interest rate expectations and as such we like receiving the belly of the 3m forward 1y-7y-10y swap butterfly as the rolldown is high.

- We do not envisage a significant probability of extraordinary policy measures from the BOJ under our base case scenario. However, a LDP-led coalition may push for bolder monetary easing than what is currently being priced in. A front-end steepening position on the JPY basis curve could best capture the impact of any aggressive injections of JPY liquidity by the BOJ.

- Life insurers' activities up to H1 12 suggest continued duration lengthening in JGB holdings. We have now closed out our short 10y JGB position.

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With thanks to
Jacy Sun

Figure 1. Strategy Summary Table

APAC Developed Markets	View	Strategies
Direction	AUD rates markets remaining highly correlated to offshore, notably USTs. Markets continue to range trade, with outright duration unattractive still	Keep duration exposure very light unless ACGBs revisit the top of established trading ranges (3.4-3.5% in 10s)
Yield Curve	AUD curve is currently directional. JGB curve looks relatively anchored out to 5yrs	Hold AUD 6m1yr vs 2y1yr swap flattener. Take profits on conditional 2s10s AUD bear steepener as market has turned around within the range. 5s-10s JPY conditional steepener.
Cross-market	Cross market spread levels have opened up opportunities to position long AUD vs US trades once more	Receive AUD 5y5y vs USD. Medium-term, for positive fiscal cliff outcome sell AUD vs USD payers.
Spreads	Spreads are following risk. Swap spreads are capable of re-tightening into year end in our view, but visibility is obviously quite low currently.	Hold QTC 15s versus SAFA 15s. Keep 3s10s EFP box flattener as hedge to adverse fiscal cliff outcome.
Inflation	Neutral on AUD inflation risk currently	Look to pay fixed on 10y ZCS on any dip towards the 2.70% level
Volatility	Gamma looks to have found a base and now looks better medium-term value than vega, on selected tenors.	Keep 2m10yr vs 6m10y ATM straddles
Risk Allocation	Balanced outlook for duration unless yields rise to more attractive levels in local markets. Spread and curve trades still offer more attractive opportunities.	

Source: Citi Research

APAC Developed Markets

Australia and New Zealand Rates Strategy

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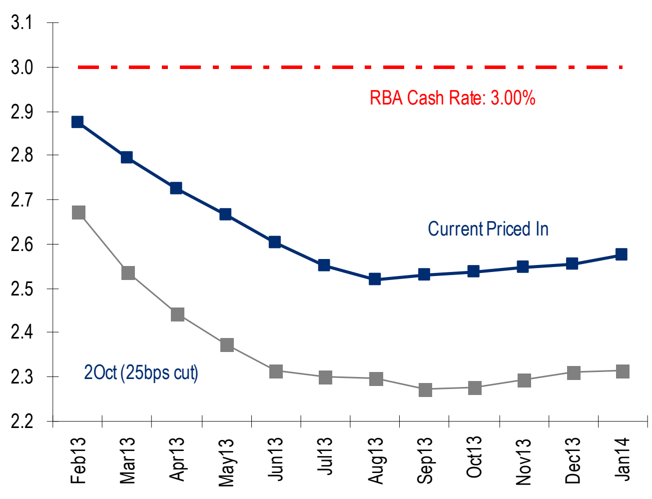
The front-end can run further

The RBA delivered again this week, with the 25bp rate cut bringing the total amount of easing in the current cycle to 175bp. In spite of the uninspiring accompanying RBA policy statement, which provided no forward guidance, we believe that there is still a strong argument for additional policy easing in the New Year. Our economists have concluded this following the release of surprisingly weak Q3 Australian GDP, which saw the year-on-year growth rate decelerate, from 3.8% in the previous period to 3.1%. The weakness in private consumption and private sector non-residential investment spending were both significant factors, with the former being of particular concern as slower mining investment is clearly not being adequately compensated for by household demand. For a full analysis please see: The economic slowdown officially begins.

In our view, the current 48bp of additional easing that is currently priced into the OIS curve in 2013 is too moderate against what promises to be another year of challenging global economic conditions. We are currently retaining a residual receive June OIS position (with only 38bp or residual easing priced in for the first six months of next year, this still seems to be a good risk reward to us). An alternative consideration that we believe still has merit is to position front-end flattening trades on the swap curve. This has notably re-steepened as the market has moved to front-load rate cut expectations. In terms of attractive entry levels and carry characteristics we have identified the AUD 3y1y versus 3m1y spread. This spread has now re-steepened back out towards former resistance levels and should begin to retrace in a lower-for-longer policy scenario. We are electing to take profits on an existing, similar flattening position that we initiated back in July, for a modest 6.5bp profit (see Tradesheet for details).

Figure 2. OIS curve: residual easing mostly priced into H1 2013



Source: Citi Research

Figure 3. AUD 3m1y versus 3y1y spread: re-flattening potential

Source: Citi Research

Trade: Pay AUD 3m1y versus AUD 3y1y at a spread of 64bp. Target 50bp. Stop 70bp.

Below we highlight the relatively attractive carry in AUD short-end forwards, particularly in 1yr and 2yr tenors

Figure 4. 3m carry for AUD forward swap tenors (full details in the Appendix)

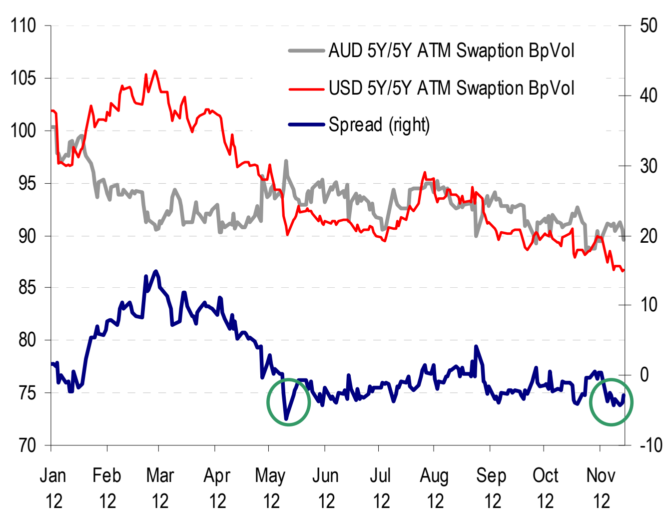
fwd/tenor	1Y	2Y	3Y	4Y	5Y	6Y	7Y	8Y	9Y	10Y
SPOT	- 9.9	- 0.3	2.4	3.0	3.7	4.0	3.9	3.8	3.6	3.5
3M	- 6.3	0.7	2.5	3.2	3.9	4.0	3.9	3.8	3.6	3.6
6M	- 0.4	4.0	4.3	4.7	5.2	5.0	4.8	4.5	4.2	4.3
9M	4.5	6.1	5.8	5.8	6.1	5.6	5.3	4.9	4.7	4.8
1Y	7.1	7.2	6.5	6.4	6.3	5.8	5.5	5.1	4.9	4.9
2Y	7.3	6.2	6.3	6.2	5.6	5.2	4.8	4.6	4.7	4.2
3Y	5.1	5.7	6.0	5.2	4.8	4.4	4.2	4.4	3.9	3.5
4Y	6.5	6.5	5.5	4.8	4.3	4.1	4.3	3.7	3.3	3.0
5Y	6.5	5.0	4.4	3.7	3.6	3.9	3.3	2.9	2.5	2.2

Source: Citi Research

Vols are low, but can probably go lower still

Gamma continues to be pressured lower. We see the rationale behind this with central bank policy in gradualist mode or otherwise aimed at containing tail risk via significant liquidity injections/more credible firewalls in the case of Europe. In Australia we observe that gamma has continued to be under more selling pressure than vega and this provides an opportunity to buy protection against an adverse US fiscal cliff outcome, or a more volatile global economic outlook over the course of 2013. We have previously recommended long 6m10y AUD straddles (financed by selling shorter, 2m expiry options - see *Tradesheet*). The following charts illustrate the relative richness of vega, with AUD 5y5y straddles now trading above USD equivalents and with 6m10yr now trading at similar levels to 2y10yr BP vol. We can see the case for owning parts of the gamma surface, but we are far less convinced that vega will remain supported given the global policy backdrop.

Figure 5. AUD 5y5y Vol – now higher than USD



Source: Citi Research

Figure 6. AUD 6m10yr minus 2y10yr BP Vol

Source: Citi Research

Semis – Bagging a Bargain

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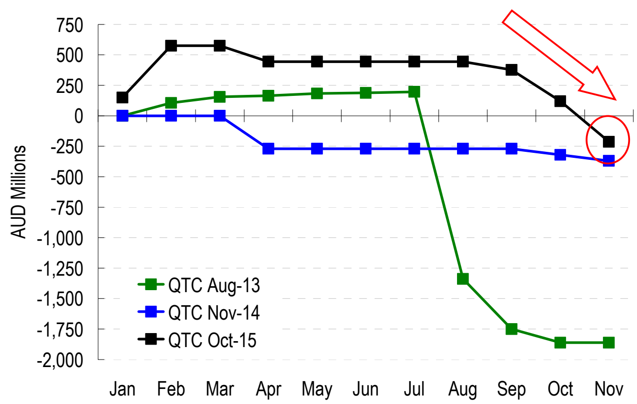
We expect the more benign ratings and supply outlook for QTC to support demand for QTC as well the other semis. The positive credit rating update on Queensland has helped to clear some of the ratings risks with QTC outperforming other semis to tighten by up to 6bps in ASW terms this week following the news (see 'Stable Queensland Ratings Outlook Eases Uncertainty'). Moreover, we estimate cumulative issuance to be at least AUD 6.4 billion which puts QTC on schedule with their FY 2012-13 term debt funding program of AUD 13.7 billion. Consolidation switches into the new QTC 2017 benchmark bond have also complemented existing buyback activity which has progressively moved up the curve (see Figure 7). As shown in Figure 7, for November 2012 QTC was a net buyer of its 2015 line over CY 2012. As the 2015 maturity is still relatively large with AUD 6.9 billion outstanding, we think buybacks will contribute to further short-end QTC spread compression and we still think the QTC 15-SAFA 16 yield spread can compress further (see *Tradesheet* in the rear of this publication).

Figure 7. 2012 cumulative issuance turned negative in the 2015 line



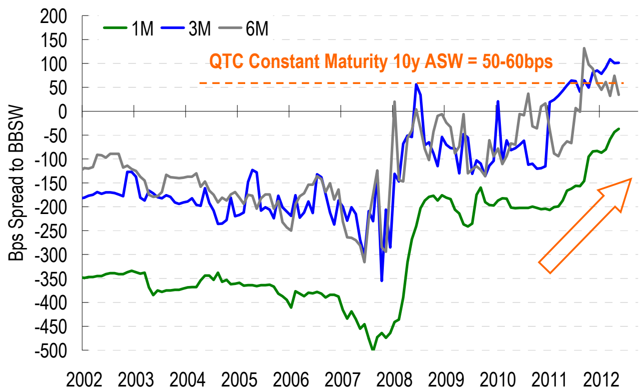
Source: Citi Research, QTC

Figure 8. QTC 15-SAFA 15 yield spread can compress to flat

Source: Citi Research

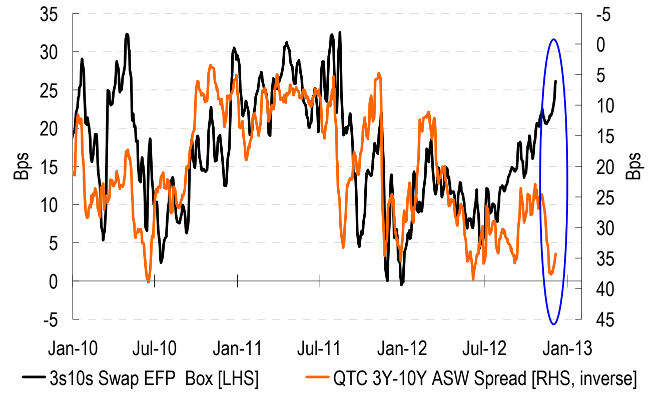
Likewise, we expect underlying demand for long-end QTC and semi spreads to remain robust particularly from domestic bank liquid asset portfolios. Although 6m term deposit spreads to bank bills have stabilized, we still think conditions remain conducive for growth in term deposits given the aggressive pricing in shorter tenors (see Figure 9). For example, 3m term deposit spreads over bank bills have widened to 100bps which is far higher than typical semi ASW spreads with a QTC constant maturity 10y ASW margin only earning +50 to +60bps . The 1m term deposit rates are also converging to bank bill yields even though their tenors are almost as short as the 30 days mandated in the Liquidity Coverage Ratio (LCR) for Basel 3. As noted in previous publications, semis are the highest yielding eligible liquid asset that banks are allowed to hold as a buffer against potential cash outflows from funding sources like term deposits. As many liquidity portfolios report on an 'available-for-sale' basis, we think long-end semi asset swaps will be targeted by banks for the relatively high carry. Credit and supply risks for semis also look contained for now as we enter the mid-year budget review season with NSW and VIC due to report on December 12 and 15 respectively. The historical richness in swaps (relative to semis) in the long-end compared to the short-end is also likely to translate into semi ASW curve flattening and 3s10s swap EFP box steepening from asset swapping flows (see Figure 10).

Figure 9. Short-tenor term deposits still aggressively priced vs BBSW



Source: Citi Research, RBA, CANSTAR

Figure 10. 3s10s swap EFP box likely to rise as semi ASW curves flatten

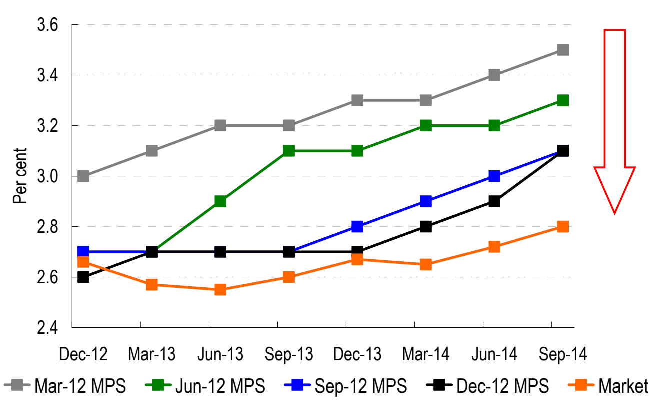


Source: Citi Research, Bloomberg

NZD Rates – Lord of the Flies

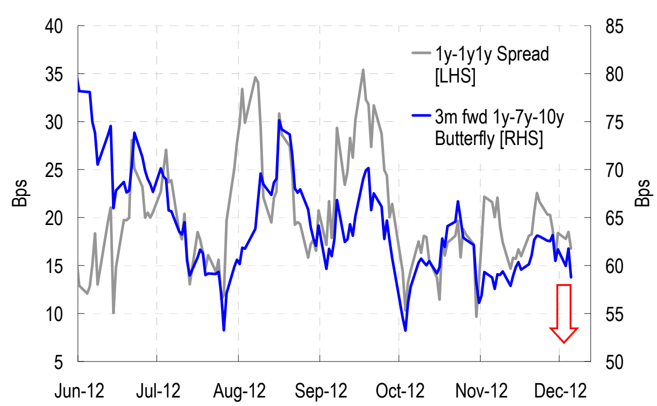
The decision by the RBNZ to leave the policy rate unchanged accompanied a policy assessment which embodied more hawkish language and a more medium-term focus leading the NZD 2y swap yield to gap +8bps higher (see 'Low OCR for longer'). This belies the more bearish forecasts in the Monetary Policy Statement (MPS) with CPI now expected to muddle around the bottom half of the 1-3% target band over the next 2 years. Moreover, in keeping with previous MPSs the low rate guidance was extended by another quarter with the first rate hike expected around Q1 14 (see Figure 11). As we can see from Figure 11, RBNZ expectations of 3m bank bill yields have been progressively downgraded not only in terms of the level of rates but also in timing of the first rate hike. We think the more bullish language understates the immediate risks to growth which were highlighted in recent international and domestic data like the BNZ manufacturing PMI (see 'Value in Yield Convergence Trades'). The NZD money market curve has flattened in line with our weaker activity indicator based on the BNZ survey with the next survey to be released on 13 December.

Figure 11. RBNZ MPS vs Market Expectations for the 3m Bank Bill Rate



Source: Citi Research, RBNZ

Figure 12. NZD 1y-1y1y Swap Spread vs 3m Fwd 1y-7y-10y Butterfly

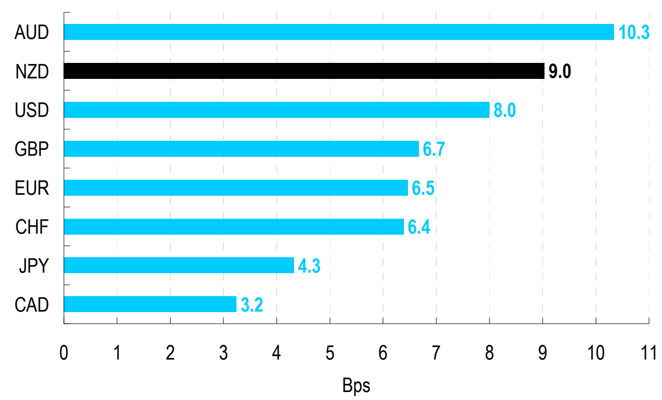


Source: Citi Research

We see scope for the NZD short-end curve to flatten and see this as a buy-on-dips opportunity. We maintain our received position in front-end swaps like the 2y1y and also look at high roll butterflies in NZD like the 3m forward 1y-7y-10y which also offers 9bps of roll per quarter. As displayed in Figure 12, this butterfly has tracked the flattening of the money market curve as proxied by the 1y-1y1y swap spread (see Figure 12). We think this butterfly can tighten towards the bottom of its range and beyond as we consider the substance of the MPS has yet to be fully absorbed by the market. We also like this NZD curvature play for the rolldown as it is relatively high compared to G10 peers who have also maintained low rates guidance like the USD market (see Figure 13). The rolldown is also historically high versus its AUD counterpart which is almost at the bottom of its range (see Figure 14).

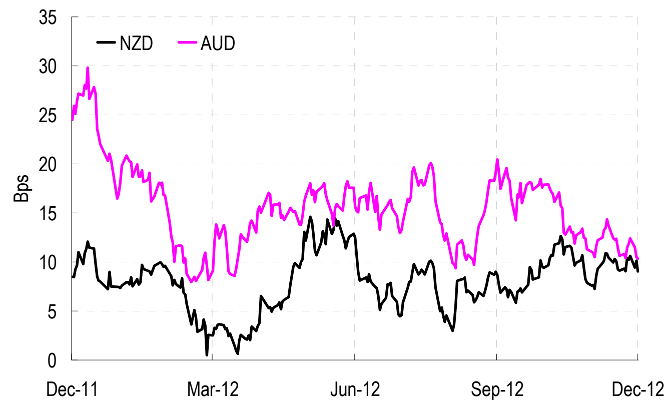
Trade – Receive belly of NZD 3m forward 1y-7y-10y swap butterfly. Entry +59bps. Target +49bps. Stop +64bps.

Figure 13. Cross-Section of 3m Roll on 3m Fwd 1y-7y-10y Butterfly



Source: Citi Research

Figure 14. Time Series of 3m Roll on 3m Fwd 1y-7y-10y Butterfly



Source: Citi Research

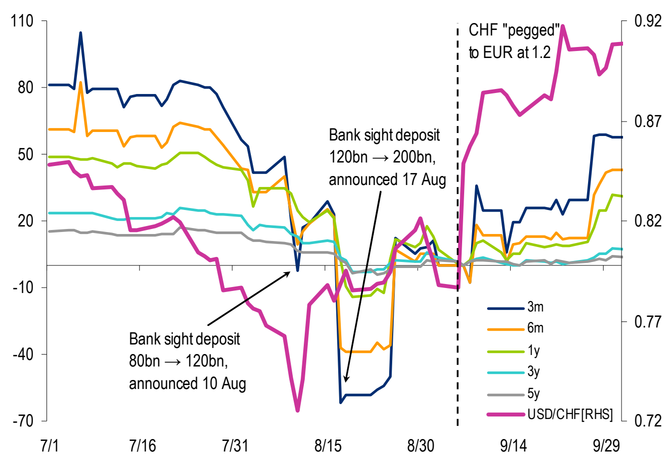
Japan Derivative Strategy

JPY Basis: A Trip Down Abe Road

With thanks to Jacy Sun

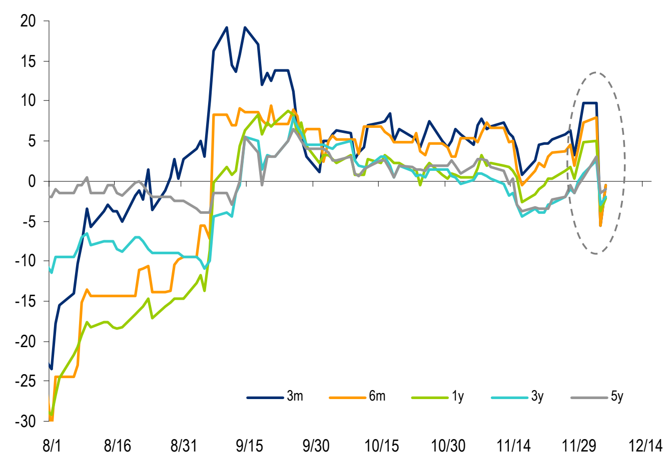
Under our base case scenario for the post election policy platform in Japan we do not envisage a significant probability of extraordinary policy measures from the BOJ, such as a reduction in the current account rate to zero or negative territory, or the establishment of a special fund to purchase foreign bonds. However, we would not rule out some form of bolder central bank intervention occurring, most likely the result of key personnel changes at the BOJ following the end of BOJ Governor Shirakawa's term in early April. Such events could cause further widening of the yen basis (i.e. deeper into negative territory), and a forward steepener on the front-end of the cross currency basis curve would be the optimal strategy if one were to position for such scenarios.

Figure 15. FX Intervention and CHF Xccy Basis (summer 2011)



Source: Citi Research, Bloomberg, IMF

Figure 16. Recent Movements of CHF Xccy Basis (Aug 2012-present)

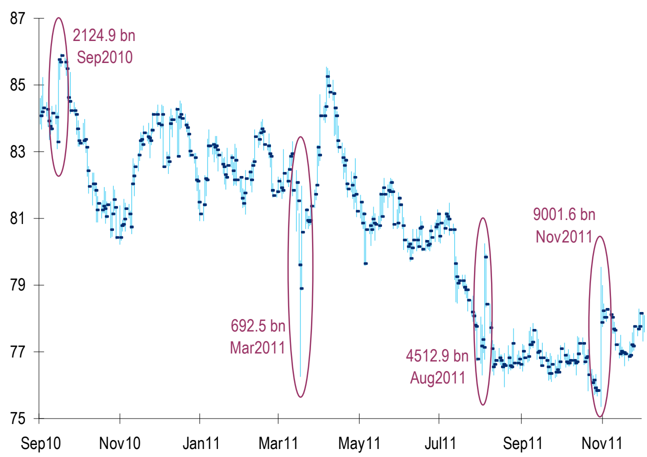


Source: Citi Research, Bloomberg

Historically, aggressive central bank easing could exert significant downward pressure on the cross currency basis. For instance, at the height of the European sovereign-debt crisis last summer, the Swiss National Bank (SNB) engaged in substantial quantitative easing in an attempt to weaken the Swiss currency as safe haven flows flooded into the country. Major policy measures included a reduction in policy rates from 0-0.75% to 0-0.25% and an expansion of the bank sight deposits (the equivalence of BOJ current accounts) from 30 billion to 200 billion, on top of direct foreign exchange intervention in the form of spot and swap transactions. In the space of a few weeks, 3-month USD-CHF cross currency basis plunged about 150bps, from positive low 20s to negative 160bps at one point. Figure 15 compares the magnitude of movements for selected tenors of USD-CHF cross currency basis (shown as the change in price from 6 Sep 2011 levels). The first observation is that sudden flooding of CHF liquidity by the central bank affects the short-end basis most significantly, and the impact tapers off as one goes further out on the curve. We also note that the "shocks" tend to be short-lived, as the central bank exits the intervention and the massive negative basis gets arbitraged away by domestic banks that can "park" their excess reserves with the central bank at a non-negative rate. Indeed, we observed similar movements of CHF basis this week (albeit on a smaller scale) post the announcement that a major clearing bank in Switzerland will also start imposing negative interest rate on large CHF deposits (Figure 16).

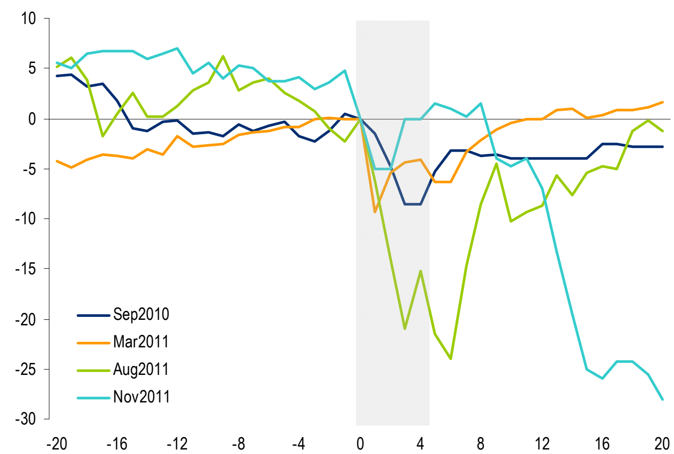
Our base case scenario assumes that the outcome of this month's election produces some form of LDP-led coalition, probably with the new Komeito party, such that more expansionary monetary and fiscal policies are firmly back on the agenda until nominal growth targets are achieved (see Japanese Elections: Political, Economic and Market Impact - A Multi-Asset Investment Perspective). This in itself may push the new government to reach beyond what is currently been entertained as likely policy responses, should deflationary forces remain firmly entrenched and the global economy fail to maintain traction. Indeed, comments from BOJ's deputy governor Nishimura this week signaled a decisive stimulus bias, and signs or speculations of bold monetary easing policies could plunge the JPY basis in the run-up to the appointment of the new BOJ governors in April next year.

Figure 17. BOJ Foreign Exchange Interventions in Recent Years



Source: Citi Research, Bloomberg, MOF

Figure 18. JPY Basis Widened post BOJ FX Interventions (bps)



Source: Citi Research, Bloomberg

Based on the four FX interventions disclosed by BOJ in the past three years (Figure 17), JPY basis exhibited similar dynamics (i.e. an initial sharp drop followed by a rapid rebound) in response to a surge of JPY liquidity (Figure 18). As such, a calendar spread that pays the sub-3m forward (as dramatic policy actions are unlikely ahead of personnel changes at the BOJ) versus receiving a longer dated forward could benefit from unprecedented easing policies. However, the current rolldown profile of the front end USD-JPY cross currency basis (Figure 19) suggests that such trades are already crowded and rather costly to position. A more attractive alternative would be a forward steepener, as short tenors are more sensitive to central bank policies. For instance, one could receive 5m2m USD-JPY cross currency basis to capture the downward movement of basis versus paying 5m1y to negate the large negative carry on the receiving leg.

Figure 19. USD-JPY Fwd Xccy Basis 3-month Rolldown (bps)

	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	1y	2y	3y
1m	19.0	9.3	4.4	2.7	2.1	1.1	0.0	0.0	0.3	0.1	-0.2	-0.2	-1.2	-1.3
2m	17.8	5.4	1.6	0.4	-0.7	-2.1	-2.8	-2.2	-1.8	-2.1	-2.3	-2.4	-3.4	-3.3
3m	11.7	2.1	-1.0	-2.7	-4.1	-5.1	-5.1	-4.2	-4.0	-4.2	-4.5	-4.6	-5.4	-5.0
4m	-8.0	-8.2	-7.6	-8.4	-8.7	-8.0	-6.7	-6.1	-6.0	-6.3	-6.4	-6.7	-6.2	-5.6
5m	-7.9	-7.0	-8.4	-8.7	-7.8	-6.4	-5.7	-5.6	-5.9	-6.0	-6.4	-6.8	-5.8	-5.4
6m	-6.4	-8.8	-9.0	-7.9	-6.2	-5.5	-5.4	-5.8	-5.9	-6.4	-6.8	-7.2	-5.9	-5.4
7m	-11.6	-10.6	-8.4	-6.2	-5.4	-5.2	-5.8	-6.0	-6.4	-6.8	-7.2	-7.0	-5.8	-5.2
8m	-10.5	-7.6	-4.5	-4.2	-4.2	-4.8	-5.3	-6.0	-6.4	-7.0	-6.8	-6.6	-5.6	-5.0
9m	-5.2	-2.3	-2.0	-2.9	-4.1	-4.5	-5.5	-6.2	-6.6	-6.6	-6.5	-6.2	-5.5	-5.0
10m	0.7	-0.9	-1.9	-3.6	-4.4	-5.3	-6.1	-6.7	-6.5	-6.4	-6.2	-6.0	-5.3	-4.7
11m	-2.8	-3.9	-5.1	-5.8	-6.9	-7.4	-7.9	-7.7	-7.2	-6.9	-6.8	-6.6	-5.6	-4.8
1y	-6.1	-6.8	-7.0	-8.3	-8.5	-8.7	-8.5	-8.0	-7.4	-7.3	-6.9	-6.7	-5.5	-4.7

Source: Citi Research

JGB Rates Strategy

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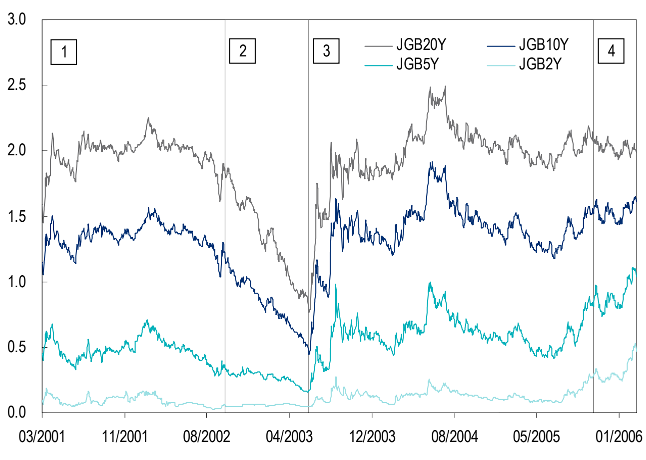
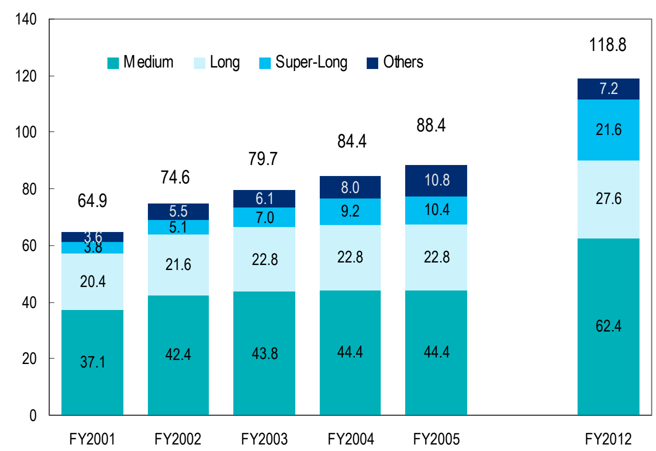
Around this time of year we can usually gauge next fiscal year's JGB issuance schedule. However, this year with the General Election to be held on December 16 there has been a delay in compilation of the main government budget for FY2013. Such uncertainties as well as continued downward bias in bond yields seem to be forcing investors to face more challenging environment than usual, and we expect the JGB market over the January-March period into next fiscal year to become more volatile in contrast to the market as it is now. After the 10yr JGB yield broke the 0.7% level and reached its lowest level in 9 years, the market is reminded of the historic low (0.43%) established in June 2003 (Figure 20). Many domestic investors seem to have expected higher yields for FY2012 based on Spring bond investment strategy plans, and in the scenario that bond yields maintain current levels or head lower investors may need to lighten their exposures to JGBs and shift focus to other assets for better returns in anticipation of March book closing. As in the past two years, high-coupon old 5yr bonds will be redeemed next year which is likely to detract from investment returns. Meanwhile, as bond yields get closer to zero, the upside room for capital gains shrink. Extending the bond maturity in the portfolio would be one way of securing returns, yet investors' risk appetite may have contracted, resulting in a continued decline in volatility. The aggregate JGB issuance into the market is far larger than FY2003, in which the proportion of the super-long JGBs is more than threefold today (Figure 21). The abrupt jump in yields following the VaR shock (Phase 3 in Figure 20) may lead investors to hesitate buying long-tenor bonds and they could possibly revise the proportion of JGB holdings.

Figure 20. JGB Yields During Old QE [%]



Source: Bloomberg, Citi Research

Figure 21. JGB Issuance by Maturity During Old QE



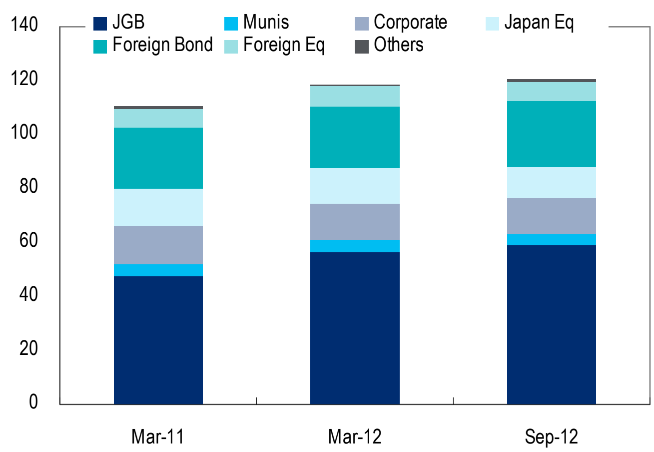
Source: MoF, Citi Research

Lifers' latest activities

The 1H FY2012 results reports of major life insurers through last week show that they have lengthened the maturities of their bond portfolios in preparation for the tightening of solvency rules and the introduction of mark-to-market accounting for liabilities. The holdings of marketable securities by the biggest nine Japanese life insurers grew by ¥1.7trn over six months to ¥120.4trn at end-September. JGBs had the highest weighting, at 48.9% of total assets, having grown from 47.7%, or ¥2.3trn, since end-FY2011. The main changes in holdings of other assets were a ¥1.7trn decrease in Japanese equities and a ¥1.3trn increase in foreign bonds. So to adapt to new solvency rules, life insurers reduced holdings of equities, which are

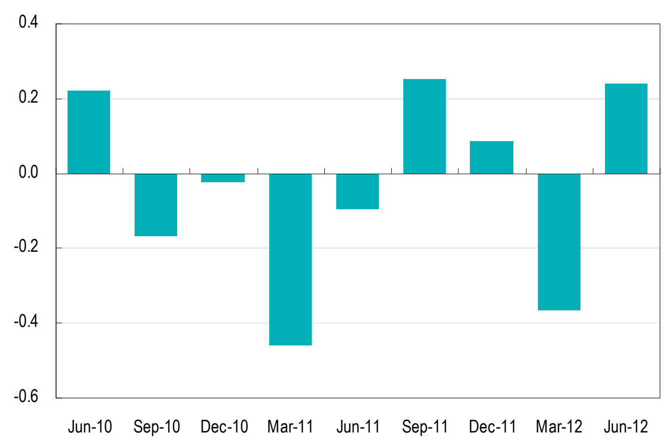
subject to greater price volatility risk, and directed inflows of new funds into JGBs and foreign bonds.

Figure 22. Composition of Securities Holding[¥trn]



Source: Citi Research based on Lifers Financial Report

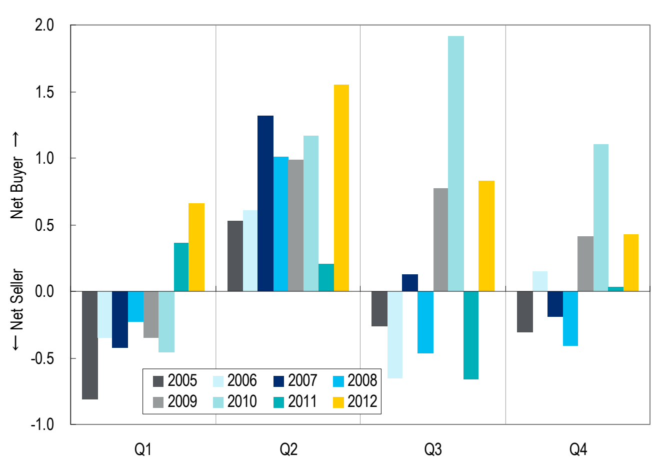
Figure 23. Equity Trading Flows by Lifers [¥trn]



Source: BoJ, Citi Research

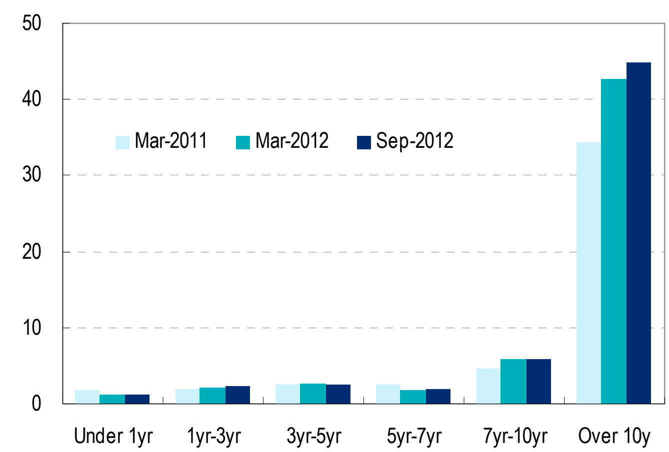
Life insurers' investment stances have changed relative to last fiscal year. In FY2011, the ¥8.9trn increase in holdings of JGBs exceeded the ¥7.9trn growth in holdings of marketable securities overall. The holdings of foreign bonds increased by only ¥0.3trn. With a little more than half of this fiscal year having passed, the rate of growth in JGB holdings has slowed markedly, as life insurers have switched some of the funds they had intended to invest in JGBs to foreign bonds (Figure 24), because JGB yields have fallen short of expectations.

Figure 24. Net Foreign Bond Purchases by Lifers [¥trn]



Source: MoF, Citi Research

Figure 25. JGB Holding by Maturity [¥trn]



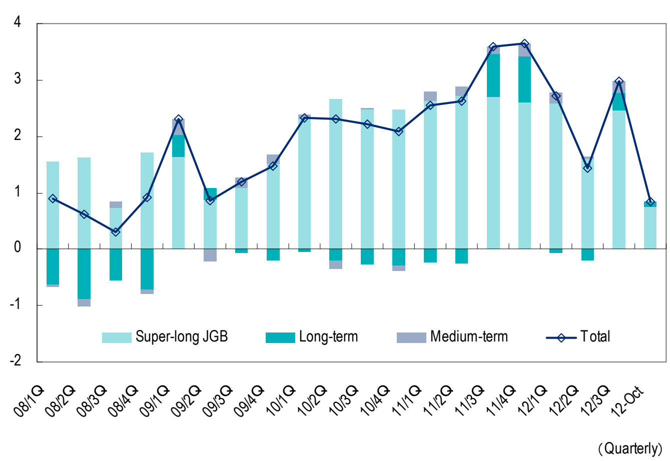
Source: Citi Research based on Lifers Financial Report

Life insurers have also lengthened the maturity of their JGB portfolios. Figure 25 shows total JGB holdings by the nine big life insurers by period to maturity. The weighting of JGBs with 10 years or longer to maturity increased from 75.6% at end-March to 76.3% at end-September. There was little change in holdings of other maturities, so the ¥2.2trn growth in this sector accounts for almost all the increase in

overall JGB holdings. Last fiscal year, however, holdings JGBs grew by ¥8.9trn, with those of maturities longer than 10 years increasing by ¥8.4trn and those of 7-10 years increasing ¥1.3trn. In contrast, holdings of JGBs declined by ¥0.6trn in both zones with maturities of less than one year and 5-7 years, so reshuffling of portfolios to lengthen maturities affected all zones. If current interest rates continue to prevail during 2H FY2012, the pace of super-long JGB buying by life insurers may not increase (Figure 26). The yield curve is unlikely to continue to bull flatten.

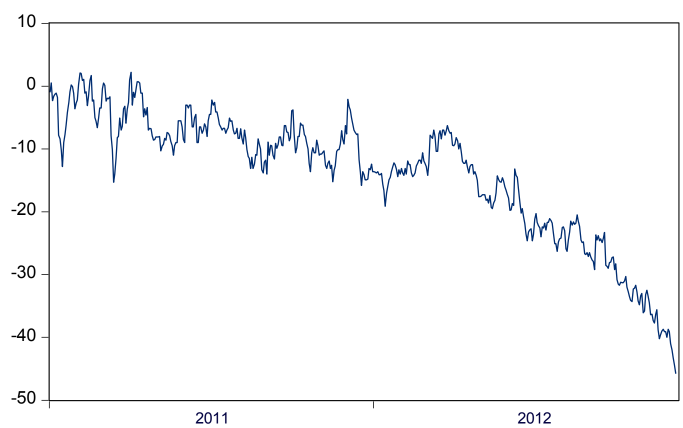
If, for example, the yield on 20yr and 30yr JGBs rose by 10-20bp, life insurers could probably looks to switch from medium- and long-term JGBs to super-long JGBs, causing the yield curve to bear flatten. We expect a bear market after the December 16 election, and the 7-10yr zone to underperform. We also think that futures selling by foreign players and profit taking by banks in the long-term sector will grow. In such case, the shape of the butterfly spread will be corrected from what looks like an extreme level (Figure 27).

Figure 26. Yen Bond Investment by Domestic Lifers and Non-Lifers[¥trn]



Source: JSDA, Citi Research

Figure 27. JGB5x10x20yr Fly [bp]



Source: Citi Research

Strategy: Closed short 10yr JGB position

We closed an outright short 10yr JGB trade at our stop out limit. Current 10yr JGB yield declined to 0.695% on Nov 30 to renew its lowest since June 2003. Although the trend of equity's advance and yen depreciation followed the Diet dissolution as expected, the US Treasury bond market remained solid and strong expectations for the BoJ's aggressive easing encouraged bullish investors. Despite the fact that many inventors have an outlook of higher JGB yields going forward, the timing is expected to be pushed back to after the election. So, even only in short-term dealings, investors did not retreat from buying a long-term sector. We retain our conditional steepener of 5x10yr swaps on back of a paradigm shift of policy focus from fiscal reconstruction to growth strategies in 2H FY2012. The key uncertainty near term is USD/JPY, in our view. Any progress in the talks of US fiscal cliff or European debt issues may bring USD higher and the trends of equity rally and yen depreciation may continue as Citi expects into 1Q 2013. Under such circumstances, we expect 7-10yr tenors of JGB, where richness has not retreated on the curve, to be under pressure for profit taking.

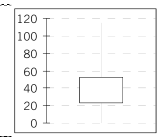
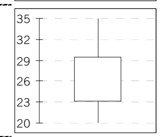
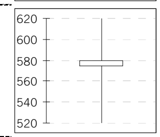
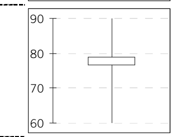
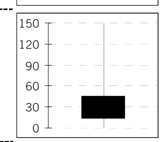
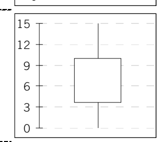
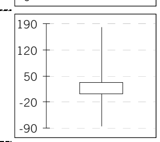
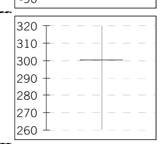
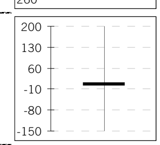
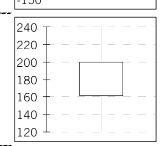
Tradesheet

New Trades: Receive belly of NZD 3m forward 1y-7y-10y swap butterfly. Entry +59bps. Target +49bps. Stop +64bps.

Pay AUD 3m1y versus AUD 3y1y at a spreads of 64bp. Target 50bp. Stop 70bp.

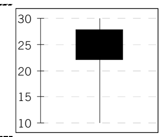
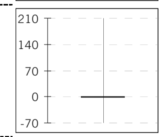
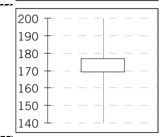
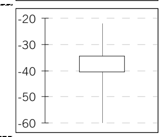
Closed Trades: Pay AUD 6m1y vs 2y1y for a profit of 6.5bp

Figure 28. Record of Open Trades

Country	Trade	Levels		Publication Date	
AUD	**Buy AUD 1y2y 75bp wide 1/2/1 receiver fly**	Open	22c		
		Current	52.81c		
Volatility	Buy 1 x AUD 1y2y ATM receiver (4.21% strike)	**P&L**	**30.81c**		
	Sell 2 x AUD 1y2y 75bp OTM receiver (3.46% strike)	Target	115c		
	Buy 1 x AUD 1y2y 150bp OTM receiver (2.71% strike)	Stop	0c	*APAC DMRS 29 March 2012*	
AUD	**Buy ACGB 5.5% April 2023. Sell ACGB 4.5% April 2020**	Open	29.5bp		
		Current	23bp		
Cash Curve	Buy ACGB 5.5% April 2023	**P&L**	**6.5bp**		
	Sell ACGB 4.5% April 2020	Target	20bp		
		Stop	35bp	*APAC DMRS 8 May 2012*	
AUD	**Sell AUD 5y5y ATM Straddle**	Open	580c		
		Current	573.53c		
Volatility	Sell AUD 5y5y ATM Straddle	**P&L**	**6.47c**		
		Target	520c		
		Stop	620c	*APAC DMRS 21 June 2012*	
AUD	**Buy ACGB 4.75% April 2027, Sell ACGB 4.25% July 2017**	Open	79bp		
		Current	76.5bp		
Cash Curve	Buy ACGB 4.75% April 2027	**P&L**	**2.5bp**		
	Sell ACGB 4.25% July 2017	Target	60bp		
		Stop	90bp	*APAC DMRS 19 July 2012*	
JPY	**JPY 6m fwd 5y/10y ATM conditional steepener via payers**	Open	46c		
		Current	12.31c		
Volatility	Sell 2 x JPY 6m5y ATM payer (0.41% strike)	**P&L**	**-33.69c**		
	Buy 1 x JPY 6m10y ATM payer (0.895% strike)	Target	150c		
		Stop	0c	*APAC DMRS 13 September 2012*	
AUD	**Buy QTC 15, Sell SAFA 15**	Open	10bp		
		Current	3.5bp		
Cash Curve	Buy QTC 15	**P&L**	**6.5bp**		
	Sell SAFA 15	Target	0bp		
		Stop	15bp	*APAC DMRS 13 September 2012*	
AUD	**Sell AUD 3m3y 50bp wide strangle and buy 1y3y 50bp OTM receiver**	Open	0bp		
		Current	32.69c		
Volatility	Sell AUD 3m3y 50bp wide strangle (2.75% and 3.25% strike)	**P&L**	**32.69c**		
	Buy AUD 1y3y 50bp OTM receiver (2.64% strike)	Target	180c		
		Stop	-85c	*APAC DMRS 27 September 2012*	
NZD	**Receive NZD 2y1y**	Open	300bp		
		Current	300.49bp		
Swap Curve	Receive NZD 2y1y	**P&L**	**-0.49bp**		
		Target	2.60%		
		Stop	3.20%	*APAC DMRS 4 October 2012*	
AUD	**Sell AUD 3m10y 75bp OTM payer and buy 55bp OTM receiver**	Open	12c		
		Current	-0.48c		
Volatility	Sell AUD 3m10y 75bp OTM payer (4.3% strike)	**P&L**	**-12.48c**		
	Buy AUD 3m10y 55bp OTM receiver (3% strike)	Target	200c		
		Stop	-150c	*APAC DMRS 4 October 2012*	
AUD	**Sell AUD 2m10y ATM straddles vs 6m10y**	Open	160c		
		Current	199.59c		
Volatility	Sell AUD 2m10y ATM straddles	**P&L**	**39.59c**		
	Buy AUD 6m10y ATM straddles	Target	240c		
		Stop	120c	*APAC DMRS 1 November 2012*	

Source: Citi Research

Figure 29. Record of Open Trades

AUD	**AUD 3s10s EFP box flattener**	Open	22bp		
		Current	27.75bp		
Spreads	Pay AUD 3s EFP	**P&L**	**-5.75bp**		
	Receive AUD 10s EFP	Target	10bp		
		Stop	30bp	*APAC DMRS 1 November 2012*	
AUD/USD	**Sell 1.11 x AUD 6m10y 4% payer and buy 1 x USD 6m10y ATM payer**	Open	0c		
		Current	-3.11c		
Cross-market	Sell 1.11 x AUD 6m10y 4% payer	**P&L**	**-3.11c**		
	Buy 1 x USD 6m10y ATM payer	Target	210c		
		Stop	-70c	*APAC DMRS 22 November 2012*	
AUD/USD	**Receive AUD 5y5y versus USD 5y5y**	Open	177bp		
		Current	168.83bp		
Cross-market	Receive AUD5y5y	**P&L**	**8.17bp**		
	Pay USD 5y5y	Target	140bp		
		Stop	200bp	*APAC DMRS 28 November 2012*	
AUD	**AUD Dec12 / Jun13 OIS Flattener**	Open	-34.5bp		
		Current	-40.8bp		
Swap Curve	Pay AUD Dec12 OIS	**P&L**	**6.3bp**		
	Receive AUD Jun13 OIS	Target	-60bp		
		Stop	-22bp	*APAC DMRS 30 November 2012*	

Source: Citi Research

Appendix

Figure 30. Australia relative value by sector

Versus Fitted Yield Curve

ACGB

	Rank	Bond	ZScore	Issued	Size (bn)
Richest	1	AUT 4.75 Jun16	-2.14	Jun10	11.0
	2	AUT 4.75 Oct15	-1.75	Apr11	2.2
	3	AUT 3.25 Apr29	-1.47	Oct12	3.3
	4	AUT 4.50 Oct14	-1.24	Apr10	9.2
	5	AUT 5.75 May21	-1.13	May07	12.8
	5	AUT 2.75 Apr24	0.50	Apr12	0.0
	4	AUT 5.50 Dec13	0.61	Dec09	9.3
	3	AUT 6.50 May13	1.54	May00	16.7
	2	AUT 5.50 Jan18	1.62	Jul10	8.3
Cheapest	1	AUT 6.25 Apr15	1.86	Apr02	14.1

NSW

	Rank	Bond	ZScore	Issued	Size (bn)
Richest	1	NSW 6.00 Apr16	-1.25	Oct09	1.0
	2	NSW 6.00 Apr15	-1.19	Apr11	2.0
	3	NSW 4.00 Feb17	-1.07	Feb12	1.0
	4	NSW 2.75 Jul14	-0.96	Jul12	0.5
	5	NSW 6.00 May20	-0.96	Nov09	4.5
	5	NSW 6.00 May30	-0.75	May10	0.2
	4	NSW 6.00 Apr19	-0.74	Apr08	3.5
	3	NSW 6.00 May23	-0.67	May07	2.6
	2	NSW 5.00 Aug24	-0.33	Feb12	0.9
Cheapest	1	NSW 5.25 May13	-0.18	May09	0.6

QTC

	Rank	Bond	ZScore	Issued	Size (bn)
Richest	1	QTC 6.00 Oct15	-1.43	Oct10	6.9
	2	QTC 6.00 Apr16	-1.31	Apr10	5.1
	3	QTC 6.50 Mar33	-1.29	Mar08	0.7
	4	QTC 5.75 Nov14	-1.25	Nov09	7.8
	5	QTC 6.25 Feb20	-1.14	Feb10	5.9
	5	QTC 6.00 Aug13	-1.09	Feb02	3.3
	4	QTC 5.50 Jun21	-1.02	Jun11	1.5
	3	QTC 6.00 Jul22	-0.87	Jan11	3.8
	2	QTC 6.00 Aug13	-0.79	Aug10	3.5
Cheapest	1	QTC 5.75 Jul24	-0.70	Jan11	1.1

TCV

	Rank	Bond	ZScore	Issued	Size (bn)
Richest	1	TCV 5.75 Nov16	-1.14	Nov04	3.5
	2	TCV 6.00 Jun20	-1.10	Jun09	3.4
	3	TCV 5.50 Nov18	-1.06	Nov08	3.0
	4	TCV 4.75 Oct14	-1.06	Apr03	4.0
	4	TCV 6.00 Oct22	-0.71	Oct03	3.1
	3	TCV 5.50 Nov26	-0.58	May11	0.6
	2	TCV 5.50 Dec24	-0.47	Jun10	2.3
Cheapest	1	TCV 6.50 Mar33	0.00	Sep10	0.1

WATC

	Rank	Bond	ZScore	Issued	Size (bn)
Richest	1	WATC 7.00 Apr15	-1.27	Oct06	2.6
	2	WATC 8.00 Jul17	-1.04	Jan01	2.5
	3	WATC 5.50 Apr14	-1.04	Apr10	1.9
	3	WATC 7.00 Oct19	-0.95	Apr01	1.8
	2	WATC 7.00 Jul21	-0.87	Jul02	0.8
Cheapest	1	WATC 6.00 Oct23	-0.59	Mar05	0.2

Versus Swap Curve (CAS)

ACGB

	Rank	Bond	ZScore	Issued	Size (bn)
Richest	1	AUT 3.25 Apr29	-0.71	Oct12	3.3
	2	AUT 2.75 Apr24	0.69	Apr12	0.0
	3	AUT 4.75 Apr27	0.84	Oct11	3.3
	4	AUT 5.50 Apr23	0.87	Apr11	3.2
	5	AUT 5.75 Jul22	0.97	Jan10	7.4
	5	AUT 4.75 Jun16	1.16	Jun10	11.0
	4	AUT 4.50 Oct14	1.19	Apr10	9.2
	3	AUT 4.75 Oct15	1.22	Apr11	2.2
	2	AUT 6.25 Apr15	1.42	Apr02	14.1
Cheapest	1	AUT 6.50 May13	1.62	May00	16.7

NSW

	Rank	Bond	ZScore	Issued	Size (bn)
Richest	1	NSW 6.00 Feb18	0.28	Feb11	4.3
	2	NSW 4.00 Feb17	0.32	Feb12	1.0
	3	NSW 6.00 May20	0.42	Nov09	4.5
	4	NSW 6.00 Mar22	0.46	Sep11	0.6
	5	NSW 6.00 Apr16	0.63	Oct09	1.0
	5	NSW 6.00 Apr15	1.35	Apr11	2.0
	4	NSW 5.50 Aug13	1.39	Feb10	5.0
	3	NSW 6.00 Jun20	1.41	Jun09	1.1
	2	NSW 6.00 Apr19	1.62	Apr08	3.5
Cheapest	1	NSW 5.25 May13	1.73	May09	0.6

QTC

	Rank	Bond	ZScore	Issued	Size (bn)
Richest	1	QTC 6.00 Oct15	-1.21	Oct10	6.9
	2	QTC 6.00 Feb18	-1.13	Feb11	4.4
	3	QTC 6.50 Mar33	-1.12	Mar08	0.7
	4	QTC 6.00 Apr16	-0.97	Apr10	5.1
	5	QTC 6.25 Feb20	-0.93	Feb10	5.9
	5	QTC 6.00 Jul22	-0.58	Jan11	3.8
	4	QTC 5.75 Jul24	-0.48	Jan11	1.1
	3	QTC 5.75 Nov14	-0.44	Nov09	7.8
	2	QTC 6.00 Aug13	0.69	Feb02	3.3
Cheapest	1	QTC 6.00 Aug13	0.75	Aug10	3.5

TCV

	Rank	Bond	ZScore	Issued	Size (bn)
Richest	1	TCV 6.00 Jun20	-0.16	Jun09	3.4
	2	TCV 5.50 Nov18	0.00	Nov08	3.0
	3	TCV 6.00 Oct22	0.33	Oct03	3.1
	4	TCV 5.50 Nov26	0.40	May11	0.6
	4	TCV 5.75 Nov16	0.47	Nov04	3.5
	3	TCV 5.50 Dec24	0.47	Jun10	2.3
	2	TCV 6.50 Mar33	0.62	Sep10	0.1
Cheapest	1	TCV 4.75 Oct14	0.74	Apr03	4.0

WATC

	Rank	Bond	ZScore	Issued	Size (bn)
Richest	1	WATC 6.00 Oct23	0.40	Mar05	0.2
	2	WATC 8.00 Jul17	0.52	Jan01	2.5
	3	WATC 7.00 Jul21	0.75	Jul02	0.8
	3	WATC 7.00 Oct19	0.93	Apr01	1.8
	2	WATC 5.50 Apr14	1.00	Apr10	1.9
Cheapest	1	WATC 7.00 Apr15	1.24	Oct06	2.6

ZScore calculated using 6M history
2y,5y,7y,10y,20y,30y denote the OTR bonds
Analytics as of 5-Dec-12

Source: Citi Research

Figure 31. Australia relative value by sector

Versus Fitted Yield Curve

Sector		Rank	Bond	ZScore	Issued	Size (bn)
SAFA	Richest	1	**SAFA 5.75 Sep17**	-1.30	Mar10	2.0
		2	**SAFA 5.75 Apr15**	-1.21	Apr09	2.0
		2	**SAFA 5.25 Jun14**	**-0.99**	Dec10	2.0
	Cheapest	1	**SAFA 6.00 May13**	**-0.32**	Nov06	2.2
NTER	Richest	1	**NTER 6.25 Oct15**	-1.37	Apr10	0.5
				-6.00		
	Cheapest	1	**NTER 5.75 Jul14**	**-1.24**	Jul09	0.5
TASM	Richest	1	**TASM 6.00 Jun20**	-1.31	Jun09	0.1
		2	**TASM 5.00 Sep17**	-1.09	Sep11	0.5
		2	**TASM 6.50 May13**	**0.00**	Nov06	0.8
	Cheapest	1	**TASM 6.50 Apr15**	**0.00**	Oct06	0.5

Versus Swap Curve (CAS)

Sector		Rank	Bond	ZScore	Issued	Size (bn)
SAFA	Richest	1	**SAFA 5.75 Sep17**	-1.21	Mar10	2.0
		2	**SAFA 5.00 May21**	-1.07	May11	1.0
		2	**SAFA 5.25 Jun14**	**0.31**	Dec10	2.0
	Cheapest	1	**SAFA 6.00 May13**	**1.16**	Nov06	2.2
NTER	Richest	1	**NTER 6.25 Oct15**	-0.98	Apr10	0.5
				-10.00		
	Cheapest	1	**NTER 5.75 Jul14**	**-0.67**	Jul09	0.5
TASM	Richest	1	**TASM 6.50 May13**	**-1.51**	Nov06	0.8
		2	**TASM 6.00 Jun20**	-0.85	Jun09	0.1
		2	**TASM 6.50 Apr15**	**0.06**	Oct06	0.5
	Cheapest	1	**TASM 5.50 Jun14**	**0.53**	Jun10	0.8

ZScore calculated using 6M history
2y,5y,7y,10y,20y,30y denote the OTR bonds
Analytics as of 5-Dec-12

Source: Citi Research

Figure 32. Australia relative value by maturity

Versus Fitted Yield Curve

AUS 1-3

	Rank	Bond	ZScore	Issued	Size (bn)
Richest	1	**AUT 4.75 Oct15**	**-1.75**	Apr11	2.2
	2	**QTCX 6.00 Oct15**	**-1.71**	Apr03	0.6
	3	**QTC 6.00 Oct15**	-1.43	Oct10	6.9
	4	**NTER 6.25 Oct15**	-1.37	Apr10	0.5
	5	**WATC 7.00 Apr15**	-1.27	Oct06	2.6
	5	**NSW 2.75 Jul14**	**-0.96**	Jul12	0.5
	4	**AUT 6.25 Jun14**	**-0.57**	Jun08	11.9
	3	**TASM 6.50 Apr15**	**0.00**	Oct06	0.5
	2	**AUT 5.50 Dec13**	**0.61**	Dec09	9.3
Cheapest	1	**AUT 6.25 Apr15**	**1.86**	Apr02	14.1

AUS 4-7

	Rank	Bond	ZScore	Issued	Size (bn)
Richest	1	**ACT 5.50 Jun18**	-1.33	Jun11	0.3
	2	**SAFA 5.75 Sep17**	-1.30	Mar10	2.0
	3	**QTC 6.00 Feb18**	-1.14	Feb11	4.4
	4	**TASM 5.00 Sep17**	-1.09	Sep11	0.5
	5	**NSW 4.00 Feb17**	-1.07	Feb12	1.0
	5	**NSW 6.00 Apr19**	**-0.74**	Apr08	3.5
	4	**AUT 4.25 Jul17 (5y)**	**-0.07**	Jul11	0.0
	3	**AUT 5.25 Mar19**	**0.44**	Sep05	13.9
	2	**AUT 6.00 Feb17**	**0.46**	Feb04	14.5
Cheapest	1	**AUT 5.50 Jan18**	**1.62**	Jul10	8.3

AUS 8-10

	Rank	Bond	ZScore	Issued	Size (bn)
Richest	1	**SAFA 5.00 May21**	-1.19	May11	1.0
	2	**AUT 5.75 May21**	-1.13	May07	12.8
	3	**QTC 5.50 Jun21**	-1.02	Jun11	1.5
	4	**WATC 7.00 Jul21**	-0.87	Jul02	0.8
			[redacted]	#N/A	
	4	**QTC 6.00 Jul22**	**-0.87**	Jan11	3.8
	3	**NSW 6.00 Mar22**	**-0.77**	Sep11	0.6
	2	**TCV 6.00 Oct22**	**-0.71**	Oct03	3.1
Cheapest	1	**AUT 5.75 Jul22**	**0.08**	Jan10	7.4

AUS >10

	Rank	Bond	ZScore	Issued	Size (bn)
Richest	1	**AUT 3.25 Apr29**	-1.47	Oct12	3.3
	2	**QTC 6.50 Mar33**	-1.29	Mar08	0.7
	3	**AUT 4.75 Apr27**	-0.76	Oct11	3.3
	4	**NSW 6.00 May30**	-0.75	May10	0.2
	5	**QTC 5.75 Jul24**	-0.70	Jan11	1.1
	5	**TCV 5.50 Dec24**	**-0.47**	Jun10	2.3
	4	**NSW 5.00 Aug24**	**-0.33**	Feb12	0.9
	3	**TCV 6.50 Mar33**	**0.00**	Sep10	0.1
	2	**AUT 5.50 Apr23 (10y)**	**0.02**	Apr11	3.2
Cheapest	1	**AUT 2.75 Apr24**	**0.50**	Apr12	0.0

Versus Swap Curve (CAS)

AUS 1-3

	Rank	Bond	ZScore	Issued	Size (bn)
Richest	1	**QTC 6.00 Oct15**	-1.21	Oct10	6.9
	2	**NTER 6.25 Oct15**	-0.98	Apr10	0.5
	3	**NTER 5.75 Jul14**	-0.67	Jul09	0.5
	4	**QTC 5.75 Nov14**	-0.44	Nov09	7.8
	5	**SAFA 5.75 Apr15**	-0.23	Apr09	2.0
	5	**WATC 7.00 Apr15**	**1.24**	Oct06	2.6
	4	**NSWX 5.50 Aug14**	**1.25**	Aug03	1.0
	3	**NSW 2.75 Jul14**	**1.27**	Jul12	0.5
	2	**NSW 6.00 Apr15**	**1.35**	Apr11	2.0
Cheapest	1	**AUT 6.25 Apr15**	**1.42**	Apr02	14.1

AUS 4-7

	Rank	Bond	ZScore	Issued	Size (bn)
Richest	1	**ACT 5.50 Jun18**	-1.31	Jun11	0.3
	2	**SAFA 5.75 Sep17**	-1.21	Mar10	2.0
	3	**QTC 6.00 Feb18**	-1.13	Feb11	4.4
	4	**TASM 5.00 Sep17**	-0.34	Sep11	0.5
	5	**TCV 5.50 Nov18**	0.00	Nov08	3.0
	5	**AUT 5.50 Jan18**	**1.10**	Jul10	8.3
	4	**AUT 6.00 Feb17**	**1.15**	Feb04	14.5
	3	**NSW 5.50 Mar17**	**1.33**	Mar06	3.3
	2	**NSWX 5.50 Mar17**	**1.38**	Mar06	1.6
Cheapest	1	**NSW 6.00 Apr19**	**1.62**	Apr08	3.5

AUS 8-10

	Rank	Bond	ZScore	Issued	Size (bn)
Richest	1	**SAFA 5.00 May21**	-1.07	May11	1.0
	2	**QTC 5.50 Jun21**	-0.77	Jun11	1.5
	3	**QTC 6.00 Jul22**	-0.58	Jan11	3.8
	4	**TCV 6.00 Oct22**	0.33	Oct03	3.1
			[redacted]	#N/A	
	4	**NSW 6.00 Mar22**	**0.46**	Sep11	0.6
	3	**WATC 7.00 Jul21**	**0.75**	Jul02	0.8
	2	**AUT 5.75 Jul22**	**0.97**	Jan10	7.4
Cheapest	1	**AUT 5.75 May21**	**1.03**	May07	12.8

AUS >10

	Rank	Bond	ZScore	Issued	Size (bn)
Richest	1	**QTC 6.50 Mar33**	-1.12	Mar08	0.7
	2	**AUT 3.25 Apr29**	-0.71	Oct12	3.3
	3	**QTC 5.75 Jul24**	-0.48	Jan11	1.1
	4	**TCV 5.50 Nov26**	0.40	May11	0.6
	5	**WATC 6.00 Oct23**	0.40	Mar05	0.2
	5	**NSW 6.00 May30**	**0.70**	May10	0.2
	4	**NSW 6.00 May23**	**0.72**	May07	2.6
	3	**AUT 4.75 Apr27**	**0.84**	Oct11	3.3
	2	**AUT 5.50 Apr23 (10y)**	**0.87**	Apr11	3.2
Cheapest	1	**NSW 5.00 Aug24**	**0.89**	Feb12	0.9

ZScore calculated using 6M history
2y,5y,7y,10y,20y,30y denote the OTR bonds
Analytics as of 5-Dec-12

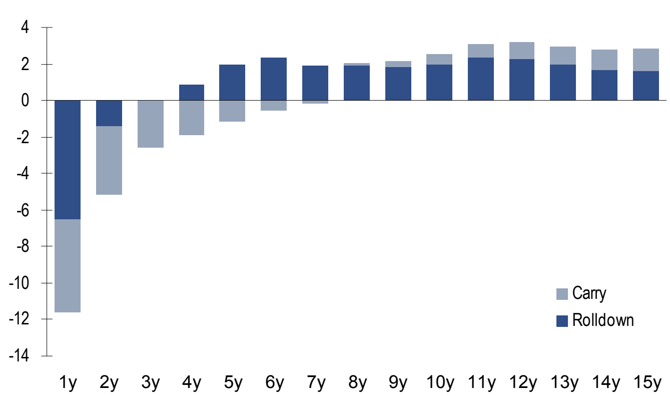
Source: Citi Research

Figure 33. 3M carry in AUD swaps[1]

fwd/tenor	1Y	2Y	3Y	4Y	5Y	6Y	7Y	8Y	9Y	10Y	12Y	15Y	20Y	25Y	30Y
SPOT	- 9.9	- 0.3	2.4	3.0	3.7	4.0	3.9	3.8	3.6	3.5	3.4	2.7	1.8	1.1	0.8
3M	- 6.3	0.7	2.5	3.2	3.9	4.0	3.9	3.8	3.6	3.6	3.3	2.7	1.8	1.1	0.8
6M	- 0.4	4.0	4.3	4.7	5.2	5.0	4.8	4.5	4.2	4.3	3.8	3.1	2.0	1.4	1.0
9M	4.5	6.1	5.8	5.8	6.1	5.6	5.3	4.9	4.7	4.8	4.1	3.4	2.2	1.5	1.2
1Y	7.1	7.2	6.5	6.4	6.3	5.8	5.5	5.1	4.9	4.9	4.1	3.5	2.2	1.6	1.2
2Y	7.3	6.2	6.3	6.2	5.6	5.2	4.8	4.6	4.7	4.2	3.6	3.0	1.7	1.1	0.8
3Y	5.1	5.7	6.0	5.2	4.8	4.4	4.2	4.4	3.9	3.5	2.9	2.4	1.1	0.7	0.4
4Y	6.5	6.5	5.5	4.8	4.3	4.1	4.3	3.7	3.3	3.0	2.6	1.9	0.7	0.4	0.1
5Y	6.5	5.0	4.4	3.7	3.6	3.9	3.3	2.9	2.5	2.2	2.0	1.1	0.2	- 0.1	- 0.3
6Y	3.5	3.3	3.0	2.8	3.4	2.7	2.3	2.0	1.7	1.7	1.3	0.3	- 0.3	- 0.6	- 0.7
7Y	3.2	2.7	2.8	3.4	2.6	2.1	1.8	1.5	1.5	1.3	0.7	- 0.2	- 0.7	- 0.9	- 0.9
8Y	2.2	2.6	3.7	2.5	1.9	1.5	1.2	1.2	1.1	0.8	0.0	- 0.7	- 1.0	- 1.2	- 1.2
9Y	3.0	4.5	2.9	1.8	1.4	1.0	1.1	0.9	0.6	0.2	- 0.6	- 1.0	- 1.3	- 1.4	- 1.3
10Y	6.0	2.8	1.7	1.0	0.6	0.7	0.6	0.3	- 0.1	- 0.6	- 1.2	- 1.4	- 1.6	- 1.7	- 1.5

Source: Citi Research

Figure 34. 3M carry profile of ACGB[2]



Source: Citi Research

Figure 35. 3M carry table of ACGB

ACGB	Carry	Rolldown	Total
1y	-5.1	-6.5	-11.6
2y	-3.8	-1.4	-5.2
3y	-2.6	0.0	-2.6
4y	-1.9	0.9	-1.0
5y	-1.2	1.9	0.8
6y	-0.5	2.4	1.8
7y	-0.2	1.9	1.8
8y	0.1	1.9	2.0
9y	0.3	1.8	2.2
10y	0.5	2.0	2.5
11y	0.7	2.3	3.1
12y	0.9	2.3	3.2
13y	1.0	1.9	3.0
14y	1.1	1.7	2.8
15y	1.2	1.6	2.8

Source: Citi Research

[1] Sectors with carry more than 5bp is highlighted in green while the carry less than 5bp is highlighted in red.

[2] ACGB carry profile and table is calculated from the relative value curve and it may vary from individual bonds given the repo rate.

Figure 36. 3M carry in NZD swaps[3]

fwd/tenor	1Y	2Y	3Y	4Y	5Y	6Y	7Y	8Y	9Y	10Y	12Y	15Y	20Y
SPOT	- 3.1	2.5	4.6	5.6	6.3	6.8	6.6	6.3	5.7	5.1	3.7	3.1	2.7
3M	- 0.7	3.3	4.9	5.7	6.6	6.7	6.6	6.1	5.6	4.8	3.5	3.1	2.7
6M	4.0	5.7	6.6	7.0	7.9	7.6	7.3	6.7	6.1	5.2	3.9	3.4	3.0
9M	6.6	7.5	7.9	8.2	8.8	8.3	7.9	7.1	6.4	5.4	4.1	3.7	3.2
1Y	6.8	7.7	7.9	8.3	8.5	8.1	7.5	6.8	6.0	5.0	3.9	3.5	3.0
2Y	8.6	8.5	8.8	9.0	8.4	7.7	6.8	5.9	4.8	4.1	3.4	3.1	2.6
3Y	8.4	8.9	9.2	8.3	7.5	6.5	5.5	4.3	3.5	3.0	2.8	2.6	2.1
4Y	9.4	9.6	8.3	7.3	6.1	5.0	3.7	2.8	2.3	2.2	2.1	2.0	1.6
5Y	9.9	7.8	6.6	5.2	4.0	2.6	1.7	1.3	1.2	1.2	1.3	1.2	1.0
6Y	5.7	4.9	3.6	2.4	0.9	0.1	- 0.2	- 0.1	0.0	0.2	0.4	0.3	0.3
7Y	4.0	2.4	1.2	- 0.4	- 1.2	- 1.3	- 1.1	- 0.8	- 0.6	- 0.4	- 0.2	- 0.2	- 0.2
8Y	0.7	- 0.3	- 2.0	- 2.7	- 2.5	- 2.1	- 1.7	- 1.3	- 1.0	- 0.8	- 0.7	- 0.6	- 0.5
9Y	- 1.5	- 3.4	- 3.9	- 3.4	- 2.7	- 2.1	- 1.6	- 1.3	- 1.0	- 0.9	- 0.8	- 0.7	- 0.6
10Y	- 5.5	- 5.2	- 4.1	- 3.1	- 2.3	- 1.6	- 1.2	- 1.0	- 0.8	- 0.8	- 0.7	- 0.6	- 0.5

Source: Citi Research

[3] Sectors with carry more than 5bp is highlighted in green while the carry less than 5bp is highlighted in red.

Figure 37. Japan relative value by maturity

Versus Fitted Yield Curve

JGB 2-7

	Rank	Bond	ZScore	Issued	Size (¥tln)
Richest	1	#294 1.70 Jun18	-1.88	Jul08	2.10
	2	#276 1.60 Dec15	-0.95	Feb06	3.13
	3	#265 1.50 Dec14	-0.95	Dec04	3.28
	4	#266 1.40 Dec14	-0.95	Jan05	3.29
	5	#274 1.50 Dec15	-0.95	Dec05	3.38
	5	#106 0.20 Sep17 (5y)	1.99	Sep12	2.64
	4	#299 1.30 Mar19	2.20	Mar09	3.87
	3	#297 1.40 Dec18	2.32	Dec08	2.11
	2	#298 1.30 Dec18 (7y)	2.49	Jan09	4.00
Cheapest	1	#300 1.50 Mar19	2.50	May09	2.28

JGB 7-10

	Rank	Bond	ZScore	Issued	Size (¥tln)
Richest	1	#308 1.30 Jun20	-1.77	Jun10	2.25
	2	#55 2.00 Mar22	-1.70	Apr02	0.99
	3	#53 2.10 Dec21	-1.28	Dec01	0.85
	4	#310 1.00 Sep20	-1.26	Sep10	4.74
	5	#309 1.10 Jun20	-1.21	Jul10	4.76
	5	#317 1.10 Sep21	2.18	Sep11	2.31
	4	#57 1.90 Jun22	2.38	Aug02	0.97
	3	#322 0.90 Mar22	2.51	May12	2.53
	2	#305 1.30 Dec19 (JB)	2.65	Dec09	7.14
Cheapest	1	#46 2.20 Jun20	3.34	Apr00	0.70

JGB 10-15

	Rank	Bond	ZScore	Issued	Size (¥tln)
Richest	1	#93 2.00 Mar27	-2.17	Mar07	1.15
	2	#77 2.00 Mar25	-2.00	May05	0.81
	3	#73 2.00 Dec24	-1.99	Dec04	1.36
	4	#98 2.10 Sep27	-1.94	Nov07	1.04
	5	#75 2.10 Mar25	-1.90	Mar05	0.73
	5	#87 2.20 Mar26	1.19	May06	0.96
	4	#70 2.40 Jun24	1.25	Jun04	1.44
	3	#60 1.40 Dec22	1.52	Feb03	1.12
	2	#68 2.20 Mar24	1.61	Apr04	0.68
Cheapest	1	#61 1.00 Mar23	1.65	Apr03	1.21

JGB 15-20

	Rank	Bond	ZScore	Issued	Size (¥tln)
Richest	1	#102 2.40 Jun28	-2.63	Jun08	1.04
	2	#107 2.10 Dec28	-2.26	Dec08	1.04
	3	#100 2.20 Mar28	-2.17	Mar08	1.84
	4	#106 2.20 Sep28	-2.12	Oct08	0.94
	5	#105 2.10 Sep28	-1.84	Sep08	1.90
	5	#129 1.80 Jun31	1.07	Aug11	1.27
	4	#127 1.90 Mar31	1.09	May11	1.11
	3	#137 1.70 Jun32	1.22	Jun12	1.27
	2	#140 1.70 Sep32 (20y)	1.36	Sep12	1.25
Cheapest	1	#139 1.60 Jun32	1.58	Aug12	1.20

JGB >20

	Rank	Bond	ZScore	Issued	Size (¥tln)
Richest	1	#13 2.00 Dec33	-1.83	Feb04	0.72
	2	#12 2.10 Sep33	-1.60	Nov03	0.52
	3	#19 2.30 Jun35	-1.46	Jul05	0.72
	4	#22 2.50 Mar36	-1.33	Apr06	0.77
	5	#20 2.50 Sep35	-1.20	Oct05	0.66
	5	#34 2.20 Mar41	0.41	Mar11	2.77
	4	#9 1.40 Dec32	0.65	Jan03	0.32
	3	#36 2.00 Mar42	0.66	Mar12	0.79
	2	#37 1.90 Sep42 (30y)	0.78	Sep12	0.75
Cheapest	1	#24 2.50 Sep36	1.09	Oct06	0.61

Versus Swap Curve (YYS)

JGB 2-7

	Rank	Bond	ZScore	Issued	Size (¥tln)
Richest	1	#302 1.40 Jun19	1.02	Jul09	2.25
	2	#301 1.50 Jun19	1.04	Jun09	4.31
	3	#303 1.40 Sep19	1.05	Sep09	4.65
	4	#304 1.30 Sep19	1.06	Oct09	2.39
	5	#294 1.70 Jun18	1.18	Jul08	2.10
	5	#104 0.20 Mar17	1.98	May12	2.50
	4	#101 0.40 Dec16	1.99	Dec11	2.85
	3	#284 1.70 Dec16	2.00	Dec06	9.44
	2	#102 0.30 Dec16	2.00	Jan12	5.42
Cheapest	1	#323 0.10 Dec14	2.03	Dec12	2.70

JGB 7-10

	Rank	Bond	ZScore	Issued	Size (¥tln)
Richest	1	#55 2.00 Mar22	-2.64	Apr02	0.99
	2	#53 2.10 Dec21	-2.39	Dec01	0.85
	3	#324 0.80 Jun22	-2.32	Jul12	2.63
	4	#323 0.90 Jun22	-2.28	Jun12	2.30
	5	#54 2.20 Dec21	-2.16	Feb02	0.90
	5	#307 1.30 Mar20	0.71	May10	2.57
	4	#47 2.20 Sep20	0.90	Jul00	0.69
	3	#45 2.40 Mar20	1.04	Jan00	0.87
	2	#46 2.20 Jun20	1.11	Apr00	0.70
Cheapest	1	#305 1.30 Dec19 (JB)	1.20	Dec09	7.14

JGB 10-15

	Rank	Bond	ZScore	Issued	Size (¥tln)
Richest	1	#93 2.00 Mar27	-2.80	Mar07	1.15
	2	#94 2.10 Mar27	-2.67	Apr07	1.83
	3	#83 2.10 Dec25	-2.63	Dec05	0.95
	4	#82 2.10 Sep25	-2.59	Oct05	1.53
	5	#81 2.00 Sep25	-2.59	Sep05	0.88
	5	#68 2.20 Mar24	-1.76	Apr04	0.68
	4	#61 1.00 Mar23	-1.45	Apr03	1.21
	3	#60 1.40 Dec22	-1.41	Feb03	1.12
	2	#59 1.70 Dec22	-1.33	Dec02	1.07
Cheapest	1	#326 0.70 Dec22	1.00	Dec12	2.30

JGB 15-20

	Rank	Bond	ZScore	Issued	Size (¥tln)
Richest	1	#102 2.40 Jun28	-2.75	Jun08	1.04
	2	#103 2.30 Jun28	-2.62	Jul08	0.91
	3	#100 2.20 Mar28	-2.62	Mar08	1.84
	4	#107 2.10 Dec28	-2.61	Dec08	1.04
	5	#105 2.10 Sep28	-2.59	Sep08	1.90
	5	#126 2.00 Mar31	-1.08	Apr11	1.15
	4	#131 1.70 Sep31	-1.07	Nov11	1.10
	3	#128 1.90 Jun31	-1.06	Jun11	2.23
	2	#137 1.70 Jun32	-0.97	Jun12	1.27
Cheapest	1	#138 1.50 Jun32	-0.97	Jul12	1.37

JGB >20

	Rank	Bond	ZScore	Issued	Size (¥tln)
Richest	1	#31 2.20 Sep39	-2.85	Oct09	2.21
	2	#35 2.00 Sep41	-2.83	Sep11	3.01
	3	#34 2.20 Mar41	-2.83	Mar11	2.77
	4	#30 2.30 Mar39	-2.83	Apr09	2.27
	5	#32 2.30 Mar40	-2.82	Mar10	2.52
	5	#14 2.40 Mar34	-1.98	Apr04	0.87
	4	#12 2.10 Sep33	-1.97	Nov03	0.52
	3	#10 1.10 Mar33	-1.58	May03	0.53
	2	#11 1.70 Jun33	-1.55	Jul03	0.58
Cheapest	1	#9 1.40 Dec32	-1.40	Jan03	0.32

ZScore calculated using 6M history
2y,5y,7y,10y,20y,30y denote the OTR bonds
Analysis as of 5-Dec-12

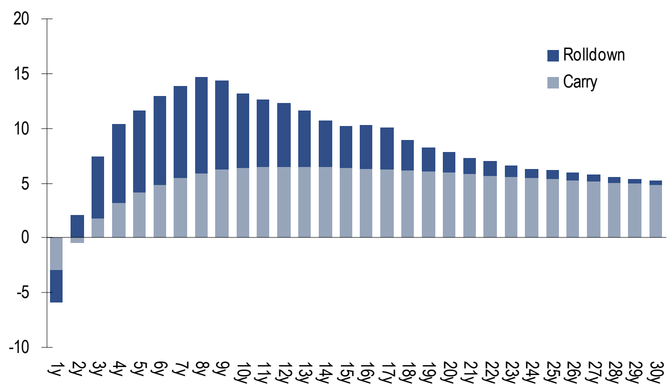
Source: Citi Research

Figure 38. 6M carry in JPY swaps[4]

fwd/tenor	1Y	2Y	3Y	4Y	5Y	6Y	7Y	8Y	9Y	10Y	12Y	15Y	20Y	25Y	30Y	40Y
SPOT	- 9.0	- 3.2	- 1.6	- 0.1	1.6	3.3	5.1	6.2	7.2	7.7	8.4	8.0	6.0	4.5	3.8	3.2
6M	- 4.6	- 2.5	- 0.8	0.7	2.4	4.2	5.7	6.7	7.4	7.9	8.3	7.8	5.8	4.4	3.8	3.2
9M	- 5.9	- 3.1	- 1.0	0.9	2.8	4.7	6.0	7.1	7.8	8.3	8.6	8.0	5.8	4.4	3.9	3.2
1Y	- 0.4	0.3	1.4	3.0	4.7	6.3	7.4	8.3	8.8	9.2	9.2	8.4	6.1	4.7	4.1	3.5
2Y	1.0	2.3	4.0	5.8	7.5	8.7	9.4	9.8	10.1	10.1	9.8	8.5	6.0	4.8	4.2	3.5
3Y	3.6	5.5	7.4	9.2	10.2	10.9	11.1	11.3	11.2	11.0	10.2	8.6	6.0	4.9	4.4	3.6
4Y	7.6	9.4	11.2	12.0	12.4	12.5	12.5	12.4	12.0	11.5	10.4	8.4	6.0	4.9	4.4	3.7
5Y	11.3	13.0	13.5	13.7	13.6	13.4	13.2	12.6	12.1	11.4	10.0	7.9	5.6	4.7	4.2	3.5
6Y	14.7	14.6	14.6	14.2	14.0	13.6	12.9	12.2	11.5	10.8	9.3	7.1	5.1	4.3	3.9	3.3
7Y	14.9	14.8	14.3	14.1	13.5	12.8	12.1	11.3	10.6	9.7	8.0	6.0	4.4	3.8	3.4	2.8
8Y	14.4	13.8	13.5	13.0	12.3	11.5	10.7	9.8	9.0	8.1	6.5	4.8	3.6	3.1	2.8	2.3
9Y	13.2	13.1	12.7	11.8	11.0	10.1	9.2	8.3	7.5	6.6	5.1	3.7	2.8	2.5	2.2	1.8
10Y	13.0	12.4	11.4	10.4	9.5	8.5	7.6	6.7	5.8	5.0	3.7	2.7	2.0	1.8	1.6	1.4
12Y	9.5	8.6	7.6	6.6	5.6	4.7	3.8	3.0	2.3	1.7	1.1	0.7	0.6	0.6	0.5	0.4
15Y	3.4	2.5	1.5	0.7	- 0.1	- 0.7	- 1.1	- 1.3	- 1.5	- 1.5	- 1.4	- 1.1	- 0.8	- 0.6	- 0.6	- 0.5
20Y	- 4.0	- 3.9	- 3.6	- 3.4	- 3.1	- 2.8	- 2.5	- 2.2	- 2.0	- 1.8	- 1.4	- 1.1	- 0.8	- 0.7	- 0.6	- 0.5
25Y	- 1.2	- 1.0	- 0.7	- 0.5	- 0.3	- 0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
30Y	0.8	0.8	0.7	0.7	0.6	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.1

Source: Citi Research

Figure 39. 6M carry profile of JGB[5]



Source: Citi Research

Figure 40. 6M carry table of JGB

JGB	Carry	Rolldown	Total
1y	-2.9	-3.0	-5.9
2y	-0.4	2.1	1.7
3y	1.7	5.6	7.4
4y	3.2	7.1	10.3
5y	4.1	7.5	11.6
6y	4.9	8.1	12.9
7y	5.4	8.5	13.9
8y	5.9	8.8	14.7
9y	6.3	8.1	14.3
10y	6.4	6.7	13.1
20y	5.9	1.8	7.8
30y	4.9	0.4	5.3

Source: Citi Research

[4] Sectors with carry more than 5bp is highlighted in green while the carry less than 5bp is highlighted in red.

[5] JGB carry profile and table is calculated from the relative value curve and it may vary from individual bonds given the repo rate.

Appendix A-1

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