

## APAC Developed Markets Rates Strategy

### "Communication Breakdown"

- Given the lack of policy commitment by the Fed, we think it will be difficult for the bond market to dismiss positive economic data which has been a reliable fundamental guide for market direction. As such, we still look to hold positive rolldown positions with a short exposure such as our NZD 6m1y-3y2y swap steepener.
- Post FOMC we think the key message is one of near-term policy stability from both the Fed as well as the RBA which is now hamstrung by rising house prices and a rising AUD. This should favour tactical carry and roll enhancement trades like selected semi-ACGB spread compression positions and semi-ACGB box flatteners.
- We strongly believe that "sell-Japan" should fail again and yields are likely to decline towards 2014 due to following five reasons (1) very little chance for issuance to increase, (2) strong demand for carry, (3) BOJ purchase, (4) cheap hedge, (5) little chance for current account deficit

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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

<b>Duration</b>	Global yields to trend higher as global growth improves and Fed tapering still on the agenda.	Maintain AUD 1x1 6m10y payer spread.
<b>Yield Curve</b>	AUD/NZD curve still directional with the long-end showing highest beta. Short-end AUD forwards need to rise back to more attractive levels before re-positioning Chinese growth risk trades.	Maintain NZD 6m1y-3y2y swap steepener but with a tighter stop.
<b>Cross-Market Spreads</b>	A US-led regime of higher interest rates is likely to overshadow long-run cross-market themes like 'China bears/US bulls' and 'short iron/long milk'.	5s10s ACGB box flattener vs UST.
<b>Bond Spreads</b>	EIB spreads sensitive to sovereign downgrades risks in the UK and Netherlands. Mining states like QLD and WA remain vulnerable to falling Chinese demand for commodities. Selective semi-semi spreads look tight given divergent credit rating outlooks. Regulatory-based demand should be a positive for semi-ACGB spread compression trades.	Buy TCV 20s vs NSWTC 20s. Buy QTC 17s vs ACGB 17s. Enter QTC-ACGB 16s-17s Box Flattener. Enter WATC-ACGB 16s-17s Box Flattener.
<b>Derivative Spreads</b>	AUD swap spreads are likely trade directionally higher with yields. The 3s10s EFP box could also track AUDJPY higher.	Looking for better levels to enter paid positions in the 3s10s EFP box.
<b>Inflation</b>	AUD BEIs are likely to remain range bound in line with the RBA outlook.	Enter NSWTCi-ACGBi 20s-25s Box Flattener. Long belly of ACGBi 20s-25s-30s Butterfly.
<b>Volatility</b>	Implied volatility could rise further as we progress through key event risks over September.	Keep 6m5y 1x2 receiver spread as a low cost option for yield retracement lower.
<b>Risk Allocation</b>	We favour short and quasi short positions through curve steepeners and payer spreads. We also see value in selective spread and curve trades given the relatively low volatility and relative value opportunities.	

Source: Citi Research

## APAC Developed Markets

### Australia and New Zealand Rates Strategy

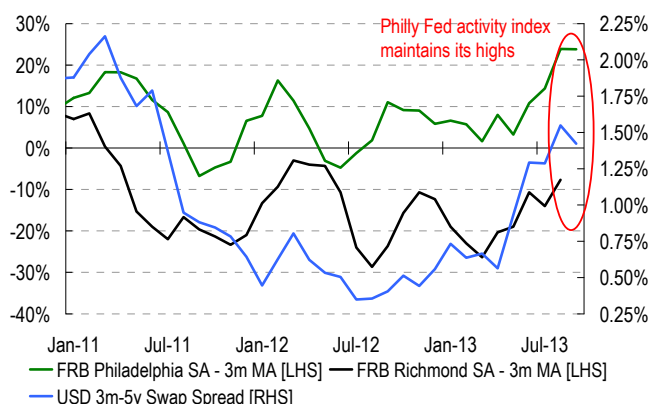
#### "Communication Breakdown"

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In the words of the great Roy Orbison, yesterday's announcement of no taper was a significant "Communication Breakdown" between the FOMC and the bond market which on average had expected a USD 10 billion reduction in asset purchases. In the statement the FOMC *"decided to await more evidence"* due to concerns about a *"tightening of financial conditions"* although it did caution that *"asset purchases are not on a preset course"*. Our US rates strategists' interpretation is that extended forward rate guidance and a deferral in the QE tapering schedule will be the most likely outcome which they think will cap any major rises in yields (see ["Stronger Guidance and No Taper Justify Treasury Market Move"](#)).

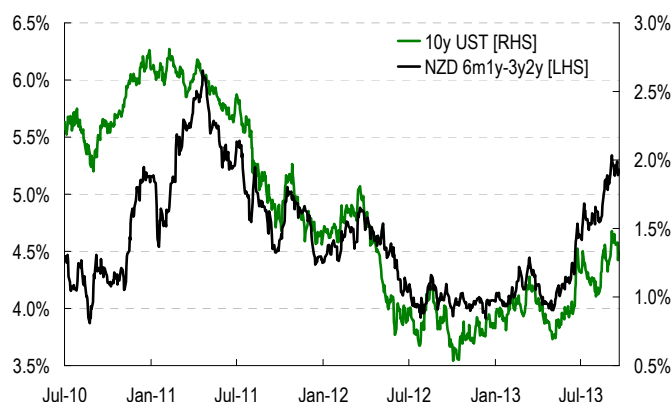
However, in our view, given the lack of policy commitment by the Fed, we think it will be difficult for the bond market to dismiss positive economic data which has been a reliable fundamental guide for market direction. For instance, our proprietary Philadelphia activity index from the district Federal Reserve Bank (FRB) manufacturing survey maintained its highs from August supported by new orders growth outpacing inventories (see Figure 2). We look to next Wednesday's Richmond FRB manufacturing survey as our other key market bellwether for 10y USTs. But in the meantime we still look to hold positive rolldown positions with a short exposure such as our NZD 6m1y-3y2y swap steepener (see Figure 3).

Figure 2. USD 3m-5y Swap Spread vs FRB Activity Indicators



Source: Citi Research, Haver, Bloomberg

Figure 3. NZD 6m1y-3y2y Swap Steepener vs 10y UST Yield

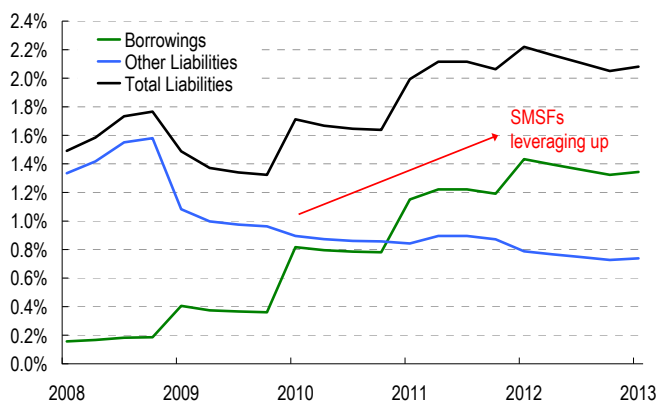


Source: Citi Research, Bloomberg

In contrast to the renewed dovishness in US, the policy outlook in the Antipodes appears to be learning towards less dovishness by the RBA and more hawkishness by the RBNZ. This was illustrated in this week's September RBA Board minutes with the business liaison comments pointing to declining mining investment and modest retail sales growth although this was offset by a reported recovery in established homes and dwelling investment growth (see ["The September Board Minutes Are Market Neutral"](#)). Moreover, the Board also noted property gearing in self-managed superannuation funds (SMSFs) which they highlighted as an area where *"households could be starting to take some risk with their finances"*. Indeed, as the SMSF regulator the ATO has overseen a several fold increase in total SMSF liabilities (as a percentage of total SMSF assets) driven by increased borrowing, albeit from a low base (see Figure 4).

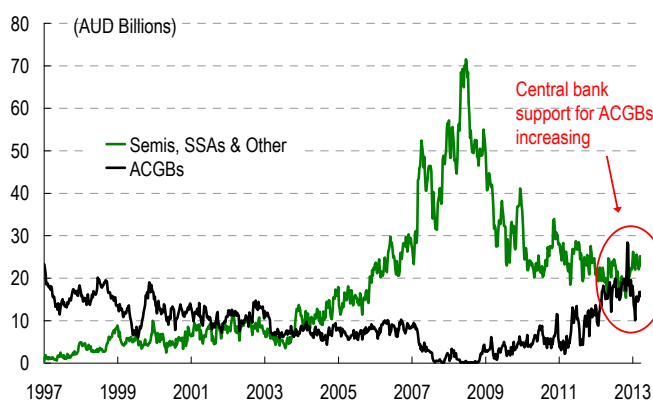
This also has coincided with signs of increased APRA supervision of bank lending suggesting increasing central bank and financial regulator discomfort with rising house prices (see our previous note ['Passing the Policy Baton to APRA?'](#)). Indeed, across other notable 'safe haven' markets such as Canada, Sweden and Norway, rising house prices have spurred tightening expectations either via macro-prudential measures or forward hawkish guidance (see ['Household Debt Reaction – Imbalances Justify Hawkish Bias'](#) for Canada, ['Minutes: Riksbank Awaits Additional Macro-Prudential Measures'](#) for Sweden, and ['Stable Rates, Easing Bias Removed And Earlier Rate Hike'](#) for Norway). Likewise in Australia, we expect rising house prices to become a formidable hurdle for further rate cuts which makes it increasingly likely that jawboning will be the only viable policy option to deter further AUD strength, which was a point apparently conceded by the Board in its decision to *"neither close off the possibility of reducing rates further nor signal an imminent intention to reduce them."* The more even balance of risks supports our Australian economists' forecast for a RBA rate hike sometime in Q3 14.

Figure 4. Liabilities as a % of Total Assets for SMSFs



Source: Citi Research, ATO

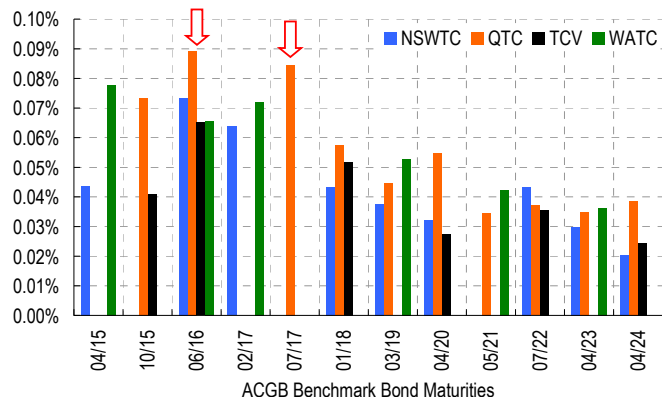
Figure 5. AUD Securities on the RBA Balance Sheet



Source: Citi Research, RBA

At least for Australia and the US, we think the key message is one of near-term policy stability with upside risk for Australia given the lift in our leading activity indicator (see last week's report ['It's A Long Way To The Top...for Yields'](#)). This should favour tactical carry and roll enhancement trades such as selected semi-ACGB spread compression positions and semi-ACGB box flatteners, particularly as we enter a period of ratings stability for the states following the WA downgrade (see ['Semis Update – A Black Swan Event for the Black Swan State?'](#)). Compared to semis, demand for ACGBs looks to have weakened based on RBA balance sheet data of ACGB holdings (see Figure 5). Both on an outright basis and through repos with other banks, the level of ACGB holdings are close to matching those for semis, SSAs and other spread products which we think highlights underlying upward pressure on banks' ACGB inventories.

Figure 6. 3m carry and roll on semi-ACGB switches



Source: Citi Research

Figure 7. QTC-ACGB 17s Yield Spread Compression



Source: Citi Research

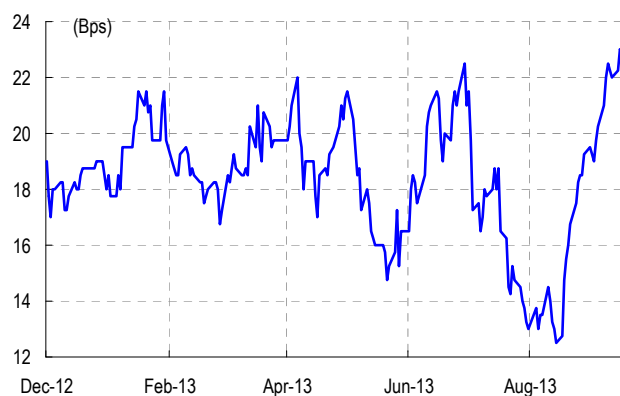
In addition to the favourable supply outlook for semis over ACGBs, the carry and roll on semi-ACGB switches is also substantial for tenors under 5 years with the QTC-ACGB 16s and QTC-ACGB 17s switches delivering more than +8bps of carry and roll per quarter (see Figure 6). Moreover, although carry and roll on semi-ACGB switches tends to decline with an increasing maturity there appears to be little give up on carry and roll between a 16s or 17s semi-ACGB switch, especially for QTC and WATC. As such, we look to close out our existing TCV-ACGB 16s switch (+3.5bps profit) to initiate the following positions (see *Tradesheet* and Figure 7 to Figure 9).

**TRADE IDEA #1 – Buy QTC 17s vs ACGB 17s. Entry 55bps. Target +41bps. Stop +62bps.**

**TRADE IDEA #2 – Enter QTC-ACGB 16s-17s Box Flattener. Entry +24bps. Target +14bps. Stop +29bps.**

**TRADE IDEA #3 – Enter WATC-ACGB 16s-17s Box Flattener. Entry +19bps. Target +11bps. Stop +23bps.**

Figure 8. QTC-ACGB 16s-17s Box Flattener – Top of the Range!



Source: Citi Research

Figure 9. WATC-ACGB 16s-17s Box Flattener – Top of the Range!



Source: Citi Research

## Japan Rates Strategy

### Five reasons why “sell-Japan” should fail AGAIN

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While market rallied with volatility declining, yet swap spread widened despite the large scale receiving for carry by domestic investors. It was offset by bearish payer by international investors, whose macro view seems to be what is implied by equity market rather than that by JGBs, the 30% of former was owned by foreigners while 95% of the latter was owned by domestics. As market now focus on the stimulus package such as supplementary budget or corporate tax cut, we start hearing “cry wolf” again warning the “inevitable JGB blown-up” due to ballooning issuance, which might happen in a distant future but won’t happen within 10-years, in our view.

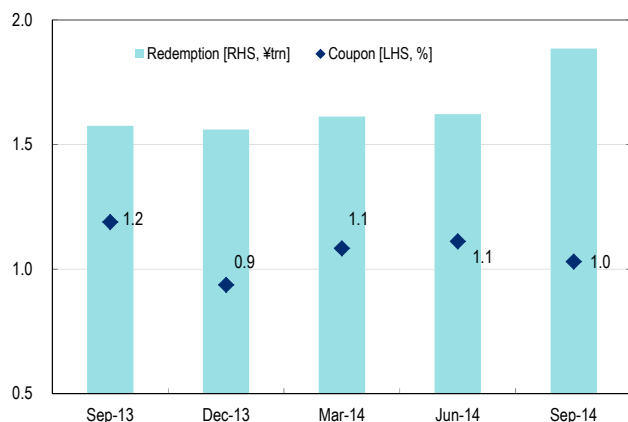
**(1) Stimulus package will not increase the size of issuance**

As we pointed out in the report published on 6 September, front-loaded issuance, including carried-over budget of JPY 1.3 trillion, expected increase in tax revenue against budget assumption of JPY 4 trillion, and lower interest cost than assumed in the budget (1.8% for 10yr) of JPY 1 trillion, should be around JPY 16 trillion in our estimation. The headline news on corporate tax cut is a matter of JPY 1 trillion so far. Much larger fiscal spending can be easily absorbed by the JPY 16 trillion of front-loaded issuance. On top of this, there will be possible JPY 25 trillion of the BOJ rollover next year compared to JPY 11.7 trillion this year. There is doubling between the 25 trillion of rollover and the BOJ’s monthly purchase amount of JPY 7.5 trillion because the monthly number does include redemption. However, we believe government will use these buffers so that there is no surprise in issuance amount even with a surprisingly large scale of stimulus package.

**(2) Consumption tax hike and FOMC back up bearish view on economy among JGB investors**

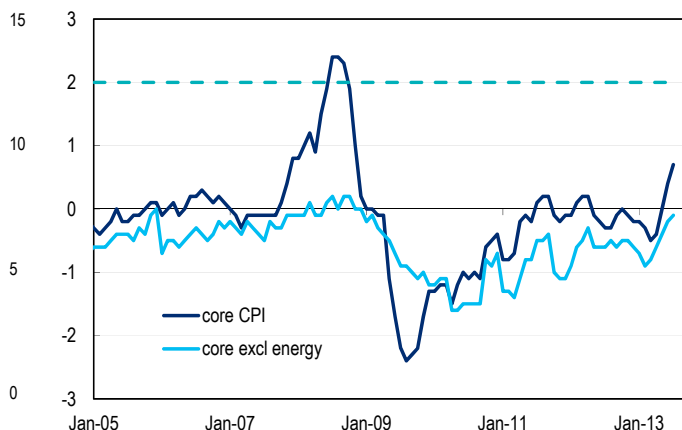
After consumption tax hike in April 2014 was almost fully priced in, few believe the achievement of 2% inflation target by the BOJ to increase confidence in possible prolonged BOJ purchase operation than currently committed. Domestic investors need to either increase the size of JGBs or extend duration to keep coupon income due to the large amount of redemption of high-coupon JGBs as shown in Figure 10. Dovish Fed also encouraged domestic investors to position for carry based on their weaker than foreigners macro view.

Figure 10. Average Coupon of Redeeming Bonds In FY2013-2014



Source: BoJ, MoF, Citi Research

Figure 11. Japan CPI (core and core ex energy, %)



Source: Japan Statistic Bureau, Citi Research

**(3) BOJ purchase**

As we repeatedly pointed out, we cannot underestimate the impact of the BOJ purchase especially in 5-10 year sector, where net issuance is negative. We expect the BOJ share at 10-year sector will exceed 40% by yearend from current 25%. Supply demand balance in super long sector will be also tight. The needs to extend

duration by lifers may not be as big as before given that the duration gap is small enough not to chase bull market, however, supply will be well absorbed by just maintaining the current level. The needs for coupon income shown above and the needs for ALM have to compete with the BOJ purchase while there is little chance for increase in supply. The equity gain may delay the capitulation for short covering but demand for carry is likely to remain strong.

**(4) Cheap Hedge Tools**

Due to massive purchase operation by the BOJ, the curve shape is quite distorted compared to the volatility, providing attractive carry against risk. While butterfly spread with 7-year at body express a very bullish view on economy, as cheap as 2006/7, that with 10-year at body shows a very bearish view, a downward convex shaped implying a large probability of no rate hike for the next 10-years. Investors can get paid by switching from bullet to barbell to hedge possible sell-off in the future. Cheap gamma sector also provide a good hedge, such as 1y10y ATM receiver, while the price is 158bp, the strike is 17.5bp higher than spot so that roll down can cover the cost.

**(5) Little chance for current account deficit**

JGB is often compared to the interfamilial borrowing which neighbours should not worry about. There are still people misunderstand that the family will eventually have to borrow from neighbours. Yes, it is not 100% deniable but it will take a very long time given that Japan has USD 3 trillion of net overseas assets, by far the biggest in the world. Option skew may remain very steep thanks to the sell-Japan speculators, which will provide cheap way to hedge against more realistic scenarios.

Even after recent drop in volatility, the breakeven level of 10y1y zero cost 1x2 payer spread is still 7.5% with possible 275bp gain or we can make breakeven at 10% with zero cost atm-3%-9% payer ladder. The very high breakeven despite the historically low level of ATM volatility is thanks to the demand for "JGB blown-up" speculators. We believe it is very little chance for 1-year rate to exceed 10% within 10 years and the skew would be the next source of carry once cheapness in futures sector was corrected.

# Tradesheet

**New Trades:** Buy QTC 17s vs ACGB 17s. Entry 55bps. Target +41bps. Stop +62bps.

Enter QTC-ACGB 16s-17s Box Flatteners. Entry +24bps. Target +14bps. Stop +29bps.

Enter WATC-ACGB 16s-17s Box Flatteners. Entry +19bps. Target +11bps. Stop +23bps.

**Closed Trades:** Exited the TCV-ACGB 16s switch for a +3.5bps profit.

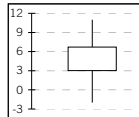
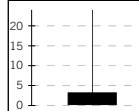
Figure 12. Record of Open Trades

Country	Trade	Levels	Publication Date	
<b>NZD</b>	<b>NZD 6m1y-3y2y Steepener</b>	Open 160bp Current 194.8bp <b>P&amp;L 34.8bp</b> Target 260bp Stop 180bp	<a href="#">APAC DMRS 16 August 2013</a>	
<i>Swap Curve</i>	Receive NZD 6m1y Swap Pay NZD 3y2y Swap			
<b>AUD</b>	<b>Buy TCV 20s vs NSWTC 20s</b>	Open 2bp Current 0.2bp <b>P&amp;L 1.8bp</b> Target -6bp Stop 6bp	<a href="#">APAC DMRS 13 August 2013</a>	
<i>Cash Curve</i>	Buy TCV 6% Jun-2020 @ 3.9% Sell NSWTC 6% May-2020 @ 3.88%			
<b>AUD</b>	<b>Buy AUD 6m10y payer spread</b>	Open 56c Current 85.2c <b>P&amp;L 29.2c</b> Target 206c Stop 0c	<a href="#">APAC DMRS 09 August 2013</a>	
<i>Volatility</i>	Buy 1 x AUD 6m10y ATM+25bp payer (strike 4.54%) Sell 1 x AUD 6m10y ATM+50bp payer (strike 4.79%)			
<b>AUD</b>	<b>NSWTCI-ACGBi 20s-25s Box Flatteners</b>	Open 18bp Current 17.5bp <b>P&amp;L 0.5bp</b> Target 9bp Stop 24bp	<a href="#">APAC DMRS 02 August 2013</a>	
<i>Cash Curve</i>	Buy NSWTCi 25s @ 2.1425% Sell ACGBi 25s @ 1.4025% Sell NSWTCi 20s @ 1.665% Buy ACGBi 20s @ 1.105%			
<b>AUD</b>	<b>Long the belly of ACGBi 20s-25s-30s Butterfly</b>	Open 6bp Current 8.8bp <b>P&amp;L -2.8bp</b> Target -4bp Stop 11bp	<a href="#">APAC DMRS 02 August 2013</a>	
<i>Cash Curve</i>	Buy ACGBi 20s @ 1.105% Sell ACGBi 25s @ 1.4025% Sell ACGBi 30s @ 1.64%			
<b>AUD/USD</b>	<b>5s-10s ACGB-UST Box</b>	Open -41bp Current -53.5bp <b>P&amp;L 12.5bp</b> Target -75bp Stop -25bp	<a href="#">APAC DMRS 02 July 2013</a>	
<i>Cash Curve</i>	Buy Apr-2023 ACGB @ 3.75% Sell Jan-2018 ACGB @ 3.05% Sell May-2023 UST @ 2.47% Buy Jun-2018 UST @ 1.37%			
<b>AUD</b>	<b>Buy AUD 6m5y Receiver Spread</b>	Open 0c Current 50.6c <b>P&amp;L 50.6c</b> Target 200c Stop -100c	<a href="#">APAC DMRS 28 June 2013</a>	
<i>Volatility</i>	Buy 1 x AUD 6m5y ATM receiver (strike 3.9%) Sell 2 x AUD 6m5y ATM-40bp receivers (strike 3.5%)			
<b>JPY</b>	<b>10-year / 18-year JGB ASW Swap Box</b>	Open 16.5bp Current 11.3bp <b>P&amp;L 5.2bp</b> Target 6.5bp Stop 20.5bp	<a href="#">APAC DMRS 27 June 2013</a>	
<i>Swap Curve</i>	Long 18-year JGB (JL125) on ASW Sell 10-year JGB (JB329) on ASW			

Source: Citi Research



Figure 13. Record of Open Trades

<b>JPY</b>	<b>Pay 20-year JGB Swap Spread</b>		Open	3bp	
			Current	6.7bp	
<i>Swap Curve</i>	Buy 20-year JGB (JL145)		<b>P&amp;L 3.7bp</b>		
	Pay 20-year JPY swap		Target	11bp	
			Stop	-2bp	<a href="#">APAC DMRS 20 June 2013</a>
<b>AUD</b>	<b>Buy AUD 1y1y payer spread</b>		Open	3.2c	
			Current	0.2c	
<i>Volatility</i>	Buy 1 x AUD 1y1y 3.79% strike payer		<b>P&amp;L -3c</b>		
	Sell 1 x AUD 1y1y 4.04% strike payer		Target	24c	
			Stop	0c	<a href="#">APAC DMRS 22 February 2013</a>

Source: Citi Research

### Open Trade Ideas

- P&L on trade ideas includes carry and roll costs but not trading costs.
- Results should not, and cannot, be viewed as an indicator of future performance.
- Closed trade ideas details available on request.
- Table shows opening levels, current mark and P&L.
- Futures trading involves substantial risk of loss.

## Appendix

Figure 14. 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 6.25 Apr15	-3.12	Apr02	14.8	1	AUT 3.25 Apr25	-0.55	Apr13	5.8
		2	AUT 5.75 May21	-1.21	May07	17.9	2	AUT 3.25 Apr29	-0.19	Oct12	5.9
		3	AUT 5.5 Jan18	-1.15	Jul10	19.1	3	AUT 4.75 Apr27	0.10	Oct11	10.2
		4	AUT 3.25 Apr25	-0.89	Apr13	5.8	4	AUT 2.75 Apr24	0.35	Apr12	10.0
		5	AUT 4.5 Oct14	-0.86	Apr10	12.0	5	AUT 5.5 Apr23	0.54	Apr11	18.2
	Cheapest	5	AUT 6 Feb17	0.52	Feb04	18.0	5	AUT 4.75 Oct15	1.20	Apr11	13.9
		4	AUT 3.25 Apr29	0.90	Oct12	5.9	4	AUT 4.5 Oct14	1.22	Apr10	12.0
		3	AUT 4.75 Oct15	1.06	Apr11	13.9	3	AUT 4.25 Jul17	1.23	Jul11	13.9
		2	AUT 5.5 Apr23	1.44	Apr11	18.2	2	AUT 6 Feb17	1.47	Feb04	18.0
		1	AUT 4.5 Apr20	1.54	Apr09	17.6	1	AUT 4.75 Jun16	1.49	Jun10	18.8
NSW	Richest	1	NSW 6 Apr15	-2.16	Apr11	2.5	1	NSW 6 May23	-1.10	May07	2.1
		2	NSW 6 Apr16	-1.58	Oct09	5.1	2	NSW 6 May30	-0.90	May10	0.3
		3	NSW 6 May23	-1.47	May07	2.1	3	NSW 6 Mar22	-0.78	Sep11	6.7
		4	NSW 6 Jun20	-1.26	Jun09	0.2	4	NSW 6 Apr15	-0.60	Apr11	2.5
		5	NSW 6 Mar22	-0.95	Sep11	6.7	5	NSW 6 Apr16	-0.56	Oct09	5.1
	Cheapest	5	NSW 5 Aug24	-0.66	Feb12	3.9	5	NSW 6 Feb18	0.07	Feb11	5.2
		4	NSW 5.5 Mar17	-0.63	Mar06	1.5	4	NSW 6 May20	0.24	Nov09	6.1
		3	NSW 6 May30	-0.58	May10	0.3	3	NSW 4 Feb17	0.37	Feb12	3.9
		2	NSW 6 Apr19	-0.55	Apr08	1.6	2	NSW 6 Apr19	0.53	Apr08	1.6
		1	NSW 4 Apr23	-0.32	Apr13	1.9	1	NSW 5.5 Mar17	1.84	Mar06	1.5
QTC	Richest	1	QTC 6 Apr16	-1.76	Apr10	5.6	1	QTC 6 Apr16	-1.51	Apr10	5.6
		2	QTC 6 Oct15	-1.56	Oct10	5.0	2	QTC 6 Oct15	-1.22	Oct10	5.0
		3	QTC 6 Oct15	-1.51	Apr98	1.8	3	QTC 6 Jul22	-1.08	Jan11	7.3
		4	QTC 6 Feb18	-1.03	Feb11	6.9	4	QTC 6 Oct15	-0.94	Apr98	1.8
		5	QTC 6 Jul22	-0.95	Jan11	7.3	5	QTC 4.25 Jul23	-0.76	Jul12	3.5
	Cheapest	5	QTC 6.25 Jun19	-0.65	Jun09	4.6	5	QTC 3.5 Sep17	-0.33	Sep12	4.0
		4	QTC 5.75 Jul24	-0.60	Jan11	4.8	4	QTC 6.25 Jun19	0.23	Jun09	4.6
		3	QTC 5.75 Nov14	-0.40	Nov09	4.7	3	QTC 6.5 Mar33	0.23	Mar08	0.7
		2	QTC 6 Sep17	-0.31	Sep06	3.8	2	QTC 5.75 Nov14	1.03	Nov09	4.7
		1	QTC 6.5 Mar33	0.73	Mar08	0.7	1	QTC 6 Sep17	1.67	Sep06	3.8
TCV	Richest	1	TCV 8 Aug15	-1.74	Sep12	0.9	1	TCV 6.5 Mar33	-1.61	Sep10	0.1
		2	TCV 6.5 Mar33	-1.68	Sep10	0.1	2	TCV 8 Aug15	-1.38	Sep12	0.9
		3	TCV 4.75 Oct14	-1.01	Apr03	2.1	3	TCV 5.5 Dec24	-0.16	Jun10	4.6
		4	TCV 5.75 Nov16	-1.01	Nov04	5.3	4	TCV 6 Oct22	-0.14	Oct03	5.5
	Cheapest	4	TCV 5.5 Dec24	-0.48	Jun10	4.6	4	TCV 4.25 Dec32	0.28	Dec12	0.2
		3	TCV 5.5 Nov18	-0.41	Nov08	5.2	3	TCV 2.75 Nov15	0.54	May13	0.9
		2	TCV 5.5 Nov26	-0.20	May11	3.1	2	TCV 5.75 Nov16	0.67	Nov04	5.3
		1	TCV 4.25 Dec32	2.13	Dec12	0.2	1	TCV 5.5 Nov18	0.77	Nov08	5.2

Z-scores are calculated using 6-month history.

Black shades highlight Z-scores outside the 95% confidence interval ( $z > 1.96$  or  $z < -1.96$ ).

Black shades highlight Z-scores outside the 90% confidence interval ( $z > 1.65$  or  $z < -1.65$ ).

Source: Citi Research

Figure 15. Australia relative value by sector

Versus Fitted Yield Curve							Versus Swap Curve (CAS)						
WATC	Richest	Rank		ZScore	Issued	Size (bn)	Richest	Rank		ZScore	Issued	Size (bn)	
		1	WATC 7 Apr15	-1.58	Oct06	3.5		1	WATC 7 Apr15	0.15	Oct06	3.5	
		2	WATC 3 Jun16	-0.97	Jun12	2.8		2	WATC 3 Jun16	0.96	Jun12	2.8	
	3	WATC 8 Jul17	0.03	Jan01	4.9	3	WATC 6 Oct23	1.69	Mar05	1.3			
	Cheapest	3	WATC 7 Oct19	0.45	Apr01	3.7	3	WATC 7 Jul21	2.05	Jul02	2.9		
2		WATC 6 Oct23	1.01	Mar05	1.3	2	WATC 7 Oct19	2.50	Apr01	3.7			
1		WATC 7 Jul21	1.25	Jul02	2.9	1	WATC 8 Jul17	2.74	Jan01	4.9			
SAFA	Richest	Rank		ZScore	Issued	Size (bn)	Richest	Rank		ZScore	Issued	Size (bn)	
		1	SAFA 5.75 Apr15	-1.88	Apr09	2.3		1	SAFA 5.75 Apr15	-0.67	Apr09	2.3	
	2	SAFA 5.75 Sep17	-0.82	Mar10	2.2	2	SAFA 4.75 Aug19	-0.21	Apr12	1.8			
	Cheapest	2	SAFA 4.75 Aug19	-0.72	Apr12	1.8	2	SAFA 5.75 Sep17	0.12	Mar10	2.2		
		1	SAFA 5 May21	-0.52	May11	2.0	1	SAFA 5 May21	0.29	May11	2.0		
NTER	Richest	Rank		ZScore	Issued	Size (bn)	Richest	Rank		ZScore	Issued	Size (bn)	
		1	NTER 5.75 Nov16	-1.41	May11	0.5		1	NTER 5.75 Nov16	-1.20	May11	0.5	
	2	NTER 6.25 Oct15	-1.40	Apr10	0.5	2	NTER 6 Mar28	-0.86	Mar01	0.0			
	Cheapest	2	NTER 6 Mar24	-0.26	Mar01	0.6	2	NTER 4.75 Nov17	-0.35	Nov11	0.5		
		1	NTER 4.25 Sep21	-0.18	Mar13	0.6	1	NTER 6 Mar24	-0.29	Mar01	0.6		
TASM	Richest	Rank		ZScore	Issued	Size (bn)	Richest	Rank		ZScore	Issued	Size (bn)	
		1	TASM 6.5 Apr15	-1.72	Oct06	0.8		1	TASM 4.25 Mar22	-1.59	Mar13	0.5	
	2	TASM 4.25 Mar22	-1.26	Mar13	0.5	2	TASM 6.5 Apr15	-1.24	Oct06	0.8			
	Cheapest	2	TASM 6 Jun20	-0.92	Jun09	0.5	2	TASM 6 Jun20	-0.71	Jun09	0.5		
		1	TASM 5 Sep17	-0.89	Sep11	0.9	1	TASM 5 Sep17	-0.50	Sep11	0.9		

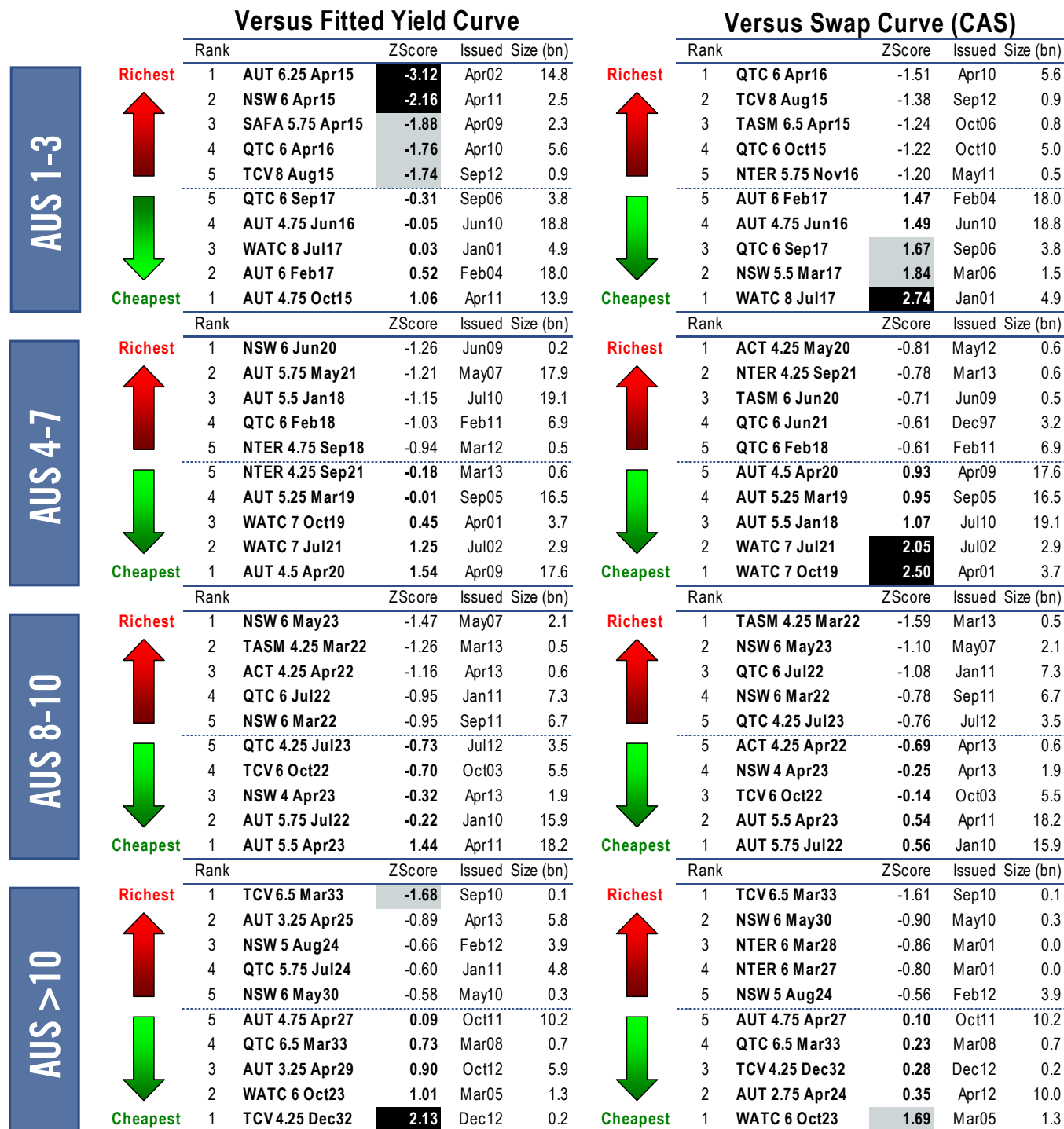
Z-scores are calculated using 6-month history.

Black shades highlight Z-scores outside the 95% confidence interval ( $z > 1.96$  or  $z < -1.96$ ).

Black shades highlight Z-scores outside the 90% confidence interval ( $z > 1.65$  or  $z < -1.65$ ).

Source: Citi Research

Figure 16. Australia relative value by maturity



Z-scores are calculated using 6-month history.  
 Black shades highlight Z-scores outside the 95% confidence interval ( $z > 1.96$  or  $z < -1.96$ ).  
 Black shades highlight Z-scores outside the 90% confidence interval ( $z > 1.65$  or  $z < -1.65$ ).

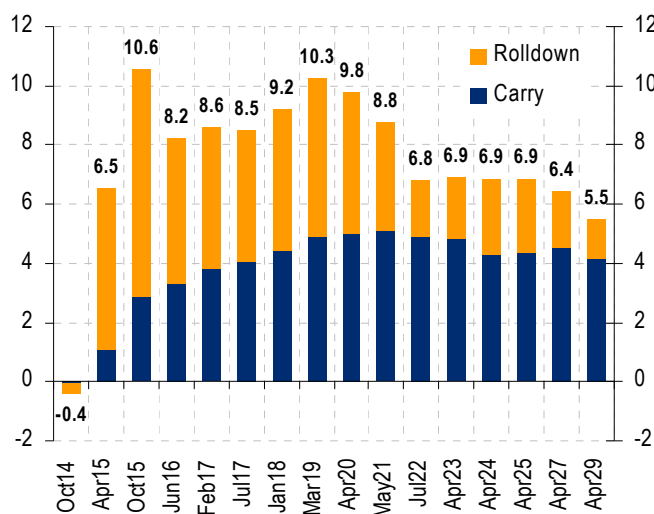
Source: Citi Research

Figure 17. 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	1.3	12.1	12.7	12.3	11.8	11.3	10.3	9.4	8.6	8.0	7.3	5.8	4.5	3.8	3.4
3M	4.4	12.9	12.5	12.0	11.8	10.9	10.0	9.1	8.3	7.9	7.0	5.6	4.4	3.8	3.4
6M	10.3	14.9	13.7	12.8	12.5	11.4	10.4	9.3	8.4	8.3	7.1	5.7	4.5	3.9	3.5
9M	16.9	16.6	14.9	13.7	13.1	11.8	10.6	9.5	8.7	8.6	7.4	5.8	4.6	4.0	3.5
1Y	20.8	17.6	15.5	14.4	13.4	11.9	10.7	9.7	8.9	8.8	7.4	5.9	4.7	4.0	3.6
2Y	13.7	12.2	11.5	10.9	9.6	8.6	7.6	7.0	6.9	6.2	5.3	4.0	3.2	2.7	2.3
3Y	10.8	10.4	10.1	8.6	7.5	6.5	5.9	6.0	5.3	4.8	3.9	2.8	2.3	1.9	1.6
4Y	10.0	9.8	8.1	6.6	5.6	5.0	5.2	4.5	4.0	3.5	2.6	1.9	1.5	1.2	1.0
5Y	9.5	7.0	5.7	4.3	3.8	4.3	3.6	3.1	2.6	2.2	1.4	1.1	0.7	0.5	0.3
6Y	4.5	3.7	2.7	2.3	3.1	2.5	2.0	1.6	1.2	0.7	0.3	0.2	- 0.0	- 0.2	- 0.3
7Y	2.8	1.7	1.7	2.8	2.0	1.6	1.2	0.7	0.2	- 0.1	- 0.2	- 0.2	- 0.4	- 0.5	- 0.6
8Y	0.5	1.1	3.1	1.9	1.3	0.9	0.3	- 0.2	- 0.4	- 0.6	- 0.5	- 0.5	- 0.6	- 0.8	- 0.7
9Y	1.7	4.5	2.7	1.6	1.0	0.3	- 0.3	- 0.6	- 0.8	- 0.7	- 0.6	- 0.7	- 0.8	- 0.9	- 0.8
10Y	7.4	3.2	1.8	0.8	- 0.0	- 0.7	- 1.0	- 1.1	- 1.1	- 1.0	- 0.9	- 0.9	- 1.0	- 1.1	- 1.0

Source: Citi Research

Figure 18. 3M carry profile of ACGBs



Source: Citi Research

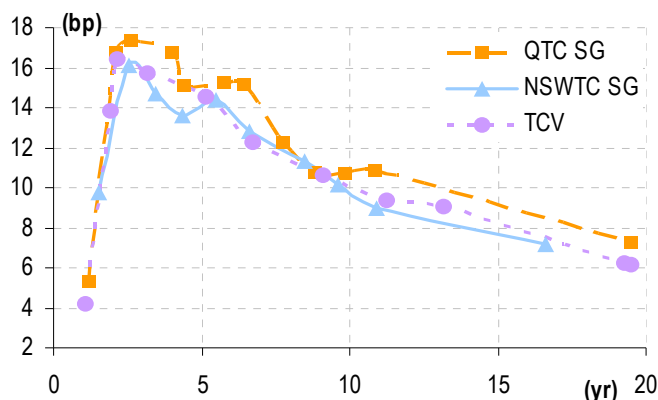
Figure 19. 3M carry table of ACGBs

	Carry	Roll-down	Total
ACGB 4.5% Oct14	-0.1	-0.4	-0.4
ACGB 6.25% Apr15	1.1	5.5	6.5
<b>ACGB 4.75% Oct15</b>	<b>2.9</b>	<b>7.7</b>	<b>10.6</b>
ACGB 4.75% Jun16	3.3	4.9	8.2
ACGB 6% Feb17	3.8	4.8	8.6
ACGB 4.25% Jul17	4.1	4.4	8.5
ACGB 5.5% Jan18	4.4	4.8	9.2
<b>ACGB 5.25% Mar19</b>	<b>4.9</b>	<b>5.4</b>	<b>10.3</b>
<b>ACGB 4.5% Apr20</b>	<b>5.0</b>	<b>4.8</b>	<b>9.8</b>
ACGB 5.75% May21	5.1	3.7	8.8
ACGB 5.75% Jul22	4.9	1.9	6.8
ACGB 5.5% Apr23	4.9	2.0	6.9
ACGB 2.75% Apr24	4.3	2.6	6.9
ACGB 3.25% Apr25	4.3	2.5	6.9
ACGB 4.75% Apr27	4.5	1.9	6.4
ACGB 3.25% Apr29	4.1	1.3	5.5

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.

Figure 20. 3M carry profile of AUD Semis



Source: Citi Research

Figure 21. 3M carry table of QTC SG

	Carry	Rolldown	Total
QTC SG 5.75% Nov14	5.1	0.2	5.3
<b>QTC SG 6% Oct15</b>	<b>6.2</b>	<b>10.5</b>	<b>16.8</b>
<b>QTC SG 6% Apr16</b>	<b>7.2</b>	<b>10.1</b>	<b>17.3</b>
<b>QTC SG 3.5% Sep17</b>	<b>8.1</b>	<b>8.7</b>	<b>16.8</b>
QTC SG 6% Feb18	8.1	7.0	15.1
QTC SG 4% Jun19	8.2	7.0	15.2
QTC SG 6.25% Feb20	8.5	6.7	15.2
QTC SG 5.5% Jun21	8.4	3.9	12.3
QTC SG 6% Jul22	8.0	2.8	10.8
QTC SG 4.25% Jul23	7.6	3.1	10.7
QTC SG 5.75% Jul24	7.7	3.1	10.9
QTC SG 6.5% Mar33	6.7	0.5	7.2

Source: Citi Research

Figure 22. 3M carry profile of NSWTC SG

	Carry	Rolldown	Total
NSWTC SG 6% Apr15	4.5	5.3	9.8
<b>NSWTC SG 6% Apr16</b>	<b>6.6</b>	<b>9.5</b>	<b>16.1</b>
<b>NSWTC SG 4% Feb17</b>	<b>7.2</b>	<b>7.5</b>	<b>14.7</b>
NSWTC SG 6% Feb18	7.4	6.2	13.6
<b>NSWTC SG 3.5% Mar19</b>	<b>7.6</b>	<b>6.8</b>	<b>14.4</b>
NSWTC SG 6% May20	7.8	5.1	12.8
NSWTC SG 6% Mar22	7.5	3.8	11.3
NSWTC SG 4% Apr23	7.0	3.2	10.2
NSWTC SG 5% Aug24	6.7	2.3	9.0
NSWTC SG 6% May30	6.2	1.0	7.2

Source: Citi Research

Figure 23. 3M carry table of TCV

	Carry	Rolldown	Total
TCV 4.75% Oct14	2.8	1.4	4.2
TCV 8% Aug15	4.9	8.9	13.8
<b>TCV 2.75% Nov15</b>	<b>5.9</b>	<b>10.5</b>	<b>16.5</b>
<b>TCV 5.75% Nov16</b>	<b>7.1</b>	<b>8.6</b>	<b>15.7</b>
<b>TCV 5.5% Nov18</b>	<b>7.5</b>	<b>7.0</b>	<b>14.5</b>
TCV 6% Jun20	7.6	4.7	12.3
TCV 6% Oct22	7.2	3.4	10.6
TCV 5.5% Dec24	6.8	2.6	9.4
TCV 5.5% Nov26	6.5	2.5	9.0
TCV 4.25% Dec32	5.6	0.7	6.2
TCV 6.5% Mar33	5.6	0.5	6.2

Source: Citi Research

Figure 24. 3M carry in NZD swaps

Fwd / Tenor	1Y	2Y	3Y	4Y	5Y	6Y	7Y	8Y	9Y	10Y	12Y	15Y	20Y
SPOT	22.3	24.7	21.3	18.1	15.7	13.7	12.0	10.9	9.8	9.2	8.6	7.1	6.4
3M	24.5	24.0	20.1	17.5	15.2	13.2	11.7	10.5	9.6	9.2	8.4	7.1	6.3
6M	29.9	25.9	20.5	17.5	15.2	13.1	11.7	10.4	9.5	9.2	8.4	7.1	6.3
9M	29.1	24.1	19.0	16.3	14.0	12.0	10.7	9.6	8.7	8.6	7.7	6.6	5.9
1Y	26.7	21.2	17.2	14.6	12.5	10.8	9.6	8.6	8.0	7.9	6.9	6.0	5.4
2Y	15.6	12.1	10.3	8.5	7.2	6.3	5.5	5.2	5.2	5.1	4.2	3.9	3.5
3Y	8.4	7.5	6.0	4.8	4.2	3.5	3.4	3.6	3.6	3.1	2.6	2.7	2.3
4Y	6.7	4.8	3.6	3.1	2.5	2.4	2.9	2.9	2.5	2.1	2.0	2.2	1.8
5Y	2.6	1.7	1.5	1.1	1.3	2.0	2.1	1.6	1.3	1.2	1.5	1.5	1.2
6Y	0.7	0.9	0.5	0.9	1.8	2.0	1.5	1.1	1.0	1.2	1.5	1.3	1.1
7Y	1.2	0.4	1.0	2.2	2.3	1.7	1.2	1.1	1.2	1.5	1.6	1.4	1.1
8Y	- 0.3	0.9	2.6	2.6	1.8	1.2	1.1	1.3	1.5	1.7	1.5	1.3	1.0
9Y	2.1	4.2	3.7	2.4	1.6	1.4	1.6	1.8	2.0	1.9	1.7	1.4	1.1
10Y	6.5	4.8	2.6	1.5	1.2	1.5	1.8	2.0	2.0	1.8	1.6	1.3	1.0

Source: Citi Research

Figure 25. Japan relative value by maturity

Versus Fitted Yield Curve						Versus Swap Curve (YYS)						
JGB 2-7	Richest	Rank		ZScore	Issued	Size (¥1n)	Richest	Rank		ZScore	Issued	Size (¥1n)
		1	JB302 1.4% Jun19	-2.30	7-09	2.30		1	JB310 1% Sep20	-1.77	9-10	4.75
		2	JB301 1.5% Jun19	-2.22	6-09	4.32		2	JB311 0.8% Sep20	-1.77	10-10	2.67
		3	JB283 1.8% Sep16	-1.99	11-06	2.50		3	JL46 2.2% Jun20	-1.53	4-00	0.75
		4	JB282 1.7% Sep16	-1.97	9-06	5.10		4	JB302 1.4% Jun19	-1.40	7-09	2.30
	Cheapest	5	JB311 0.8% Sep20	-1.90	10-10	2.67	5	JB301 1.5% Jun19	-1.37	6-09	4.32	
		5	JB298 1.3% Dec18	1.34	1-09	4.05	5	JB296 1.5% Sep18	-0.02	9-08	5.88	
		4	JB297 1.4% Dec18	1.34	12-08	2.27	4	JB293 1.8% Jun18	0.02	6-08	2.47	
		3	JL45 2.4% Mar20	1.51	1-00	0.87	3	JB294 1.7% Jun18	0.04	7-08	2.25	
		2	JB299 1.3% Mar19	1.52	3-09	3.89	2	JB295 1.5% Jun18	0.06	8-08	2.64	
1	JB300 1.5% Mar19	1.86	5-09	2.38	1	JS112 0.4% Jun18	0.07	6-13	3.10			
JGB 7-10	Richest	Rank		ZScore	Issued	Size (¥1n)	Richest	Rank		ZScore	Issued	Size (¥1n)
		1	JL47 2.2% Sep20	-1.68	7-00	0.69		1	JL47 2.2% Sep20	-1.70	7-00	0.69
		2	JL58 1.9% Sep22	-1.67	10-02	1.27		2	JL48 2.5% Dec20	-1.52	10-00	0.71
		3	JL57 1.9% Jun22	-1.62	8-02	0.98		3	JB312 1.2% Dec20	-1.43	12-10	7.38
		4	JL55 2% Mar22	-1.53	4-02	0.99		4	JL50 1.9% Mar21	-1.27	4-01	1.35
	Cheapest	5	JL60 1.4% Dec22	-1.50	2-03	1.12	5	JB314 1.1% Mar21	-1.01	5-11	2.45	
		5	JL64 1.9% Sep23	1.57	10-03	1.24	5	JL63 1.8% Jun23	0.03	8-03	1.01	
		4	JB329 0.8% Jun23	1.58	6-13	7.79	4	JL61 1% Mar23	0.09	4-03	1.29	
		3	JB317 1.1% Sep21	1.80	9-11	2.31	3	JB328 0.6% Mar23	0.13	3-13	7.74	
		2	JL62 0.8% Jun23	1.93	6-03	1.39	2	JL62 0.8% Jun23	0.32	6-03	1.39	
1	JB320 1% Dec21	2.12	1-12	5.05	1	JB329 0.8% Jun23	0.96	6-13	7.79			
JGB 10-15	Richest	Rank		ZScore	Issued	Size (¥1n)	Richest	Rank		ZScore	Issued	Size (¥1n)
		1	JL102 2.4% Jun28	-1.71	6-08	1.14		1	JL102 2.4% Jun28	-1.20	6-08	1.14
		2	JL103 2.3% Jun28	-1.66	7-08	1.12		2	JL103 2.3% Jun28	-1.18	7-08	1.12
		3	JL74 2.1% Dec24	-1.61	2-05	0.68		3	JL106 2.2% Sep28	-1.14	10-08	0.96
		4	JL73 2% Dec24	-1.54	12-04	1.36		4	JL105 2.1% Sep28	-1.13	9-08	1.90
	Cheapest	5	JL75 2.1% Mar25	-1.50	3-05	0.73	5	JL86 2.3% Mar26	-1.12	4-06	0.98	
		5	JL96 2.1% Jun27	0.52	8-07	0.99	5	JL68 2.2% Mar24	-0.62	4-04	0.71	
		4	JL99 2.1% Dec27	0.67	12-07	2.65	4	JL69 2.1% Mar24	-0.57	5-04	1.51	
		3	JL81 2% Sep25	1.08	9-05	0.88	3	JL67 1.9% Mar24	-0.49	3-04	0.86	
		2	JL65 1.9% Dec23	1.44	12-03	1.13	2	JL65 1.9% Dec23	-0.30	12-03	1.13	
1	JL66 1.8% Dec23	2.04	2-04	0.79	1	JL66 1.8% Dec23	-0.26	2-04	0.79			
JGB 15-20	Richest	Rank		ZScore	Issued	Size (¥1n)	Richest	Rank		ZScore	Issued	Size (¥1n)
		1	JL145 1.7% Jun33	-2.71	6-13	3.94		1	JL107 2.1% Dec28	-1.06	12-08	1.11
		2	JX6 2.4% Nov31	-1.26	11-01	0.56		2	JL108 1.9% Dec28	-0.99	1-09	1.97
		3	JL125 2.2% Mar31	-1.17	3-11	1.37		3	JL110 2.1% Mar29	-0.98	4-09	1.86
		4	JL135 1.7% Mar32	-1.00	4-12	1.20		4	JL112 2.1% Jun29	-0.95	7-09	2.28
	Cheapest	5	JX7 2.3% May32	-0.94	5-02	0.60	5	JL109 1.9% Mar29	-0.92	3-09	1.40	
		5	JL129 1.8% Jun31	0.03	8-11	1.27	5	JX9 1.4% Dec32	0.30	1-03	0.43	
		4	JX5 2.2% May31	0.05	5-01	0.38	4	JL144 1.5% Mar33	0.31	4-13	1.33	
		3	JL130 1.8% Sep31	0.15	9-11	2.36	3	JL143 1.6% Mar33	0.34	3-13	2.53	
		2	JL131 1.7% Sep31	0.26	11-11	1.13	2	JX12 2.1% Sep33	0.38	11-03	0.58	
1	JX10 1.1% Mar33	0.56	5-03	0.57	1	JX10 1.1% Mar33	0.48	5-03	0.57			
JGB >20	Richest	Rank		ZScore	Issued	Size (¥1n)	Richest	Rank		ZScore	Issued	Size (¥1n)
		1	JX33 2% Sep40	-2.50	9-10	3.01		1	JU6 1.9% Mar53	-0.25	5-13	0.86
		2	JX39 1.9% Jun43	-2.49	6-13	1.88		2	JX39 1.9% Jun43	-0.14	6-13	1.88
		3	JX34 2.2% Mar41	-2.48	3-11	2.85		3	JU1 2.4% Mar48	-0.02	11-07	0.73
		4	JX35 2% Sep41	-2.38	9-11	3.05		4	JU2 2.2% Mar49	0.02	5-09	1.24
	Cheapest	5	JX36 2% Mar42	-2.19	3-12	3.14	5	JU4 2.2% Mar51	0.03	5-11	1.67	
		5	JX15 2.5% Jun34	0.08	8-04	1.11	5	JX26 2.4% Mar37	0.50	4-07	1.85	
		4	JX20 2.5% Sep35	0.09	10-05	0.78	4	JX14 2.4% Mar34	0.52	4-04	1.01	
		3	JX25 2.3% Dec36	0.29	1-07	0.98	3	JX20 2.5% Sep35	0.53	10-05	0.78	
		2	JX14 2.4% Mar34	0.29	4-04	1.01	2	JX25 2.3% Dec36	0.54	1-07	0.98	
1	JX19 2.3% Jun35	0.68	7-05	0.80	1	JX19 2.3% Jun35	0.61	7-05	0.80			

Z-scores are calculated using 6-month history.

Black shades highlight Z-scores outside the 95% confidence interval ( $z > 1.96$  or  $z < -1.96$ ).

Black shades highlight Z-scores outside the 90% confidence interval ( $z > 1.65$  or  $z < -1.65$ ).

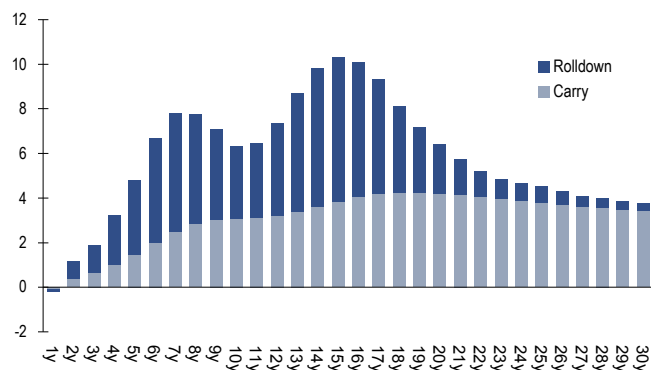
Source: Citi Research

Figure 26. 6M carry in JPY swaps<sup>2</sup>

Fwd / Tenor	1Y	2Y	3Y	4Y	5Y	6Y	7Y	8Y	9Y	10Y	12Y	15Y	20Y	25Y	30Y	40Y
SPOT	1.4	2.5	3.5	4.2	5.2	6.3	7.2	7.6	8.0	8.2	8.7	8.3	6.3	4.6	3.9	3.3
6M	2.3	3.0	3.7	4.7	5.8	6.8	7.3	7.7	7.9	8.3	8.6	8.1	6.0	4.5	3.9	3.2
9M	2.6	3.4	4.1	5.1	6.2	7.3	7.7	8.0	8.2	8.5	8.9	8.1	6.0	4.5	3.9	3.3
1Y	3.0	4.0	4.7	5.8	6.9	7.7	8.1	8.5	8.6	8.9	9.1	8.2	6.1	4.5	4.0	3.3
2Y	4.9	5.6	6.7	7.8	8.7	9.0	9.2	9.4	9.6	9.7	9.5	8.2	5.9	4.5	4.0	3.3
3Y	6.4	7.6	8.9	9.8	10.0	10.1	10.1	10.3	10.5	10.4	9.7	8.1	5.7	4.4	4.0	3.3
4Y	8.9	10.2	10.9	10.9	10.8	10.7	10.9	11.0	10.8	10.5	9.4	7.7	5.3	4.2	3.9	3.1
5Y	11.3	11.7	11.4	11.1	11.0	11.2	11.2	11.0	10.5	10.0	8.8	7.0	4.8	3.9	3.6	2.9
6Y	12.1	11.4	11.1	10.9	11.2	11.2	11.0	10.5	9.9	9.3	7.9	6.1	4.1	3.5	3.2	2.6
7Y	10.7	10.7	10.7	11.0	11.1	10.9	10.4	9.8	9.0	8.3	6.9	5.2	3.5	3.1	2.8	2.2
8Y	10.7	10.7	11.1	11.3	11.0	10.4	9.7	8.9	8.1	7.3	6.0	4.3	2.9	2.7	2.4	1.9
9Y	10.8	11.5	11.6	11.2	10.5	9.6	8.7	7.8	7.0	6.3	4.9	3.4	2.4	2.3	2.0	1.6
10Y	12.2	12.0	11.3	10.4	9.4	8.3	7.4	6.5	5.7	5.0	3.8	2.5	1.9	1.8	1.5	1.2
12Y	9.9	8.7	7.6	6.4	5.4	4.6	3.8	3.1	2.5	1.9	1.1	0.5	0.6	0.6	0.5	0.4
15Y	3.0	2.1	1.4	0.7	0.1	- 0.4	- 0.8	- 1.1	- 1.4	- 1.6	- 1.6	- 1.2	- 0.7	- 0.6	- 0.6	- 0.5
20Y	- 3.0	- 3.2	- 3.4	- 3.5	- 3.4	- 3.3	- 3.0	- 2.7	- 2.4	- 2.0	- 1.4	- 1.0	- 0.8	- 0.7	- 0.7	- 0.5
25Y	- 2.6	- 2.0	- 1.5	- 1.0	- 0.5	- 0.1	0.2	0.4	0.5	0.5	0.4	0.2	0.1	0.1	0.1	0.1
30Y	2.1	2.1	1.9	1.7	1.5	1.2	1.0	0.8	0.7	0.6	0.5	0.3	0.3	0.2	0.2	0.2

Source: Citi Research

Figure 27. 6M carry profile of JGB<sup>3</sup>



Source: Citi Research

Figure 28. 6M carry table of JGB

JGB	Carry	Rolldown	Total
1y	-0.1	-0.1	-0.2
2y	0.4	0.8	1.2
3y	0.6	1.3	1.9
4y	1.0	2.2	3.2
5y	1.5	3.3	4.8
6y	2.0	4.7	6.7
7y	2.5	5.3	7.8
8y	2.8	4.9	7.8
9y	3.0	4.0	7.1
10y	3.1	3.3	6.3
20y	4.2	2.2	6.4
30y	3.4	0.4	3.8

Source: Citi Research

<sup>2</sup> Sectors with carry more than 5bp is highlighted in green while the carry less than 5bp is highlighted in red.

<sup>3</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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