

## APAC Developed Markets Rates Strategy

### Cross market value in APAC markets

- A relatively weaker domestic growth outlook is likely to anchor AUD yields against the USD. We recommend holding AUD-USD 5y5y spread compression trades, both on an outright basis or via 6m10yr payers.
- In the near-term there is a high likelihood that the momentum in earnings upgrades for Australia and its major trading partners temporarily sustains the steepness in the AUD STIR curve. We see this as a dip-buying opportunity and recommend scaling into AUD OIS flatteners.
- Front-end forwards in AUD swaps are attractively steep with the 2y1y offering the most generous rolldown. Likewise, in AUD bonds micro switches up the QTC yield curve offer the best duration-adjusted yield pickup opportunities. Supply dynamics and relative value favour switching from QTC Sep-17s into QTC Feb-18s.
- The increase of JGB issuance in the current fiscal year was kept to a minimum. However, concerns remain for the 2013 fiscal year that could put further steepening pressure on the yen yield curve.
- We expect an inflation target of 2%, a cut in IOER and a 10 trillion yen expansion of the Asset Purchase Program to be announced at the BOJ meeting next week.

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*With thanks to  
Jacy Sun*

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**See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.**

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Figure 1. Strategy Summary Table

APAC Developed Markets	View	Strategies
<b>Direction</b>	Headline event risks make outright duration unattractive still. JGBs are likely to underperform as growth strategies are deployed in Japan.	Neutral:keep duration exposure light. We would look to sell into any further significant rally in the market (i.e. on a 20bp+ further drop in yields).
<b>Yield Curve</b>	AUD curve still looks directional (bear steepening, bull flattening). JGB curve looks relatively anchored out to 5yrs	Front-end flatteners on bullish RBA outlook. Short-end AUD forwards (2y1y) look cheap versus spot, or buy 7s versus the wings in Kiwi.
<b>Cross-market</b>	Long AUD vs US. Cross-market trades should also benefit from falling AUD versus USD yield betas.	Receive AUD 5y5y vs USD or 10yr cash spread. Sell 4% strike 6m10yr AUD payers into 2% strike USD payers.
<b>Spreads</b>	Swap spread box close to end of re-steepening move, with potential for reversal. Search for yield should drive semi spreads tighter. SSA spreads now look historically tight.	Hold QTC versus SAFA and NSWTC. Buy 10y QTC vs NSWTC. Look to re-position 3s10s EFP box flattener in Q1. Prefer KfW to EIB
<b>Inflation</b>	Neutral on AUD inflation risk currently	Look to pay fixed on 10y ZCS on any dip towards the 2.70% level
<b>Volatility</b>	Gamma looks to have found a base and now looks better medium-term value than vega, on selected tenors.	Sell AUD vega to buy gamma on 10yr tails. Take profits on calendar spreads (2m10yr vs 6m10yr)
<b>Risk Allocation</b>	Spread and curve trades are likely to fare better than outright duration exposure in 2013.	

Source: Citi Research

# APAC Developed Markets

## Australia and New Zealand Rates Strategy

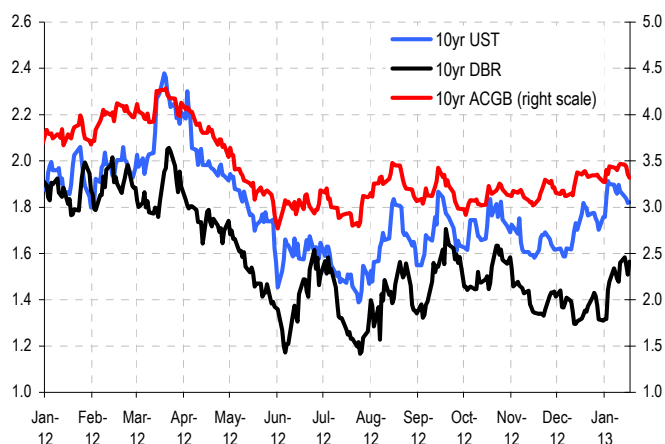
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### Home in the range – again!

While the rally in US Treasuries has helped to underpin local market sentiment, we remain wary about chasing the move. In fact, we think investors should consider fading rallies given the mounting evidence that the US economy has weathered the fiscal cliff rather well (the latest beige Book report indicated widespread evidence of housing market recovery, for instance). A clear risk is that bond markets continue to fret over the possibility of a further political stalemate next month over automatic spending reductions and the need to raise the debt ceiling; this might sustain the bid for bonds for a while longer. That said it would be surprising if markets did not look beyond these events, particularly if the economic data remains on track, as it does.

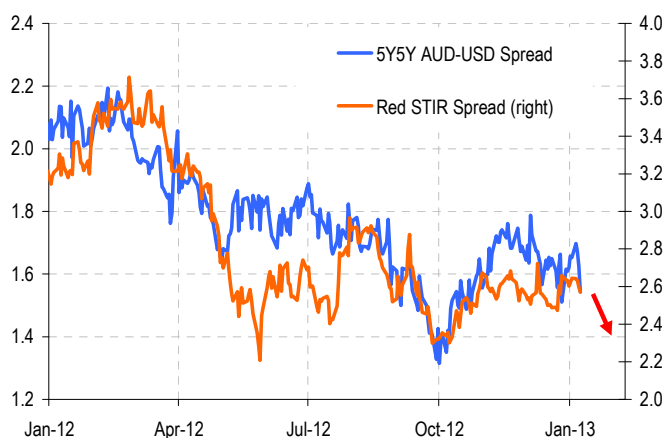
Our US strategy team sees a case for US curve steepening and wider swap spreads, with the US steepening view likely to become more compelling should US sovereign rating concerns rise as a result of a failure to improve longer-term fiscal sustainability. We continue to believe that cross-market risk offers far better risk reward than outright duration and in this vein we expect Aussie rates markets to outperform the US. A fundamental backing for this view is the apparent divergence in relative growth dynamics, with many of the Australian leading indicators now falling into the contracting or slowing territory. This is clear from the latest snapshot of our economists' economic barometer (Figure 4), which shows a more downbeat picture for house prices, employment intentions, capital imports, business confidence and retail sales compared to last month. We think that this keeps the prospect of a further RBA rate cut alive in Q1, or the early part of Q2 at the latest.

Figure 2. Benchmark yields – range trading still



Source: Citi Research

Figure 3. AUD-USD 5y5y spread versus relative policy rate expectations



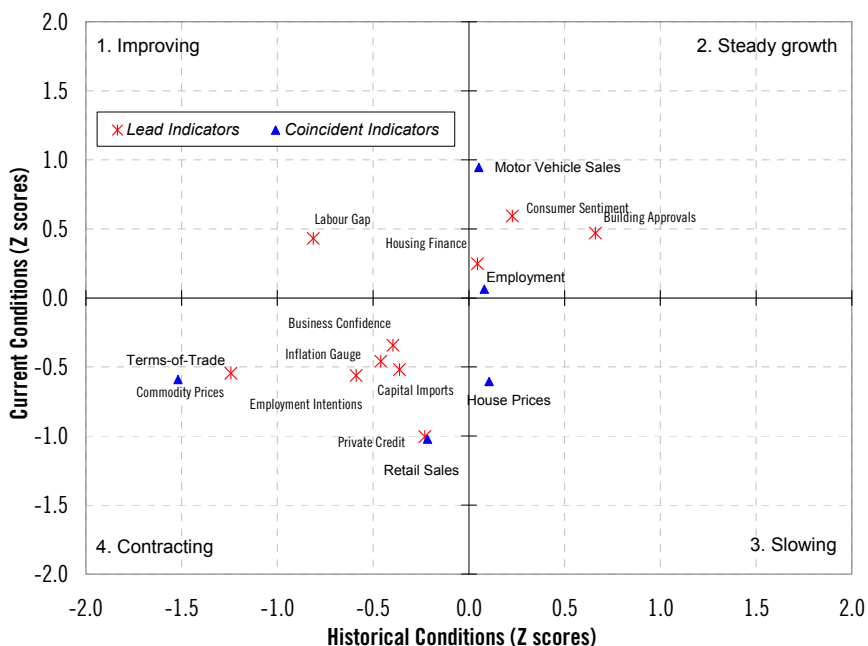
Source: Citi Research

We are already recommending a long AUD 5y5y position versus USD, which is still 15bp away from our projected target level (see *Tradesheet* for details). We think cross market exposure via payers is also attractive given the uncertainty of near-term sentiment shifts surrounding US fiscal risks and the greater risk that gamma rises in the US compared to AUD. We had similar thoughts last November, ahead of the fiscal cliff deadline and then suggested selling AUD payers to buy USD payers. This trade should continue to appeal to those fearing a negative near-term hit to sentiment on an adverse continuing resolution/debt ceiling outturn, while recognizing that the longer-term outlook is for higher US yields as the economic upturn gains traction.

For a DV01 and FX weighted trade, sell 1.09 units of 6m10yr AUD payers (4% strike), buy 1 unit of USD 6m10yr ATM payers (2% strike) for a modest net premium intake (approx 3 cents)

Note we already have a similar expression of this trade in our existing *Tradesheet*

Figure 4. Australian economic barometer (leading and coincident indicators)



Source: Citi Research

### Steep front-end forwards

The front-end of the AUD swap curve remains attractively steep. Having steepened aggressively towards the end of year, the curve now seems to have stabilized (Figure 5). Here we show 2y1y versus spot 1yr, which offers the best carry characteristics at the front-end of the curve. We have previously noted that this spread was exposed to directional risk, but closer inspection reveals that the spread is now too high relative to outright yield levels (here we show this versus 5y5y, where the relationship is stronger than for spot tenors, but even here the R2 in the regression shown is still less than 50% (Figure 7)). It is also notable that the forward spread is elevated relative to current levels of curvature (i.e. the 2s5s10s spot fly – see Figure 8). Again, this appears to be a fairly recent phenomenon, associated with the end-year re-pricing shown. Our global view is that levels of curvature are likely to remain pinned at ultra low levels, as QE continues to cap volatility and fuels the hunt for yield. Our observation on local markets is that curvature is still relatively high by international standards. It therefore seems most likely that the gap between short-term forward spreads and these other metrics will be closed via a flattening of the front-end. This also fits our view that the RBA is still likely to be mid stream with its easing cycle, with the prospect that further easing can be priced into the curve given the prevailing weakness noted in leading indicators (we are currently suggesting a paid June versus receive Dec OIS position, as outlined in our *Tradesheet*).

Figure 5. 2y1y AUD versus spot 1yr



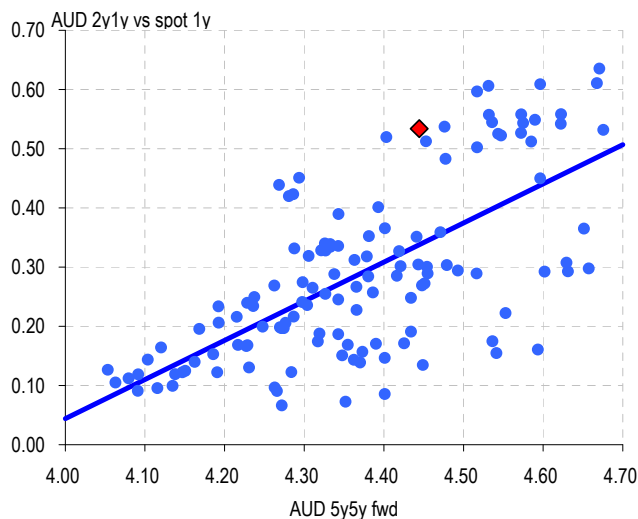
Source: Citi Research

Figure 6. 3m carry and roll by tenor (basis points)

Fwd/Tenor	1Y	2Y	3Y	4Y	5Y
SPOT	- 7.2	1.9	4.3	4.6	5.0
3M	- 4.2	2.7	4.3	4.7	5.0
6M	2.0	6.2	6.1	6.1	6.3
9M	6.1	8.2	7.2	7.0	7.0
1Y	9.0	8.8	7.9	7.6	7.4
2Y	9.0	7.5	7.4	7.2	6.8
3Y	5.7	6.3	6.5	5.9	5.3

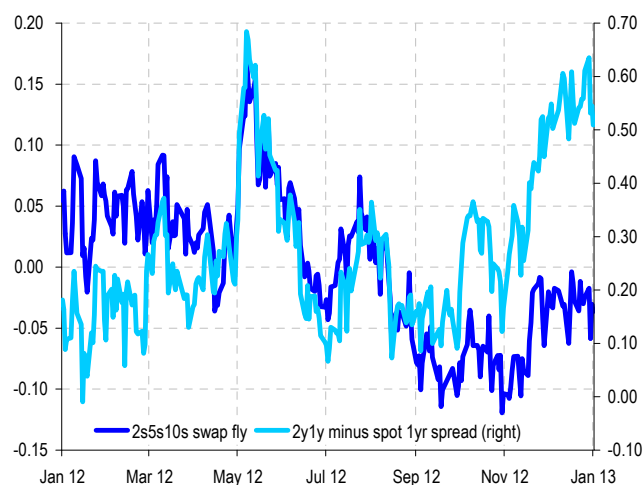
Source: Citi Research

Figure 7. AUD 2y1y forward versus 5y5y



Source: Citi Research

Figure 8. 2y1y forward versus 2s5s10s fly



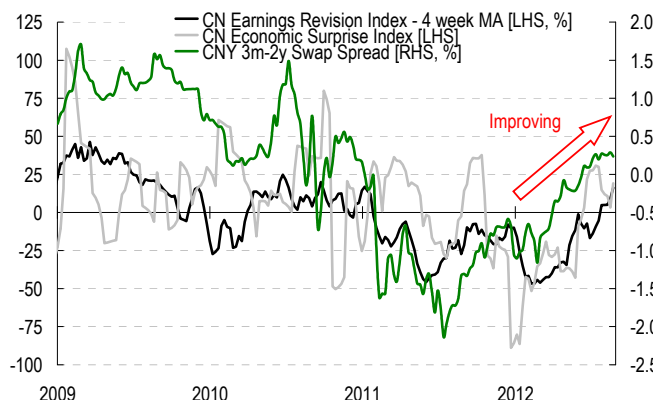
Source: Citi Research

## Two's Company, Three's a Crowd – Scale into OIS Flatteners on Dips

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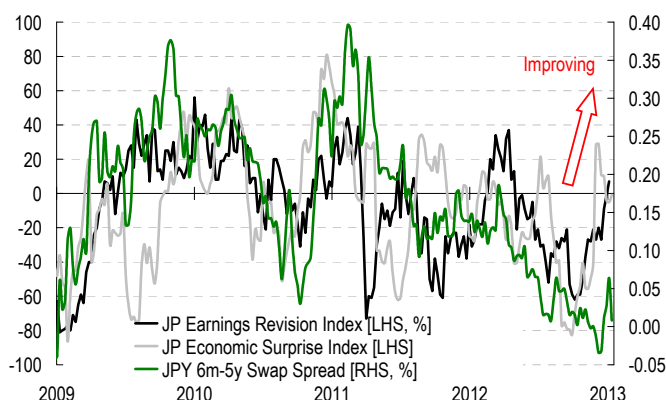
We think the synchronized rise in equity analyst expectations for Australia's major trading partners will create attractive dip buying opportunities for OIS flatteners as we still think the RBA is only midway in the policy easing cycle. To better gauge analyst expectations we used Citi's earnings revision indices (ERIs) as a bottom-up indicator which we also compared with Citi's top-down economic surprise indices (ESIs). In AUD, CNY, JPY and KRW, the ERIs have often led critical turning points in interest rate expectations as proxied by swap spreads like the 3m-2y spread for CNY. As we can see from Figure 9 to Figure 12, China and Japan have experienced simultaneous improvements in the ERIs and ESIs which have anticipated recent steepening in STIR curves. Meanwhile in Korea rate cut expectations have been relatively steady which is in line with the stagnancy in the ERI and ESI. For Australia this has also resulted in a moderation in rate cut expectations as the ERI and ESI have also displayed signs of recovery.

Figure 9. CN Analyst Expectations vs CNY 3m-2y Swap Spread



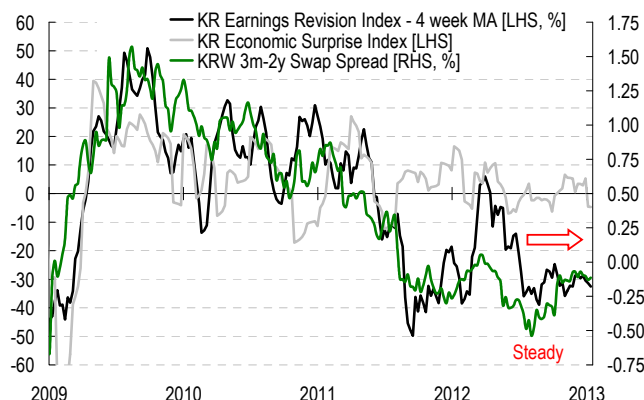
Source: Citi Research

Figure 10. JP Analyst Expectations vs JPY 6m-5y Swap Spread



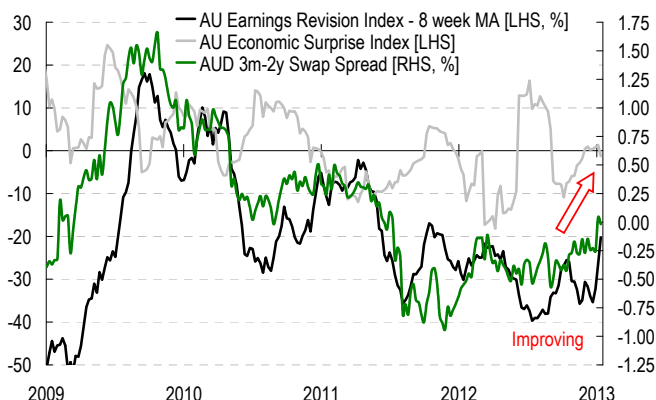
Source: Citi Research

Figure 11. KR Analyst Expectations vs KRW 3m-2y Swap Spread



Source: Citi Research

Figure 12. AU Analyst Expectations vs AUD 3m-2y Swap Spread



Source: Citi Research, CFTC

Our Asia Pacific economists and equity strategists expect the bullish momentum in earnings upgrades to be maintained in Australia as well as in China and Japan which we think represents a dip buying opportunity in the AUD STIR curve. As outlined in [China Equity Strategy - Earnings Upside and Re-rating Extend Gains](#), the stabilization in the inventory cycle has spurred growth in demand and prices with our team seeing a potential 2% to 5% upward revision in earnings for the MSCI China to begin from this month onwards. This is also expected to have a positive knock-on effect for Japanese earnings revisions as it will complement future policy targeting a weaker JPY (see [Japan Equity Strategist - Limited risk of Japanese equity correction](#)). Meanwhile, against a backdrop of KRW strength our strategist in Korea sees headwinds for earnings forecasts as they expect lower margin forecasts following the disappointing Q4 12 results (see [Kimchi Discovery #81 - 4Q12E Earnings: Beats & Misses](#)). By contrast, in Australia the equity strategy team expects the recent rate cuts to outweigh the high AUD and allow for more earnings upgrades (see [Australia Equity Strategy - Is Confidence In Earnings Growth Improving, and Is It Justified?](#)). Although this has buoyed appetite for risk assets in Asia Pacific we still expect more policy easing by the RBA to meet its macroeconomic objectives given the high AUD, weak labour market, slower GDP growth and benign CPI inflation (see [Australian Economic Release Notes - RBA rate cuts not gaining traction with households](#)). Thus we see this as a prime opportunity to scale back into flatteners in AUD OIS.

### Queuing for QTC Switches – Semis Relative Value

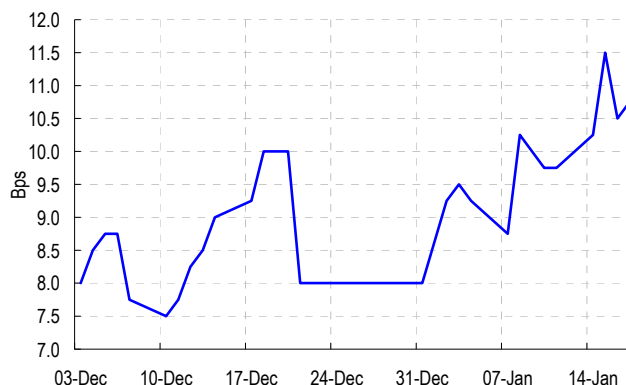
QTC micro curve trades dominate our switch filter as they earn the largest duration-adjusted yield pickup. As shown in Figure 13, QTC switches dominate our top 10 switches with each offering at least a +30bps increase in yield for an extra year of duration. In particular, we think the QTC Feb-18 against QTC Sep-17 switch offers most value as the 11bps yield pickup only increases duration by 0.1 years. This is high compared to other switches like the NSWTC Feb-18 against the NSWTC Feb-17 as a 0.6 year lengthening in duration results in a slightly higher yield pickup of 13.75 bps. We think current levels also look attractive to scale into as the spread level is now at its highest since the Sep-17 line was first issued in Dec-12 (see Figure 14).

**TRADE – Buy QTC Feb-18 vs QTC Sep-17. Entry +11bps. Target +3bps. Stop +15bps.**

Figure 13. Top 10 Switches by Duration-Adjusted Yield Pickup

Switch Trade	Bps Yield Pickup Per Year of Duration
QTC Sep-17 - QTC Feb-18	110.0
QTC Jun-19 - QTC Feb-20	90.4
QTC Jul-23 - QTC Jul-24	57.9
QTC Oct-15 - QTC Apr-16	35.4
QTC Nov-14 - QTC Oct-15	30.5
SAFA Jun-14 - SAFA Apr-15	27.7
SAFA Apr-15 - SAFA Sep-17	26.6
NSWTC Jul-14 - NSWTC Apr-15	25.3
NSWTC Feb-17 - NSWTC Feb-18	23.1

Figure 14. QTC Sep-17 vs QTC Feb-18 Yield Spread

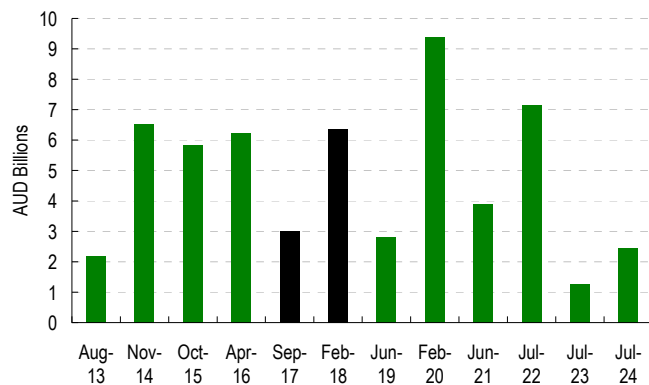


Source: Citi Research

Source: Citi Research

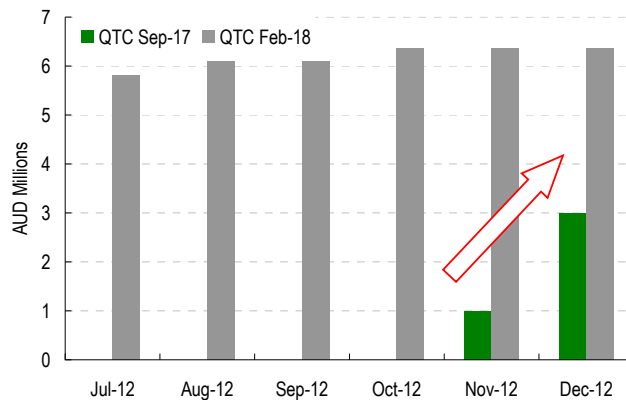
QTC spread curves remain steep amidst the recent relaxation of global Basel III liquidity guidelines and the uncertainty around APRA's policy implementation for Australia (see [Basel III Liquidity Standard Update – Avoiding a Faulty Basel](#)). The historically high level of AUDJPY over the last quarter of the Japanese fiscal year has also increased the chance of non-JPY asset repatriation which could help shift semi issuance to the short and mid tenors (see [Spreads – the bread and butter trades for 2013](#)). We think the Sep-17 tranche is most exposed in terms of supply risks as it is relatively immature compared to other bonds on the benchmark curve (see Figure 15). This is confirmed by FY 12-13 issuance patterns with the amount outstanding in the Sep-17 line growing rapidly compared to the Feb-18 line which has been stable (see Figure 16).

Figure 15. QTC Benchmark Bond Maturity Profile



Source: Citi Research, Bloomberg

Figure 16. Amount Outstanding for Selected QTC Benchmark Bonds



Source: Citi Research, QTC



## JGB Rates Strategy

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On January 11, the government announced an emergency economic package in excess of ¥20trn, of which some ¥10trn is new fiscal expenditure. The government refers to the supplementary budget as a package of “urgent economic measures to rehabilitate the Japanese economy.” The key elements are (1) spending on earthquake recovery and disaster mitigation, (2) the creation of wealth through growth, (3) lifestyle security, regional revitalization and deregulation to ensure the realization of latent growth potential, and (4) the stabilization of FX market. PM Abe’s priority in his policy is to end deflation as he has publicly commented, with the three main tools to do so being dramatic change in monetary policy, flexible fiscal policy, and a growth strategy to stimulate private-sector investment. This economic stimulus package is positioned as the first in a three-pronged effort to implement integrated and powerful policy action of a different order of magnitude to previous policy, in order to realize economic rehabilitation, earthquake recovery and risk management. One major theme we have discussed since last autumn has been a paradigm shift from fiscal consolidation to an emphasis on growth. Upward pressure on interest rates emerged some two months later than we had previously envisaged, mainly due to a delay in the Lower House dissolution. Market participants are still uncertain about how determined the government is to pursue so-called “Abenomics”, or how effective the policies will be.

The MoF released a revised JGB issuance plan on January 15, following the cabinet decision on the FY2012 supplementary budget. Please see the latest update in: [JGB Market Strategy - Revised FY2012 JGB Issuance Plan \[16 Jan 2013\]](#). We expect the FY2012 supplementary budget, which assumes the actual implementation of economic stimulus measure to be introduced in the regular session of Diet convening on January 28, and is expected to pass around mid-February. We also expect that the stimulus measures will start to impact the real economy markedly in April-June, and will likely be manifest in economic statistics about 1–2 months later. In the near term, the market’s reaction will be the only way to evaluate the effectiveness of Abenomics. With its “flexible fiscal policy” and “growth strategy to stimulate private-sector investment,” the government has effectively passed the baton to the BoJ.

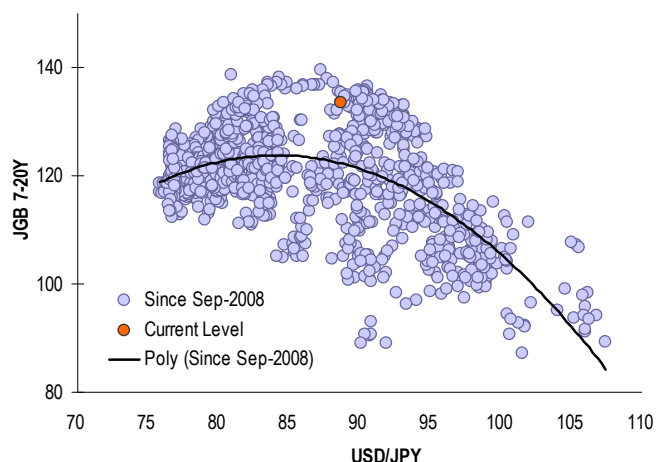
The monetary policy meeting is scheduled on Jan 21-22 and it is widely expected that a 2% “medium-term” inflation target will be adopted this time. Now that politicians are looking to tighten their control of the central bank, it is likely that the government and BoJ will both need to support an inflation target of 2%, and to demonstrate a strong commitment to achieve it. In the joint statement, numerical targets and deadlines for achievement will be important, along with expressions of accountability. In addition, Citi expects a 10trn expansion of Asset Purchase Program (Figure 17) along with lowering of the paid interest on excess reserves by 5bps. The views regarding the BoJ’s next policy steps seem to be split among economists at the timing of writing.

Figure 17. BoJ's Asset Holding [as of Dec 31, ¥trn]

(tn yen)	Target Size			Number of Operation	Amount Outstanding	Progress
	Dec-2012 40trn	By Jun-2012 60.5trn	By Dec-2013 76trn			
<b>Asset Purchases</b>						
JGB	24.0	34.0	44.0	53 times	24.1	71%
T-Bills	9.5	19.5	24.5	53 times	9.2	47%
CP	2.1	2.1	2.2	56 times	1.8	86%
Corporate Bond	2.9	2.9	3.2	22 times	2.9	101%
ETFs	1.6	1.6	2.1	66 times	1.5	92%
J-REITs	0.12	0.12	0.13	65 times	0.11	92%
<b>Fund-Supplying Operation</b>	25.0	25.0	25.0		27.1	108%
<b>Total</b>	65	86	101		66.6	78%

Source: BoJ, Citi Research

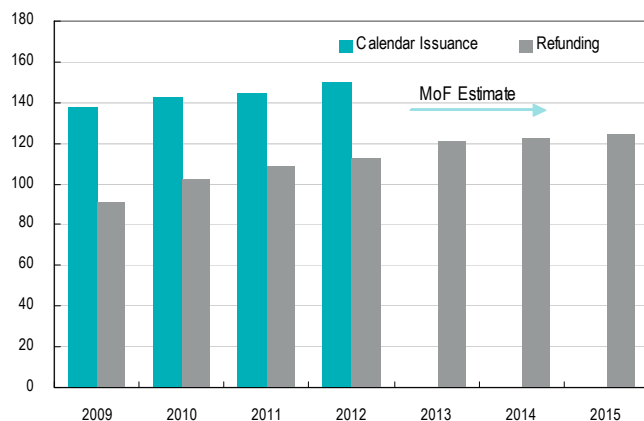
Figure 18. USD/JPY vs JGB7x30yr Curve [bp]



Source: Citi Research

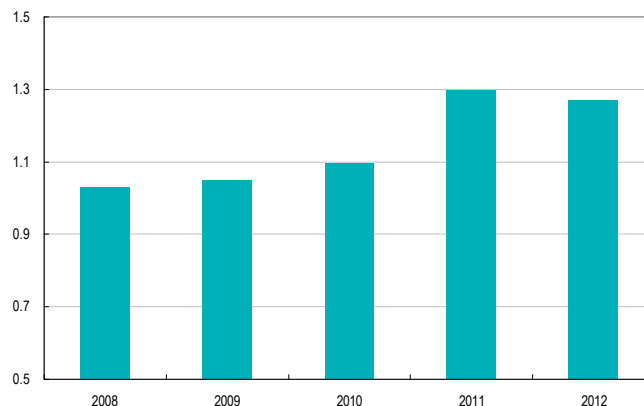
However, the markets value action and the practicality of policy settings, rather than mere words. We see “dramatic” (monetary policy) as the key word. If additional monetary easing is simply an extension of previous policy, FX and equity market are likely to retreat from the current level of exuberance. But if the yen weakens further and equities continue to rise, the JGB yield curve is likely to come under steepening pressure. The spread has widened to the widest-end of the range since 2008 (Figure 18), yet we reiterate that it should not be taken for granted that the spread will track the way it has in prior periods, because we see more reasons to expect further steepening than the past including issuance concerns, more aggressive monetary policy easing, and the issue regarding inflation targeting to tackle deflationary economic situations. From the perspective of market stability, there will be demands for the BoJ to buy JGBs with longer maturities. JGB issuance is likely to grow in the next fiscal year, due to substantial increase in issuance of refinancing bonds (Figure 19).

Figure 19. Calendar-Base JGB and Refunding Bond Issuances [¥trn]



Source: MoF, Citi Research

Figure 20. Japan's FX Reserves [end of period, \$trn]



Source: Citi Research

The BoJ's policy management process will be tested by whether it can maintain the downtrend in the yen and uptrend in the equity market by fulfilling expectations for the "dramatic monetary policy change" outlined by PM Abe. If policy ineffectiveness results in even greater distrust of the BoJ among politicians, debate regarding amendments to the BoJ Act, which has currently subsided, may gain momentum again. The appointments of a new governor and deputy governors of the BoJ in spring will also have both tangible and intangible impacts. The candidates are likely to be selected and agreed in the Diet by the end of February. We see little likelihood of the new governor being a BoJ insider (none of the candidates foreseen by the market at this point is an insider). We expect the focus to be more on the deputy governors. If neither of the new deputy governors are BoJ veterans, all positions on the Monetary Policy Board would for the first time be occupied by BoJ outsiders.

The debate on establishing a fund in which the government buys foreign securities was basked in the spotlight across markets this week. We, however, believe the chance of that becoming feasible is low, mainly due to diplomatic concerns regarding our major economic partners. LDP first stated that it will consider setting up a fund in its policy pledge for the Lower House election campaign as a part of the measures to be coordinated to tackle deflation and correct the yen's strength. As expectations for the Abe's economic policies heightened with the progress of equity rally and yen depreciation, comments and wordings out of LDP on the set up of such a fund have gradually toned down. In the latest recitation in the emergency economic package on January 11, the wording of foreign securities was omitted by stating that 'the government will consider the measures which are aimed to stabilize the currency market using foreign reserves (Figure 20) while carefully monitoring the market development.' Even if this policy option is going to be considered in the future, we think the earliest timing will be after the Upper House election in summer as it will perhaps required to be compiled in the budget along with the related bill's passage in the Diet. For such a process to be materialized, the earliest possible budget, if happens, will be the supplementary FY2013 budget after summer.

# Tradesheet

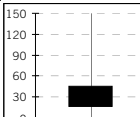
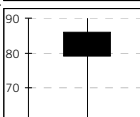
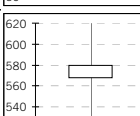
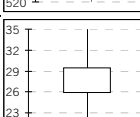
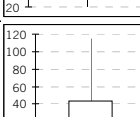
**New Trades:** Buy QTC Feb-18 vs QTC Sep-17. Entry +11bps. Target +3bps. Stop +15bps.

Figure 21. Record of Open Trades

Country	Trade	Levels	Publication Date	
<b>AUD</b>	<b>Pay AUD Jun13 OIS. Receive AUD Dec13 OIS.</b>	Open -3bp Current -7.31bp <b>P&amp;L 4.31bp</b> Target -26bp Stop 12bp	APAC DMRS 14 December 2012	
<b>Swap Curve</b>	Pay AUD Jun13 OIS Receive AUD Dec13 OIS			
<b>AUD</b>	<b>Buy QTC 6% July 2022. Sell NSWTC 6% March 2022</b>	Open 31bp Current 26bp <b>P&amp;L 5bp</b> Target 11bp Stop 41bp	APAC DMRS 14 December 2012	
<b>Cash Curve</b>	Buy QTC 6% July 2022 @ 4.29% Sell NSWTC 6% March 2022 @ 3.98%			
<b>NZD</b>	<b>Receive belly of NZD 3m fwd 1y-7y-10y butterfly</b>	Open 59bp Current 57.43bp <b>P&amp;L 1.57bp</b> Target 49bp Stop 64bp	APAC DMRS 7 December 2012	
<b>Swap Curve</b>	Receive 2 x NZD 3m7y Pay NZD 3m1y and 3m10y			
<b>AUD/USD</b>	<b>Receive AUD 5y5y. Pay USD 5y5y</b>	Open 177bp Current 155.52bp <b>P&amp;L 21.48bp</b> Target 140bp Stop 200bp	APAC DMRS 28 November 2012	
<b>Cross-market</b>	Receive AUD5y5y Pay USD 5y5y			
<b>AUD/USD</b>	<b>Sell 1.11 x AUD 6m10y 4% payer. Buy 1 x USD 6m10y ATM payer</b>	Open 0c Current 42.85c <b>P&amp;L 42.85c</b> Target 210c Stop -70c	APAC DMRS 22 November 2012	
<b>Cross-market</b>	Sell 1.11 x AUD 6m10y 4% payer Buy 1 x USD 6m10y ATM payer			
<b>NZD</b>	<b>Receive NZD 2y1y</b>	Open 300bp Current 311.52bp <b>P&amp;L -11.52bp</b> Target 2.60% Stop 3.20%	APAC DMRS 4 October 2012	
<b>Swap Curve</b>	Receive NZD 2y1y			
<b>AUD</b>	<b>Sell AUD 3m3y 50bp wide strangle. Buy 1y3y 50bp OTM receiver</b>	Open 0c Current 37.76c <b>P&amp;L 37.76c</b> Target 180c Stop -85c	APAC DMRS 27 September 2012	
<b>Volatility</b>	Sell AUD 3m3y 50bp wide strangle (2.75% and 3.25% strike) Buy AUD 1y3y 50bp OTM receiver (2.64% strike)			
<b>AUD</b>	<b>Buy QTC 6% Oct 2015, Sell SAFA 5.75% Apr 2015</b>	Open 10bp Current 6bp <b>P&amp;L 4bp</b> Target 0bp Stop 15bp	APAC DMRS 13 September 2012	
<b>Cash Curve</b>	Buy QTC 6% Oct 2015 @ 3.32% Sell SAFA 5.75% Apr 2015 @ 3.22%			

Source: Citi Research

Figure 22. Record of Open Trades

<b>JPY</b>	<b>JPY 6m fwd 5y/10y ATM conditional steepener via payers</b>	Open 46c Current 15.34c	<b>P&amp;L -30.66c</b> Target 150c Stop 0c	APAC DMRS 13 September 2012	
<b>AUD</b>	<b>Buy ACGB 4.75% Apr 2027. Sell ACGB 4.25% Jul 2017</b>	Open 79bp Current 86bp	<b>P&amp;L -7bp</b> Target 60bp Stop 90bp	APAC DMRS 19 July 2012	
<b>AUD</b>	<b>Sell AUD 5y5y ATM Straddle</b>	Open 580c Current 567.17c	<b>P&amp;L 12.83c</b> Target 520c Stop 620c	APAC DMRS 21 June 2012	
<b>AUD</b>	<b>Buy ACGB 5.5% Apr 2023. Sell ACGB 4.5% Apr 2020</b>	Open 29.5bp Current 25.75bp	<b>P&amp;L 3.75bp</b> Target 20bp Stop 35bp	APAC DMRS 8 May 2012	
<b>AUD</b>	<b>Buy AUD 1y2y 75bp wide 1/2/1 receiver fly</b>	Open 22c Current 42.97c	<b>P&amp;L 20.97c</b> Target 115c Stop 0c	APAC DMRS 29 March 2012	

Source: Citi Research

## Appendix

Figure 23. Australia relative value by sector

		Versus Fitted Yield Curve					Versus Swap Curve (CAS)				
		Rank		ZScore	Issued	Size (bn)	Rank		ZScore	Issued	Size (bn)
ACGB	Richest	1	AUT 3.25 Apr29	-1.17	Oct12	3.3	1	AUT 3.25 Apr29	-0.11	Oct12	3.3
		2	AUT 4.50 Apr20	-0.77	Apr09	14.5	2	AUT 4.75 Apr27	0.88	Oct11	3.3
		3	AUT 5.75 May21	-0.73	May07	12.8	3	AUT 6.50 May13	0.98	May00	16.7
		4	AUT 2.75 Apr24	-0.47	Apr12	0.0	4	AUT 2.75 Apr24	1.01	Apr12	0.0
		5	AUT 5.50 Apr23	-0.44	Apr11	3.2	5	AUT 5.50 Dec13	1.07	Dec09	9.3
	Cheapest	5	AUT 4.50 Oct14	0.31	Apr10	9.2	5	AUT 6.00 Feb17	1.31	Feb04	14.5
		4	AUT 5.25 Mar19	0.55	Sep05	13.9	4	AUT 6.25 Jun14	1.33	Jun08	11.9
		3	AUT 5.50 Jan18	0.62	Jul10	8.3	3	AUT 4.75 Oct15	1.36	Apr11	2.2
		2	AUT 6.50 May13	1.90	May00	16.7	2	AUT 4.75 Jun16	1.39	Jun10	11.0
		1	AUT 5.75 Jul22	2.68	Jan10	7.4	1	AUT 4.50 Oct14	1.51	Apr10	9.2
NSW	Richest	1	NSW 5.50 Mar17	-1.71	Mar06	3.3	1	NSW 5.50 Aug13	-0.18	Feb10	5.0
		2	NSW 5.50 Aug13	-1.56	Feb10	5.0	2	NSW 5.25 May13	0.09	May09	0.6
		3	NSW 6.00 Apr15	-1.47	Apr11	2.0	3	NSW 2.75 Jul14	0.70	Jul12	0.5
		4	NSW 2.75 Jul14	-1.36	Jul12	0.5	4	NSW 5.50 Mar17	0.75	Mar06	3.3
		5	NSW 6.00 Apr19	-1.27	Apr08	3.5	5	NSW 6.00 Apr19	0.86	Apr08	3.5
	Cheapest	5	NSW 6.00 May23	-0.50	May07	2.6	5	NSW 4.00 Feb17	1.54	Feb12	1.0
		4	NSW 6.00 Mar22	-0.29	Sep11	0.6	4	NSW 6.00 May23	1.74	May07	2.6
		3	NSW 6.00 May30	-0.04	May10	0.2	3	NSW 6.00 May30	1.93	May10	0.2
		2	NSW 5.25 May13	0.17	May09	0.6	2	NSW 5.00 Aug24	2.04	Feb12	0.9
		1	NSW 5.00 Aug24	0.29	Feb12	0.9	1	NSW 6.00 Mar22	2.15	Sep11	0.6
QTC	Richest	1	QTC 6.00 Apr16	-1.41	Apr10	5.1	1	QTC 6.50 Mar33	-1.11	Mar08	0.7
		2	QTC 5.75 Nov14	-1.41	Nov09	7.8	2	QTC 6.00 Apr16	-0.67	Apr10	5.1
		3	QTC 6.00 Oct15	-1.35	Oct10	6.9	3	QTC 6.25 Feb20	-0.67	Feb10	5.9
		4	QTC 6.50 Mar33	-1.19	Mar08	0.7	4	QTC 5.75 Nov14	-0.65	Nov09	7.8
		5	QTC 6.00 Aug13	-1.18	Aug10	3.5	5	QTC 6.00 Oct15	-0.48	Oct10	6.9
	Cheapest	5	QTC 6.25 Feb20	-1.13	Feb10	5.9	5	QTC 6.00 Aug13	0.11	Aug10	3.5
		4	QTC 6.00 Aug13	-1.11	Feb02	3.3	4	QTC 5.50 Jun21	0.13	Jun11	1.5
		3	QTC 6.00 Jul22	-0.88	Jan11	3.8	3	QTC 6.00 Jul22	0.14	Jan11	3.8
		2	QTC 5.50 Jun21	-0.88	Jun11	1.5	2	QTC 6.00 Aug13	0.15	Feb02	3.3
		1	QTC 5.75 Jul24	-0.53	Jan11	1.1	1	QTC 5.75 Jul24	0.64	Jan11	1.1
TCV	Richest	1	TCV 5.75 Nov16	-1.22	Nov04	3.5	1	TCV 4.75 Oct14	0.99	Apr03	4.0
		2	TCV 4.75 Oct14	-1.12	Apr03	4.0	2	TCV 6.50 Mar33	1.16	Sep10	0.1
		3	TCV 6.00 Jun20	-0.89	Jun09	3.4	3	TCV 5.75 Nov16	1.28	Nov04	3.5
		4	TCV 5.50 Nov18	-0.84	Nov08	3.0	4	TCV 6.00 Jun20	1.37	Jun09	3.4
	Cheapest	4	TCV 6.00 Oct22	-0.35	Oct03	3.1	4	TCV 5.50 Nov18	1.59	Nov08	3.0
		3	TCV 6.50 Mar33	0.00	Sep10	0.1	3	TCV 5.50 Nov26	2.07	May11	0.6
		2	TCV 5.50 Nov26	0.03	May11	0.6	2	TCV 6.00 Oct22	2.13	Oct03	3.1
		1	TCV 5.50 Dec24	0.24	Jun10	2.3	1	TCV 5.50 Dec24	2.33	Jun10	2.3
	Cheapest	Rank		ZScore	Issued	Size (bn)	Rank		ZScore	Issued	Size (bn)
WATC	Richest	1	WATC 7.00 Apr15	-1.56	Oct06	2.6	1	WATC 7.00 Apr15	0.72	Oct06	2.6
		2	WATC 5.50 Apr14	-1.17	Apr10	1.9	2	WATC 7.00 Oct19	0.90	Apr01	1.8
		3	WATC 7.00 Oct19	-1.10	Apr01	1.8	3	WATC 5.50 Apr14	1.10	Apr10	1.9
	Cheapest	3	WATC 8.00 Jul17	-1.06	Jan01	2.5	3	WATC 7.00 Jul21	1.34	Jul02	0.8
		2	WATC 7.00 Jul21	-0.77	Jul02	0.8	2	WATC 8.00 Jul17	1.42	Jan01	2.5
		1	WATC 6.00 Oct23	-0.30	Mar05	0.2	1	WATC 6.00 Oct23	1.50	Mar05	0.2

ZScore calculated using 6M history  
2y,5y,7y,10y,20y,30y denote the OTR bonds  
Analytics as of 16-Jan-13

Source: Citi Research

Figure 24. Australia relative value by sector

		Versus Fitted Yield Curve					Versus Swap Curve (CAS)				
		Rank		ZScore	Issued	Size (bn)	Rank		ZScore	Issued	Size (bn)
SAFA	Richest	1	SAFA 5.75 Sep17	-1.46	Mar10	2.0	1	SAFA 5.75 Sep17	-0.56	Mar10	2.0
		2	SAFA 5.75 Apr15	-1.42	Apr09	2.0	2	SAFA 5.00 May21	-0.47	May11	1.0
	Cheapest	2	SAFA 5.00 May21	-1.13	May11	1.0	2	SAFA 5.25 Jun14	0.42	Dec10	2.0
		1	SAFA 6.00 May13	-0.16	Nov06	2.2	1	SAFA 6.00 May13	0.61	Nov06	2.2
NTER	Richest	1	NTER 6.25 Oct15	-1.51	Apr10	0.5	1	NTER 6.25 Oct15	-1.28	Apr10	0.5
	Cheapest			-6.00					-10.00		
		1	NTER 6.75 Oct13	-1.46	Apr08	0.4	1	NTER 5.75 Jul14	-0.99	Jul09	0.5
TASM	Richest	1	TASM 5.50 Jun14	-1.41	Jun10	0.8	1	TASM 6.50 May13	-1.41	Nov06	0.8
		2	TASM 5.00 Sep17	-1.35	Sep11	0.5	2	TASM 5.50 Jun14	0.09	Jun10	0.8
	Cheapest	2	TASM 6.00 Jun20	-1.19	Jun09	0.1	2	TASM 6.00 Jun20	0.17	Jun09	0.1
		1	TASM 6.50 May13	0.00	Nov06	0.8	1	TASM 6.50 Apr15	1.08	Oct06	0.5

ZScore calculated using 6M history  
2y,5y,7y,10y,20y,30y denote the OTR bonds  
Analytics as of 16-Jan-13

Source: Citi Research

Figure 25. Australia relative value by maturity

Versus Fitted Yield Curve							Versus Swap Curve (CAS)							
	Rank		ZScore	Issued	Size (bn)		Rank		ZScore	Issued	Size (bn)			
AUS 1-3	Richest	1	QTCX 6.00 Oct15	-1.68	Apr03	0.6	Richest	1	NTER 6.25 Oct15	-1.28	Apr10	0.5		
		2	WATC 7.00 Apr15	-1.57	Oct06	2.6		2	NTER 5.75 Jul14	-0.99	Jul09	0.5		
		3	NTER 6.25 Oct15	-1.51	Apr10	0.5		3	QTC 5.75 Nov14	-0.77	Nov09	7.8		
		4	NTER 5.75 Jul14	-1.48	Jul09	0.5		4	QTC 6.00 Oct15	-0.42	Oct10	6.9		
		5	NSWN 5.50 Aug14	-1.48	Aug03	2.8		5	TASM 5.50 Jun14	0.09	Jun10	0.8		
	Cheapest	5	TCV 4.75 Oct14	-1.16	Apr03	4.0	Cheapest	5	NSWX 5.50 Aug14	1.12	Aug03	1.0		
		4	AUT 4.75 Oct15	-0.15	Apr11	2.2		4	AUT 6.25 Apr15 (2y)	1.26	Apr02	14.1		
		3	AUT 6.25 Jun14	-0.12	Jun08	11.9		3	AUT 6.25 Jun14	1.32	Jun08	11.9		
		2	AUT 4.50 Oct14	0.25	Apr10	9.2		2	AUT 4.75 Oct15	1.35	Apr11	2.2		
		1	AUT 6.25 Apr15 (2y)	0.27	AprU2	14.1		1	AUT 4.50 Oct14	1.50	Apr10	9.2		
AUS 4-7	Richest	1	NSW 5.50 Mar17	-1.58	Mar06	3.3	Richest	1	SAFA 5.75 Sep17	-0.56	Mar10	2.0		
		2	NSWX 5.50 Mar17	-1.56	Mar06	1.6		2	QTC 6.00 Feb18	-0.54	Feb11	4.4		
		3	QTCN 6.00 Sep17	-1.46	Sep06	4.6		3	ACT 5.50 Jun18	-0.17	Jun11	0.3		
		4	QTCX 6.00 Sep17	-1.46	Sep06	0.6		4	TASM 5.00 Sep17	0.13	Sep11	0.5		
		5	SAFA 5.75 Sep17	-1.46	Mar10	2.0		5	QTCN 6.00 Sep17	0.24	Sep06	4.6		
	Cheapest	5	TCV 5.50 Nov18	-0.91	Nov08	3.0	Cheapest	5	AUT 4.25 Jul17	1.23	Jul11	0.0		
		4	AUT 4.25 Jul17	-0.80	Jul11	0.0		4	WATC 8.00 Jul17	1.28	Jan01	2.5		
		3	AUT 6.00 Feb17	0.17	Feb04	14.5		3	AUT 6.00 Feb17	1.32	Feb04	14.5		
		2	AUT 5.50 Jan18 (5y)	0.27	Jul10	8.3		2	TCV 5.50 Nov18	1.40	Nov08	3.0		
		1	AUT 5.25 Mar19	1.14	Sep05	13.9		1	NSW 4.00 Feb17	1.44	Feb12	1.0		
AUS 8-10	Richest	1	SAFA 5.00 May21	-1.13	May11	1.0	Richest	1	SAFA 5.00 May21	-0.47	May11	1.0		
		2	QTC 6.00 Jul22	-0.90	Jan11	3.8		2	QTC 6.00 Jul22	-0.01	Jan11	3.8		
		3	QTC 5.50 Jun21	-0.89	Jun11	1.5		3	QTC 5.50 Jun21	0.04	Jun11	1.5		
		4	WATC 7.00 Jul21	-0.88	Jul02	0.8		4	WATC 7.00 Jul21	1.16	Jul02	0.8		
	Cheapest	4	AUT 5.75 May21	-0.75	May07	12.8	Cheapest	4	AUT 5.75 May21	1.16	May07	12.8		
		3	TCV 6.00 Oct22	-0.42	Oct03	3.1		3	AUT 5.75 Jul22	1.23	Jan10	7.4		
		2	NSW 6.00 Mar22	-0.39	Sep11	0.6		2	TCV 6.00 Oct22	1.91	Oct03	3.1		
		1	AUT 5.75 Jul22	2.43	Jan10	7.4		1	NSW 6.00 Mar22	1.94	Sep11	0.6		
	AUS >10	Richest	1	QTC 6.50 Mar33	-1.25	Mar08	0.7	Richest	1	QTC 6.50 Mar33	-1.37	Mar08	0.7	
			2	AUT 3.25 Apr29	-1.03	Oct12	3.3		2	AUT 3.25 Apr29	-0.30	Oct12	3.3	
3			QTC 5.75 Jul24	-0.54	Jan11	1.1	3		QTC 5.75 Jul24	0.44	Jan11	1.1		
4			NSW 6.00 May23	-0.49	May07	2.6	4		AUT 4.75 Apr27	0.75	Oct11	3.3		
5			AUT 2.75 Apr24	-0.41	Apr12	0.0	5		AUT 2.75 Apr24	0.90	Apr12	0.0		
Cheapest		5	TCV 6.50 Mar33	0.00	Sep10	0.1	Cheapest	5	NSW 6.00 May23	1.63	May07	2.6		
		4	TCV 5.50 Nov26	0.01	May11	0.6		4	NSW 6.00 May30	1.69	May10	0.2		
		3	AUT 4.75 Apr27	0.13	Oct11	3.3		3	TCV 5.50 Nov26	1.77	May11	0.6		
		2	TCV 5.50 Dec24	0.22	Jun10	2.3		2	NSW 5.00 Aug24	1.90	Feb12	0.9		
		1	NSW 5.00 Aug24	0.28	Feb12	0.9		1	TCV 5.50 Dec24	2.14	Jun10	2.3		

ZScore calculated using 6M history  
2y,5y,7y,10y,20y,30y denote the OTR bonds  
Analytics as of 16-Jan-13

Source: Citi Research

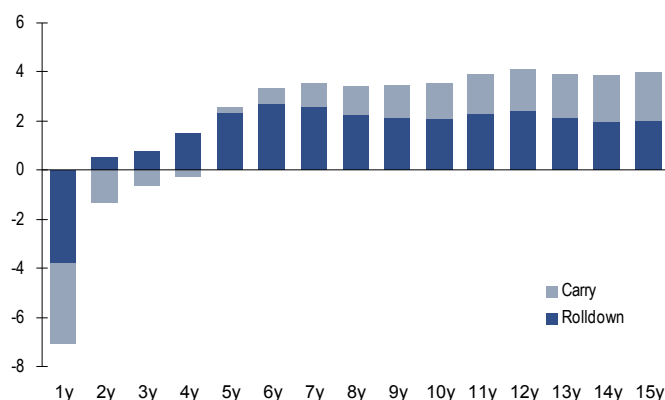


Figure 26. 3M carry in AUD swaps<sup>1</sup>

Fwd/Tenor	1Y	2Y	3Y	4Y	5Y	6Y	7Y	8Y	9Y	10Y	12Y	15Y	20Y	25Y	30Y
SPOT	- 7.2	1.9	4.3	4.6	5.0	5.3	5.2	4.8	4.6	4.4	4.4	3.8	3.0	2.4	2.1
3M	- 4.2	2.7	4.3	4.7	5.0	5.2	5.0	4.8	4.5	4.5	4.2	3.7	2.9	2.4	2.1
6M	2.0	6.2	6.1	6.1	6.3	6.3	5.7	5.5	5.1	5.2	4.8	4.2	3.2	2.7	2.4
9M	6.1	8.2	7.2	7.0	7.0	6.8	6.2	5.9	5.4	5.7	5.0	4.5	3.4	2.8	2.5
1Y	9.0	8.8	7.9	7.6	7.4	7.0	6.3	6.0	5.7	5.9	5.1	4.6	3.4	2.9	2.6
2Y	9.0	7.5	7.4	7.2	6.8	6.0	5.7	5.4	5.6	5.2	4.5	4.2	2.9	2.5	2.2
3Y	5.7	6.3	6.5	5.9	5.3	4.9	4.7	5.0	4.6	4.2	3.8	3.4	2.3	2.0	1.7
4Y	6.9	7.0	6.4	5.2	4.8	4.5	4.9	4.5	4.1	3.8	3.6	3.0	2.0	1.7	1.4
5Y	7.0	6.1	4.9	4.3	4.0	4.6	4.1	3.7	3.4	3.3	3.2	2.3	1.6	1.3	1.1
6Y	5.1	3.8	3.7	3.3	4.1	3.6	3.2	2.9	2.8	2.8	2.5	1.6	1.2	0.9	0.7
7Y	2.5	2.9	2.9	4.0	3.4	2.9	2.7	2.5	2.6	2.5	2.0	1.1	0.8	0.6	0.4
8Y	3.3	3.1	4.6	3.6	3.0	2.7	2.5	2.6	2.5	2.3	1.5	0.8	0.7	0.4	0.3
9Y	2.8	5.3	3.9	2.9	2.6	2.4	2.5	2.4	2.2	1.8	0.9	0.5	0.4	0.2	0.1
10Y	8.1	4.5	3.2	2.6	2.3	2.5	2.4	2.1	1.7	1.1	0.5	0.4	0.2	- 0.0	- 0.0

Source: Citi Research

Figure 27. 3M carry profile of ACGB<sup>2</sup>



Source: Citi Research

Figure 28. 3M carry table of ACGB

ACGB	Carry	Rolldown	Total
1y	-3.2	-3.8	-7.1
2y	-1.3	0.5	-0.8
3y	-0.6	0.8	0.1
4y	-0.3	1.5	1.2
5y	0.2	2.3	2.6
6y	0.7	2.7	3.3
7y	1.0	2.6	3.6
8y	1.2	2.2	3.4
9y	1.4	2.1	3.5
10y	1.5	2.1	3.5
11y	1.6	2.3	3.9
12y	1.7	2.4	4.1
13y	1.8	2.1	3.9
14y	1.9	2.0	3.9
15y	2.0	2.0	4.0

Source: Citi Research

<sup>1</sup> Sectors with carry more than 5bp is highlighted in green while the carry less than 5bp is highlighted in red.

<sup>2</sup> ACGB carry profile and table is calculated from the relative value curve and it may vary from individual bonds given the repo rate.

Figure 29. 3M carry in NZD swaps<sup>3</sup>

Fwd/Tenor	1Y	2Y	3Y	4Y	5Y	6Y	7Y	8Y	9Y	10Y	12Y	15Y	20Y
SPOT	3.3	5.7	6.4	6.9	7.3	7.5	7.4	7.1	6.1	5.6	4.5	3.7	3.3
3M	4.5	5.8	6.6	6.9	7.4	7.2	7.4	6.7	6.0	5.4	4.3	3.7	3.2
6M	6.9	7.1	7.5	7.6	8.1	7.7	8.0	6.8	6.2	5.5	4.4	3.8	3.3
9M	8.1	7.7	8.0	8.1	8.4	7.9	8.1	6.7	6.2	5.5	4.4	3.9	3.4
1Y	7.8	8.0	8.4	8.6	8.6	8.3	7.9	6.8	6.2	5.5	4.4	3.9	3.4
2Y	7.9	8.2	8.6	8.5	8.1	7.8	6.4	5.7	5.0	4.3	3.7	3.4	2.9
3Y	8.4	8.6	8.7	8.2	7.7	6.1	5.4	4.5	3.9	3.4	3.0	2.9	2.4
4Y	8.9	8.9	8.3	7.6	5.7	4.9	4.0	3.2	2.8	2.5	2.4	2.3	1.9
5Y	8.9	7.9	7.2	4.8	4.0	3.0	2.3	1.9	1.7	1.6	1.7	1.6	1.3
6Y	6.7	6.3	3.4	2.6	1.7	1.0	0.7	0.6	0.6	0.7	0.9	0.8	0.6
7Y	6.3	1.7	1.2	0.3	- 0.3	- 0.5	- 0.4	- 0.3	- 0.1	0.1	0.3	0.2	0.2
8Y	- 3.0	- 1.5	- 1.8	- 2.1	- 2.0	- 1.7	- 1.3	- 1.0	- 0.7	- 0.5	- 0.4	- 0.4	- 0.3
9Y	- 0.0	- 1.2	- 1.8	- 1.7	- 1.4	- 1.0	- 0.7	- 0.4	- 0.2	- 0.1	- 0.1	- 0.1	- 0.1
10Y	- 2.5	- 2.7	- 2.3	- 1.8	- 1.3	- 0.8	- 0.4	- 0.2	- 0.1	- 0.1	- 0.1	- 0.1	- 0.1

Source: Citi Research

<sup>3</sup> Sectors with carry more than 5bp is highlighted in green while the carry less than 5bp is highlighted in red.

Figure 30. Japan relative value by maturity

		Versus Fitted Yield Curve					Versus Swap Curve (YYS)				
		Rank		ZScore	Issued	Size (¥1n)	Rank		ZScore	Issued	Size (¥1n)
JGB 2-7	Richest	1	#303 1.40 Sep19	-1.46	Sep09	4.65	1	#297 1.40 Dec18	0.10	Dec08	2.11
		2	#281 2.00 Jun16	-1.19	Jul06	2.68	2	#303 1.40 Sep19	0.11	Sep09	4.65
		3	#280 1.90 Jun16	-1.17	Jun06	5.13	3	#298 1.30 Dec18 (7y)	0.12	Jan09	4.00
		4	#305 1.30 Dec19	-0.96	Dec09	7.14	4	#300 1.50 Mar19	0.19	May09	2.28
		5	#279 2.00 Mar16	-0.88	May06	2.52	5	#299 1.30 Mar19	0.22	Mar09	3.87
	Cheapest	5	#289 1.50 Dec17	1.67	Dec07	6.49	5	#284 1.70 Dec16	1.54	Dec06	9.44
		4	#104 0.20 Mar17	1.69	May12	2.50	4	#104 0.20 Mar17	1.55	May12	2.50
		3	#105 0.20 Jun17	1.75	Jun12	2.50	3	#101 0.40 Dec16	1.55	Dec11	2.85
		2	#103 0.30 Mar17	1.77	Mar12	2.50	2	#103 0.30 Mar17	1.55	Mar12	2.50
		1	#288 1.70 Sep17	1.87	Sep07	6.71	1	#102 0.30 Dec16	1.56	Jan12	5.42
JGB 7-10	Richest	1	#316 1.10 Jun21	-2.26	Aug11	2.48	1	#59 1.70 Dec22	0.81	Dec02	1.07
		2	#318 1.00 Sep21	-2.04	Oct11	4.68	2	#60 1.40 Dec22	0.86	Feb03	1.12
		3	#309 1.10 Jun20	-2.00	Jul10	4.76	3	#307 1.30 Mar20	1.05	May10	2.57
		4	#313 1.30 Mar21	-1.72	Mar11	4.87	4	#306 1.40 Mar20 (JB)	1.07	Mar10	4.77
		5	#312 1.20 Dec20	-1.70	Dec10	7.29	5	#309 1.10 Jun20	1.11	Jul10	4.76
	Cheapest	5	#49 2.10 Mar21	2.14	Jan01	0.69	5	#325 0.80 Sep22	1.94	Sep12	2.35
		4	#45 2.40 Mar20	2.19	Jan00	0.87	4	#314 1.10 Mar21	2.01	May11	2.40
		3	#323 0.90 Jun22	2.25	Jun12	2.30	3	#50 1.90 Mar21	2.72	Apr01	1.35
		2	#325 0.80 Sep22	2.40	Sep12	2.35	2	#52 2.10 Sep21	2.76	Oct01	0.72
		1	#326 0.70 Dec22	2.60	Dec12	2.64	1	#49 2.10 Mar21	2.98	Jan01	0.69
JGB 10-15	Richest	1	#80 2.10 Jun25	-1.89	Aug05	0.86	1	#99 2.10 Dec27	-1.55	Dec07	2.64
		2	#86 2.30 Mar26	-1.88	Apr06	0.98	2	#98 2.10 Sep27	-1.46	Nov07	1.04
		3	#83 2.10 Dec25	-1.84	Dec05	0.95	3	#96 2.10 Jun27	-1.45	Aug07	0.94
		4	#78 1.90 Jun25	-1.75	Jun05	0.88	4	#97 2.20 Sep27	-1.44	Sep07	1.66
		5	#82 2.10 Sep25	-1.71	Oct05	1.53	5	#86 2.30 Mar26	-1.33	Apr06	0.98
	Cheapest	5	#63 1.80 Jun23	1.25	Aug03	1.00	5	#66 1.80 Dec23	-0.43	Feb04	0.71
		4	#72 2.10 Sep24	1.32	Sep04	2.07	4	#64 1.90 Sep23	-0.22	Oct03	1.24
		3	#94 2.10 Mar27	1.94	Apr07	1.83	3	#62 0.80 Jun23	0.03	Jun03	1.07
		2	#95 2.30 Jun27	2.15	Jun07	1.77	2	#63 1.80 Jun23	0.28	Aug03	1.00
		1	#92 2.10 Dec26	2.18	Dec06	2.71	1	#61 1.00 Mar23	0.31	Apr03	1.21
JGB 15-20	Richest	1	#106 2.20 Sep28	-2.63	Oct08	0.94	1	#110 2.10 Mar29	-2.11	Apr09	1.86
		2	#107 2.10 Dec28	-2.62	Dec08	1.04	2	#125 2.20 Mar31	-2.08	Mar11	1.31
		3	#105 2.10 Sep28	-2.55	Sep08	1.90	3	#126 2.00 Mar31	-2.08	Apr11	1.15
		4	#110 2.10 Mar29	-2.35	Apr09	1.86	4	#127 1.90 Mar31	-2.06	May11	1.11
		5	#103 2.30 Jun28	-2.23	Jul08	0.91	5	#115 2.20 Dec29	-2.04	Feb10	1.18
	Cheapest	5	#8 1.80 Nov32	1.18	Nov02	0.52	5	#102 2.40 Jun28	-1.77	Jun08	1.04
		4	#139 1.60 Jun32	1.21	Aug12	1.20	4	#139 1.60 Jun32	-1.71	Aug12	1.20
		3	#119 1.80 Jun30	1.51	Jul10	1.26	3	#140 1.70 Sep32	-1.66	Sep12	1.25
		2	#9 1.40 Dec32	1.84	Jan03	0.32	2	#100 2.20 Mar28	-1.64	Mar08	1.84
		1	#120 1.60 Jun30	2.22	Aug10	1.37	1	#141 1.70 Dec32 (20y)	0.07	Dec12	1.27
JGB >20	Richest	1	#14 2.40 Mar34	-1.42	Apr04	0.87	1	#36 2.00 Mar42	-2.67	Mar12	0.79
		2	#29 2.40 Sep38	-1.28	Oct08	2.02	2	#29 2.40 Sep38	-2.66	Oct08	2.02
		3	#28 2.50 Mar38	-1.28	Apr08	1.77	3	#34 2.20 Mar41	-2.66	Mar11	2.77
		4	#15 2.50 Jun34	-0.85	Aug04	0.93	4	#35 2.00 Sep41	-2.66	Sep11	3.01
		5	#16 2.50 Sep34	-0.69	Oct04	0.64	5	#31 2.20 Sep39	-2.63	Oct09	2.21
	Cheapest	5	#19 2.30 Jun35	1.15	Jul05	0.72	5	#37 1.90 Sep42 (30y)	-2.25	Sep12	0.75
		4	#20 2.50 Sep35	1.37	Oct05	0.66	4	#13 2.00 Dec33	-2.12	Feb04	0.72
		3	#21 2.30 Dec35	1.58	Jan06	0.78	3	#12 2.10 Sep33	-2.06	Nov03	0.52
		2	#11 1.70 Jun33	1.68	Jul03	0.58	2	#11 1.70 Jun33	-2.00	Jul03	0.58
		1	#10 1.10 Mar33	2.64	May03	0.53	1	#10 1.10 Mar33	-1.82	May03	0.53

ZScore calculated using 6M history

2y,5y,7y,10y,20y,30y denote the OTR bonds

Analysis as of 16-Jan-13

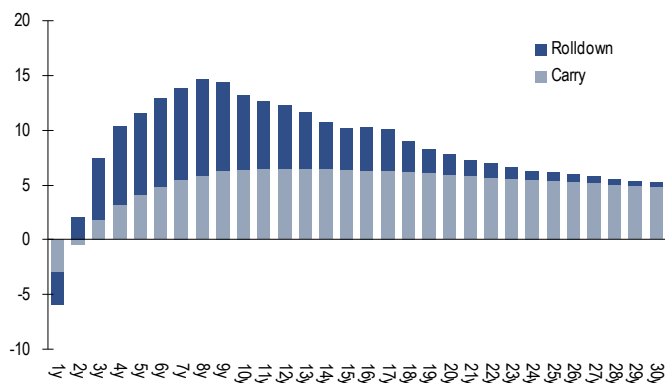
Source: Citi Research

Figure 31. 6M carry in JPY swaps<sup>4</sup>

Fwd/Tenor	1Y	2Y	3Y	4Y	5Y	6Y	7Y	8Y	9Y	10Y	12Y	15Y	20Y	25Y	30Y	40Y
SPOT	-10.4	-3.6	-1.5	0.4	2.5	4.5	6.0	6.7	7.4	8.0	8.9	8.6	6.7	5.1	4.3	3.7
6M	-5.5	-2.6	-0.6	1.4	3.5	5.2	6.4	7.1	7.7	8.2	8.8	8.5	6.5	5.0	4.3	3.7
9M	-6.2	-2.9	-0.5	1.8	4.0	5.7	6.6	7.3	7.9	8.5	9.0	8.5	6.5	5.0	4.3	3.7
1Y	-0.2	0.7	2.2	4.2	6.1	7.4	8.1	8.7	9.2	9.7	10.0	9.2	6.9	5.4	4.7	4.0
2Y	1.6	3.4	5.6	7.7	9.0	9.4	9.9	10.4	10.7	11.0	10.7	9.5	7.0	5.5	4.9	4.2
3Y	5.1	7.4	9.4	10.6	10.9	11.2	11.5	11.7	11.9	11.7	11.0	9.3	6.9	5.5	4.9	4.2
4Y	9.8	11.8	12.6	12.4	12.6	12.7	12.9	13.0	12.7	12.3	11.2	9.2	6.8	5.5	5.0	4.2
5Y	13.8	14.1	13.4	13.4	13.4	13.5	13.6	13.3	12.7	12.1	10.7	8.7	6.4	5.3	4.8	4.1
6Y	14.3	13.4	13.3	13.4	13.5	13.6	13.3	12.7	12.0	11.3	9.8	7.8	5.7	4.8	4.3	3.7
7Y	12.7	13.0	13.2	13.6	13.6	13.3	12.6	11.9	11.2	10.3	8.8	6.9	5.0	4.2	3.9	3.3
8Y	13.0	13.3	13.5	13.5	13.1	12.5	11.7	10.7	9.8	9.0	7.5	5.8	4.2	3.7	3.4	2.8
9Y	13.6	13.9	13.8	13.2	12.5	11.5	10.5	9.5	8.6	7.8	6.3	4.8	3.6	3.1	2.9	2.4
10Y	14.3	14.0	13.2	12.3	11.2	10.1	9.0	8.0	7.1	6.3	5.0	3.8	2.8	2.5	2.3	2.0
12Y	12.0	10.7	9.4	8.1	7.0	6.0	5.1	4.3	3.6	3.0	2.2	1.5	1.2	1.2	1.1	0.9
15Y	3.9	2.9	2.1	1.4	0.8	0.3	-0.1	-0.4	-0.6	-0.8	-0.9	-0.9	-0.5	-0.3	-0.3	-0.2
20Y	-2.6	-2.7	-2.7	-2.7	-2.6	-2.6	-2.4	-2.3	-2.1	-1.9	-1.5	-1.1	-0.7	-0.6	-0.5	-0.5
25Y	-2.1	-1.8	-1.5	-1.3	-1.0	-0.8	-0.6	-0.4	-0.3	-0.1	0.0	0.1	0.1	0.1	0.1	0.1
30Y	0.5	0.6	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.7	0.6	0.5	0.4	0.4	0.3

Source: Citi Research

Figure 32. 6M carry profile of JGB<sup>5</sup>



Source: Citi Research

Figure 33. 6M carry table of JGB

JGB	Carry	Roll-down	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

<sup>4</sup> Sectors with carry more than 5bp is highlighted in green while the carry less than 5bp is highlighted in red.

<sup>5</sup> 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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