Key relative value charts of NZGBs and high-grade bonds

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19 November 2019
Key RV themes

• Swap-bond spreads appear to have found a base. Short-end NZGBs have outperformed on the ASW curve.
• The NZGB 2027 is the cheapest bond on the curve. The 2033 has richened over the past fortnight and no longer stands out as cheap.
• NZ BEIs have consolidated over the past fortnight. We think they are likely to face resistance ahead, unless the nominal sell-off gains momentum.
• Long-end LGFA-NZGBs compress but remain within recent trading ranges.
• Housing NZ bonds underperform noticeably.

Special topics

• Swap spreads usually widen in December, but we think this time could be different in the wake of the HYEFU.
• Will NZGB cross-market underperformance support swap spreads?
• An update on non-resident holdings of NZ high grade bonds.
• Offshore leveraged investors reduce holdings of 2031 NZGB during October
NZGBs
NZGB 10 year cross market yield spreads

- NZGBs underperform after RBNZ keeps the OCR on hold at 1% at the November MPS.
- NZGB-ACGB, NZGB-UST spreads are towards the top of the 2019 trading ranges.

Source: Bloomberg, BNZ. Generic 10y yields.
NZGB yield curve over the last fortnight and month

Source: BNZ
NZGB carry and roll-down

NZGB carry and roll (1m)

-1.5 -1.0 -0.5 0.0 0.5 1.0
May-21 Apr-23 Apr-25 Apr-27 Apr-29 May-31 Apr-33 Apr-37

Roll

Carry (assumes 1m repo = 1.17%)

Carry and roll

Source: BNZ, Bloomberg.
NZGB ASW curve over the last fortnight and month

- There has been little movement in swap-bond spreads over the past fortnight.
- Swap-bond spreads remain at relatively low levels on a historic basis.
- The 2027 NZGB is the cheapest bond on the ASW curve.
- The 2033s and 2037s were trading with positive asset swap spreads a month ago. They have richened since then.
Short-dated NZGBs are trading rich on a Z-spread basis.

The 2027, 2029 and 2031 NZGBs are the cheapest bonds on a Z-spread basis.

**The Z-spread calculates the present value of bond cash flows based off the swap curve. It measures the number of basis points the swap curve must be parallel shifted to bring the present value of bond cash flows to zero.**
Swap-bond spreads look like they have found a floor

- The 2 year swap spread reached its lowest level since 2012 last month. Since then, short-dated NZGBs have richened vs. swaps, as we had expected.
- The 10 year swap spread has lagged the move at the short-end. It remains within vicinity of multi-year lows.
- The 2s10s swap-bond box is near its widest level over the past four years.

Source: BNZ
2027 NZGB cheap on the curve

- The 2027 NZGB is cheap compared to surrounding bonds on a yield and ASW basis.
- The 2027 is the cheapest bond on the curve on our NSS model, although it doesn’t stand out as much on a Z-score basis (i.e. it has remained cheap over the past 3 mths).
- 2027 NZGB also has the highest carry and roll on the curve.
Other RV distortions continue to fade

- The 2033s have richened over the past fortnight and they are now fair value on our NSS model.
- The 2029 has cheapened slightly, although it remains 0.5bps rich on our NSS model.
Special topics
Seasonality in swap-bond spreads in December

- Swap-bond spreads tend to show a seasonal pattern of widening in December.

- Since 2012, the 10 year swap-bond spread has widened in five of those years. In the two years that it didn’t widen (2016 and 2018), swap-bond spreads only narrowed 1bp.

- The seasonal pattern is likely related to the pause in NZGB tender issuance that occurs from mid-December for around one month. The last tender this year is on December 12th.

- Seasonal patterns are not guaranteed to repeat; the 10 year swap-bond spread tightened in April this year. This was the first time it had tightened during April since 2010.
HYEFU will influence swap spreads in December

- The outlook for swap spreads this December may be heavily influenced by the HYEFU on 11\textsuperscript{th} December (the day before the last tender of the year). NZDM will provide an update on the bond programme at HYEFU. At the Budget, NZDM set the bond programme for this fiscal year at $10b.

- We think the risks are that the bond programme is revised higher (i.e. Treasury revises its growth forecasts lower, although there are other factors that might mitigate this). If NZDM were to announce a bigger bond programme, we expect it to announce its intention to syndicate a new long-end bond. This would put pressure on swap spreads to tighten despite the seasonal pattern.

- We will provide a HYEFU preview from a bond market perspective in the coming weeks.

### Bond syndications announcements

<table>
<thead>
<tr>
<th>Year</th>
<th>Announced at Budget</th>
<th>Announced at HYEFU</th>
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<tbody>
<tr>
<td>2012</td>
<td>2020</td>
<td>2020</td>
</tr>
<tr>
<td>2013</td>
<td>2027 and linker 2030</td>
<td>2027 delayed</td>
</tr>
<tr>
<td>2014</td>
<td>2027 and a new linker</td>
<td>2025</td>
</tr>
<tr>
<td>2015</td>
<td>2033</td>
<td>2025</td>
</tr>
<tr>
<td>2016</td>
<td>2037</td>
<td>linker 2040</td>
</tr>
<tr>
<td>2017</td>
<td>2029</td>
<td>2029*</td>
</tr>
<tr>
<td>2018</td>
<td>2031</td>
<td>?</td>
</tr>
<tr>
<td>2019</td>
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* 2029 nominal syndication announced at Budget was delayed until H2 of the fiscal year

### Change in net nominal issuance vs. 10y swap spread

Source: NZDM, Bloomberg

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Will NZGB cross-market underperformance support swap spreads?

- NZGBs have underperformed foreign bonds over the past month. Were that cross-market underperformance to continue, this could rekindle foreign demand for NZGBs.

- Foreign NZGB holdings are an input into our 10y swap spread model. We model a scenario where foreign holdings return to 65%, a 10% increase from current levels. All else equal, this would boost swap spreads around 10bps according to our model (see blue line in chart).

- The main driver of swap spreads according to our model is net supply. If the reason for future NZGB cross-market underperformance were because of more expansionary fiscal policy then, in our model, the increased net supply would argue for tighter swap spreads.

Source: NZDM, RBNZ, Bloomberg.

An update on non-resident high grade holdings

- The proportion of foreign holdings across all high-grade sectors continues to drift lower (see left-hand chart), consistent with the decline in NZ’s historic yield advantage to offshore markets.

- In absolute (rather than proportionate) terms, holdings of most high grade sectors have been reasonably flat over the past few months. Nominal NZGB holdings have increased, but this is partly due to foreign participation in the 2031 NZGB syndication.

- Foreign investors net bought $350m of nominal NZGBs in October, concentrated in the bonds being tendered (+$200m 2025s, +$230m 2029s, +$125m 2037s). There was net selling of the 2027s (-$100m), consistent with its recent underperformance on the curve.
Offshore leveraged investors reduce holdings of 2031 NZGB

- A month ago we noted the large ($650m) non-resident repo position in the recently syndicated NZGB 2031. We view this as a proxy for leveraged investor (hedge funds, offshore bank) holdings of the 2031 NZGB.

- This non-res repo position was reduced significantly during October. It now stands at around $300b (see left-hand chart). This hasn’t prevented the bond performing on ASW (see right-hand chart) since the syndication, albeit the moves have been reasonably modest.

**Non-res repo holdings of recently syndicated NZGBs**

**Post-syndication asset swap performance**

Source: NZDM, RBNZ.

Source: BNZ
Linkers
The 10 year NZ BEI has consolidated over the past fortnight, near YTD highs. It is now back into the range that prevailed through 2018, albeit towards the lower end.

The carry is positive on NZ BEIs (more so from late December) and we continue to see valuations as attractive on a medium-to-long term basis. But for BEIs to push higher from here, we think the nominal sell-off needs to extend and/or global markets start trading with a more reflationary bias.

The 2025 BEI has increased relative to the other bonds. The 2025 is the biggest beneficiary from the increase in carry from late December (by almost 2bps per month).
NZGB linker RV – 2025s outperform

- The 2025s have been the star performer on the linker curve over the past fortnight. The 2025 BEI has increased relative to the other bonds (helped by a lower starting point and the proximity to late December, when the carry will improve noticeably). The 25s30s real yield curve has also steepened.
- We like owning the 2025s outright as a way to fade the recent NZ rates sell-off. A real yield position offers more protection (against a further global rates sell-off) than a nominal duration position.
- On a BEI basis, we prefer the 2035s, notwithstanding the better carry profile on the 2025s.
NZGB linker carry and roll-down

- Carry on linkers depends on the two quarter average of headline CPI.
- For the upcoming coupon on 20-Dec, this is 0.34% (1.36% ann.).
- For the 20-Mar-20 coupon, which starts accruing from late December, this is 0.63% (2.52% ann.).
- BEI carry will be boosted materially from late December (by almost 2bps per month for the 2025s).

Source: BNZ, Bloomberg. Roll for the 2025 linker is assumed to be the same as the 2025 nominal.

<table>
<thead>
<tr>
<th>Bond</th>
<th>Coupon</th>
<th>Real yield (%)</th>
<th>1m carry</th>
<th>1m roll</th>
<th>1m carry and roll</th>
<th>BEI (bps)</th>
<th>1m carry</th>
<th>1m roll</th>
<th>1m Carry and roll</th>
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<td>2</td>
<td>0.06</td>
<td>0.4</td>
<td>0.5</td>
<td>0.9</td>
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<td>0.4</td>
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<td>NZGBi Sep-35</td>
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<td>0.51</td>
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<td>0.3</td>
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<tr>
<td>NZGBi Sep-40</td>
<td>2.5</td>
<td>0.65</td>
<td>0.4</td>
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<td>0.7</td>
<td>1.23</td>
<td>0.1</td>
<td>-0.1</td>
<td>0.0</td>
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</table>

* BEI is the difference between the linker yield and interpolated nominal yield. BEI carry and roll based on linker and nearest maturity nominal bond.
** Carry calculated to 20 December
LGFA and high grade RV
LGFA asset swap spreads

- Modest LGFA outperformance vs. swap from the 2023 and longer bonds.
- 2029 LGFA is still rich on the ASW curve (albeit less so than previously as it has underperformed).

Source: BNZ
LGFA-NZGB spreads for the 2024s and longer have tightened the past fortnight.

Source: BNZ
Modest LGFA asset swap spread tightening

LGFA asset-swaps

Source: BNZ

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LGFA-NZGB spreads within recent ranges
LGFA-NZGB 2033 spread broken down into its components

2033 LGFA-NZGB breakdown

Source: BNZ
LGFA-NZGB positions – carry/roll best at short-end, belly

LGFA-NZGB spreads - carry and roll (1 month)

Source: BNZ, Bloomberg. *Assumes any residual cash mismatch is funded/invested at a repo rate of 1.16%. 2022 and 2024 LGFA bonds are assumed hedged by a duration weighted barbell of surrounding NZGB bonds.
Asset swap curves – NZGBs and high grade issuers

NZ asset swap curves

Source: BNZ. The 2027 IFC bond is shown on the IBRD curve.
Long-end high grade spreads resilient to sell-off

High grade spreads to NZGBs

Source: BNZ

bps

Jul-17 Jan-18 Jul-18 Jan-19 Jul-19

LGFA 2027

LGFA 2033

IFC 2027

HOUSNZ 2028

NZ 5 year swap, RHS

%
Not much change in LGFA-IBRD spreads

Source: BNZ. Asset swap differential.
Housing NZ underperforms noticeably

- Housing NZ spreads have widened materially this month, across the curve.
- The bulk of the widening followed Housing NZ’s $400m tap of its 2026 bond earlier this month. 100% of the allocation was to NZ-based investors and 87% to banks.
- The spread widening likely reflects anticipation of greater supply requirements over the coming years, given the government’s focus on increasing and improving the social housing stock.

Asset-swap spreads
LGFA-Housing NZ spreads compress sharply

- Housing NZ has underperformed LGFA significantly across the curve. Housing NZ/LGFA 2028-2027 ASW box is now trading flat, for the first time.

- We view Housing NZ as a slightly stronger credit than LGFA (albeit both are very much towards the top of the credit spectrum). From a value perspective, we think Housing should trade inside LGFA, but from a market perspective, relative supply pressures are likely to dominate near-term.

**HOUSNZ and LGFA asset-swap spreads**
FX hedged govt bond yields
NZGBs unattractive compared to JGBs on hedged basis

- Table shows FX-hedged yields from Japanese investor’s perspective.
- Long-end France, Spain the most favourable markets on an FX-hedged basis.
- While NZGB yields have increased over the past fortnight, so too has the cost of FX-hedging. NZGBs remain relatively unattractive on an FX-hedged yield basis, although there is the potential for capital gains if NZGB yields rally.

<table>
<thead>
<tr>
<th>FX-hedged yields for JPY investors</th>
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<tbody>
<tr>
<td>Japan</td>
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<td>-------</td>
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<tr>
<td>Japan</td>
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<tr>
<td>Canada</td>
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<td>Germany</td>
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<td>France</td>
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<tr>
<td>Spain</td>
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</tbody>
</table>

* Assumes JPY investor buys foreign bond hedged with 3m currency swaps.

Table shows effective yield on foreign bond, where investor assumes the foreign currency interest rate risk. It is a static measure over the next 3m.

Data is bond specific from Bloomberg. Maturities may differ.
Global bonds less attractive than JGBs on hedged basis

JPY-hedged 10 year yields
(assumes Japanese investor buys foreign bond and hedges FX risk with 3m FX forwards)

Source: Bloomberg, BNZ. Generic 10y yields assumed hedged with rolling 3m FX forwards.
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