

2 May 2018



Rates Strategy: NZ Linkers Are Cheap; 2035 BEI Widener.

- **NZ inflation-indexed bonds, or “linkers”, offer the highest real yields in developed markets. Notwithstanding their relative illiquidity, we think the valuation case for owning linkers, either outright or on breakeven, is compelling.**
- **We outline the macro case for owning linkers. New Zealand has one of the steepest nominal term structures among developed countries, yet just about the lowest implied breakeven inflation. We are sceptical that the forward path of interest rates priced by the market (the OCR eventually rising to around 3.5%) will be realised if actual inflation matches those breakeven inflation rates.**
- **We expect NZ CPI inflation to move to 2% at year-end, and we think the market is under-pricing the medium-term inflation risks in NZ. Either way, NZ 10 year breakeven inflation is below most measures of core inflation, giving investors some ‘buffer’ in case our inflation forecasts are too high.**
- **Linkers also give investors some protection against a number of scenarios where NZ rates could re-price higher, including: a surprise increase in inflation and earlier RBNZ tightening, foreign selling of NZGBs as yields compress to offshore, and a fall in the NZD boosting imported inflation and OCR expectations.**
- **On the supply-side, our view is that linker net issuance will likely be unchanged or, if anything, lower from here, even in an environment where the NZDMO’s bond programme is increased.**
- **We express our view with a 2035 breakeven inflation widener (against 2037s).**

Strategy	Entry	Exit	Stop	Carry (1m)
Long NZGBi 2035/short NZGB 2037	146bps	185bps	120bps	-0.4bps

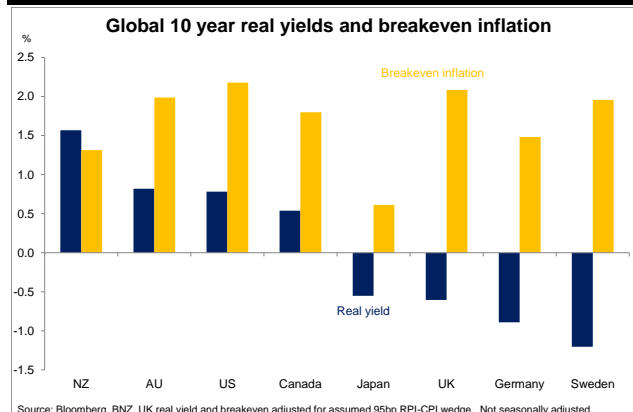
NZ has high real yields and low breakevens

New Zealand inflation-indexed bonds, or linkers, offer the highest real yields in developed markets.¹ The interpolated 10 year NZ real yield stands at around 1.55%, compared to around 0.8% on 10y US TIPS and Australian linkers, and negative real yields in Japan, Europe and the UK.

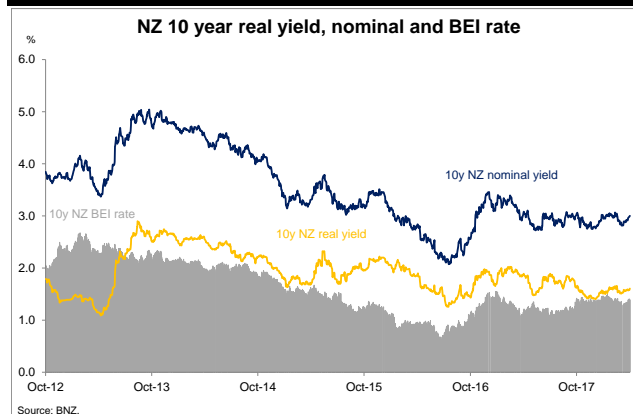
The implied 10 year NZ breakeven inflation rate (i.e. the difference between the 10 year nominal and real yields) is

¹ The NZDMO’s information memorandum on linkers is available here: https://www.nzdm.govt.nz/sites/default/files/media/media_attachment/inflation-indexed-bonds-info-memo-dec17.pdf.

NZ has high real yields and low breakeven inflation



NZ breakevens have risen, but remain well below 2%



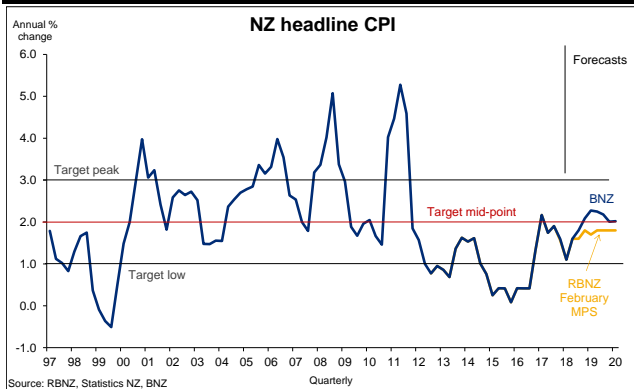
around 1.35%, which is also low by international standards. The 10 year NZ breakeven inflation rate of 1.35% compares to around 2% in Australia and 2.2% in the US. Even Europe, which has been struggling with persistently low inflation for years and where core inflation is 1%, has higher market implied inflation rates than NZ (the 10 year Euro inflation swap is around 1.55%).

NZ medium-term inflation risks rising

One of the reasons for the relatively low level of NZ breakeven inflation is the subdued domestic inflation backdrop. Annual headline CPI inflation fell to 1.1% last quarter having averaged only 1.3% since the start of 2010.

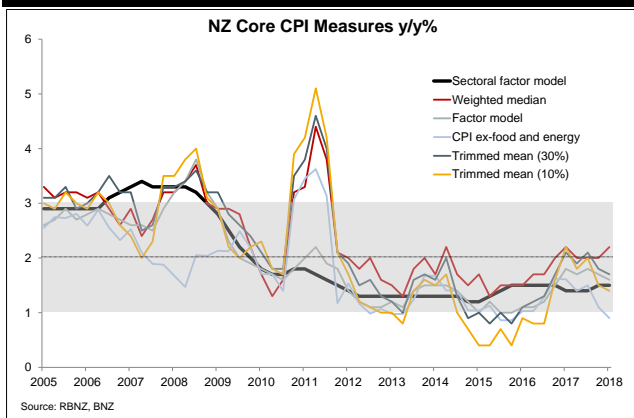
But we expect the Q1 CPI reading to mark the low point for inflation this cycle. Q1 CPI was distorted downwards by some policy-induced factors (such as the start of fees-free tertiary education) and we expect CPI to reach 2.1% by Q4 and remain slightly above 2% over 2019. The recent increase in oil prices, the government’s decision to levy a fuel tax, the increase in the minimum wage and the fall in the NZD (to the extent it is sustained) are all supportive of an increase in inflation this year. The RBNZ’s February MPS forecasts put CPI at 1.8% at year-end.

We expect NZ CPI to rise to 2% later this year



Our view is also that the current level of NZ breakeven inflation under-prices the medium term inflation risks in New Zealand. We forecast a further decline in the unemployment rate over the coming years and some emergence of wage pressure in time. Government policy also has the potential to put upward pressure on inflation in the medium-term, both directly (i.e. increases in the minimum wage) and indirectly (by boosting growth and using up resources). Finance Minister Robertson has previously stated that public sector workers “haven’t received the dividend that we’ve seen from the growth in the economy”, potentially setting the stage for some uplift in public sector pay settlements at some point.

Core inflation measures are mostly above NZ BEI



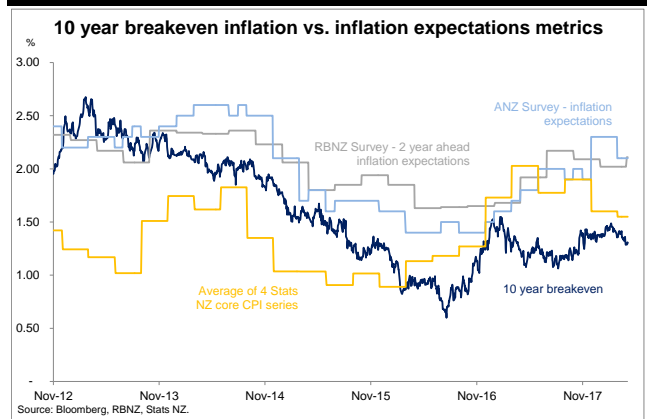
NZ breakeven inflation below most core inflation metrics

Some market participants are understandably sceptical about inflation forecasts after years of central banks (including the RBNZ) and economists over-predicting inflation. Even so, NZ breakeven inflation looks low relative to most core inflation metrics in NZ. With the exception of CPI ex food and energy (which was distorted by the start of fees-free tertiary education), the other core inflation measures range between 1.4% and 2.2%. The RBNZ’s sectoral factor model of underlying inflation is 1.5%.

So even if we assume no increase in NZ underlying inflation pressure in future years – i.e. that headline CPI converges to core inflation – realised inflation should still be higher than that priced into NZ breakevens. In our view, the fact that breakeven inflation is lower than most core inflation metrics gives investors a bit of a ‘buffer’ in case our forecasts for CPI prove too high.

Survey based measures of NZ inflation – both from the RBNZ inflation expectations survey and ANZ Business Survey – also point to significantly higher inflation in future years than priced into breakevens. In the Annex we show how NZ breakevens line up to other countries versus various inflation metrics, with our broad assessment being that NZ breakeven inflation compares favourably to other countries.

NZ breakevens below survey based measures of CPI

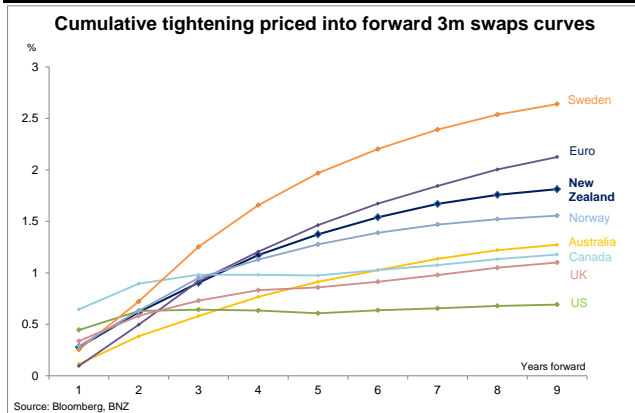


The inconsistency of low breakevens and RBNZ tightening expectations

Besides having low breakeven inflation rates, NZ has one of the steepest nominal term structures in developed markets. Using the forward 3m swaps curve as a guide, only Europe and Sweden price-in more tightening than the market does for NZ (a reflection of the low starting point (negative rates) in these economies). The NZ forward curve prices almost

150bps of tightening over the next 5 years, which would take the OCR to around 3.25%.²

NZ has one of the steepest nominal term structures



To us, there seems an inconsistency between the path of tightening priced into the nominal curve and the market implied breakeven inflation rates. The recently signed Policy Targets Agreement between the RBNZ Governor and the Minister of Finance restated the focus on the 2% midpoint of the CPI target range. We find it hard to envisage scenarios where the RBNZ raises the OCR in line with what the forwards are pricing where realised inflation is below current NZ breakeven inflation rates. Either breakeven inflation is too low, and higher inflation validates RBNZ tightening, or breakeven inflation around 1.4% is about right, in which case we would be sceptical the RBNZ would hike rates back to 'neutral', around 3.5%.³

Yes, NZ linkers are less liquid than nominals and the likely presence of illiquidity premia in linkers means that the market's "true" expectation of inflation is almost certainly higher than that implied by NZ breakeven inflation rates.⁴ But we find the decline in NZ breakeven inflation over the past four years – both outright (from around 2% in mid-2014) and relative to most other countries – difficult to square with the increase in linkers outstanding and trading volumes over that time.⁵ i.e. we find it hard to imagine that illiquidity premia on NZ linkers has *increased* materially over the past few years. Instead, we think the decline in NZ breakeven inflation – to a level well below the RBNZ's 2% target – appears to us to be more related to the subdued

² We ignore term premia here.

³ Of course, it's possible the RBNZ could tighten monetary policy pre-emptively in the future, on the expectation that inflation will converge to target from current levels. This scenario played out in 2014, when then-Governor Wheeler raised the OCR 100bps to 3.5% on the expectation that inflation would rise. But when inflation failed to materialise (and growth and commodity markets started to soften) the OCR was then lowered to 1.75%, where it sits today. Ultimately, our expectation is the forward curve would likely only be realised in a scenario where inflation is materially above that priced into NZ breakevens.

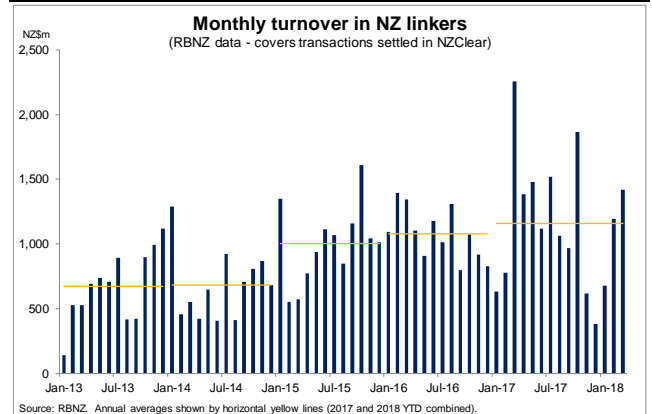
⁴ If linkers have a large illiquidity premia attached to them (relative to nominals), real yields will be higher than otherwise, and correspondingly breakeven inflation rates will be lower. Nominal bonds contain an "inflation risk premium" and this could, in principle, more than offset the illiquidity premium on linkers. But in the case of NZ, we strongly suspect the more important factor at present is the illiquidity premium.

⁵ The RBNZ data only capture trades settled in NZclear, the domestic settlement system. Trades that settle in other settlement venues, such as Euroclear, are not captured, so the turnover data shown in the chart understates overall market volumes.

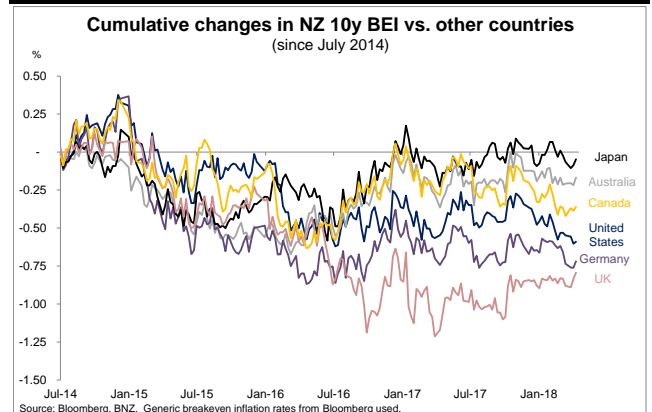
domestic inflationary backdrop in NZ amid regular supply of the product.

For investors that have the ability to take the liquidity risk, to an extent it doesn't matter whether the market is underpricing the likely future path of inflation or NZ linkers are offering an illiquidity premium – either way, they look cheap to us.

NZ linker turnover has trended modestly higher over time



NZ BEI has declined relative to most offshore markets



Linkers provide some protection against adverse scenarios

One of the reasons we like NZ linkers is that they provide investors with protection against the kind of scenarios we worry would cause a re-pricing higher in NZ rates.

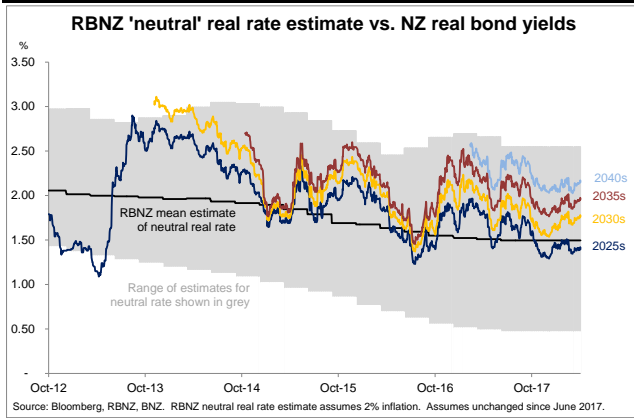
Higher domestic inflation and earlier RBNZ tightening:

The obvious risk is that NZ inflation picks up faster than expected, leading the RBNZ to tighten earlier (and probably by more) than the forwards are pricing. We would expect NZ breakevens to be materially higher in such a scenario, giving linker holders some offset to the rise in rates.

NZ linker yields already discount the OCR rising to above the RBNZ's estimate of the neutral real rate in future years. The forward real yield between 2025 and 2030 is around

2.25% vs. the RBNZ's mean estimate of the neutral real cash rate of around 1.5%.

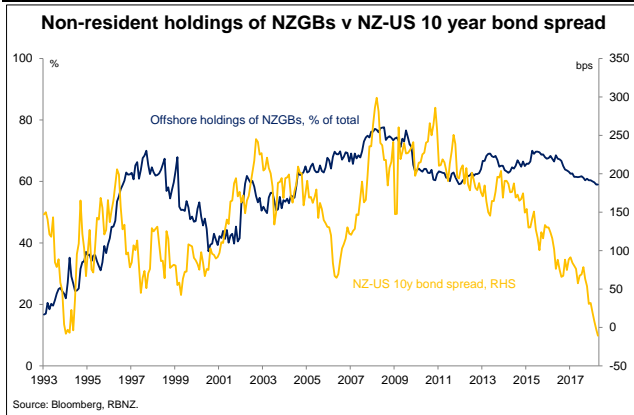
NZ linker yields mostly higher than the RBNZ's neutral rate



Foreign selling on yield compression to the US

The spread between the interpolated 10 year NZGB and US Treasury yield is around zero and at its narrowest level since 1994. Foreigners own just less than 60% of the NZGB market, with this proportion having been in gradual decline for the past few years.

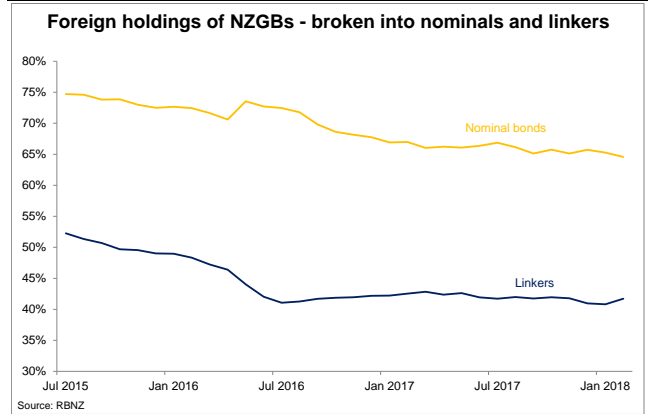
NZGB offshore holdings have been declining gradually



NZ has run a persistent current account deficit for over 20 years and has a negative net international investment position greater than 50% of GDP. As a net borrower in global capital markets, we see the risk that foreign investors could at some point demand a greater risk premium to invest in NZGBs rather than (the more liquid and arguably higher credit quality) US Treasuries. A change in sentiment towards the NZD could for instance see selling from those foreign investors who own NZGBs unhedged as part of their NZD currency allocation.

As it relates to linkers, foreign holdings are proportionately significantly lower than they are for nominals. Foreigners own just over 40% of the linker market versus over 60% for nominals. On this basis, we think linkers should be better insulated from such a scenario of foreign selling of NZGBs.

Foreign holdings of linkers are much lower than nominals

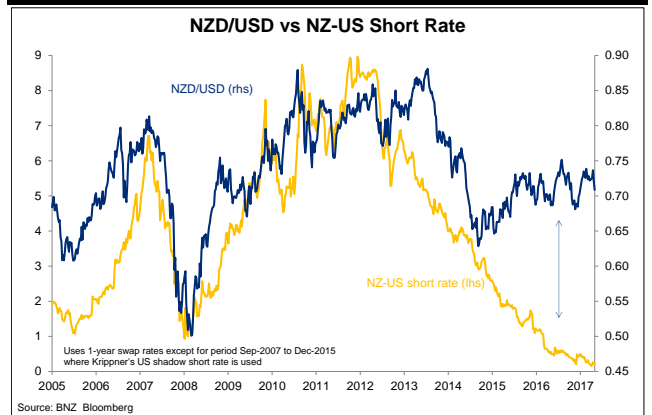


NZD catches up with interest rate differentials

Relatedly, if the NZD were to play 'catch-up' to interest rate differentials, it has a lot of down-side from current levels (see chart below). We're only forecasting a modest decline in the NZD to 0.70 this year, and our FX Strategy team retains a bearish bias on the USD, but it remains to be seen how the NZD performs if the OCR goes 50bps below the Fed funds rate later this year, as the market prices.

In a scenario where the NZD fell significantly, the increase in imported inflation should provide a boost to NZ breakeven inflation (the rough rule of thumb is that a 10% move in the NZ TWI has a 1% impact on NZ headline CPI). The increase in UK breakeven inflation after the fall in the GBP on the back of the EU referendum is an extreme example of how sharp currency moves can impact market inflation expectations. To the extent a sharp fall in the NZD caused the market to reappraise its OCR tightening expectations (bringing hikes forward), linkers should provide some protection against such an outcome.

NZD/USD well above that interest rate diffs would imply



More expansionary fiscal policy / increased bond supply

We think the medium-term risks around fiscal policy are towards more expansionary settings under the Labour

government, and consequently the outlook for bond issuance is towards more, rather than less, net supply. The upcoming Budget on May 17 will give us a better steer of the government’s fiscal intentions and we see the bond programme either remaining the same or, if anything, being revised higher.

The NZ Government is in an enviable fiscal position by international standards, with net debt/GDP around 21% and net issuance forecast to be broadly flat over the coming two fiscal years. Nonetheless, an increase in net bond supply coming at the same time as the proportion of foreign holdings appear to be gradually declining could trigger an increase in NZ yields (and widening in spreads to other countries). The marginal buyer of NZGBs may require greater compensation to absorb the increase in net supply.

Whereas we see nominal issuance being either the same or larger in future years, when it comes to linkers, we see net issuance being either the same or *lower* in coming years. At the end of this fiscal year, linkers will make up around 21% of the total stock of government bonds and bills outstanding. If we use the December HYEUFU forecast for net NZGB issuance in the coming fiscal years and assume that the NZDMO continued to issue around \$1b per year in linkers (broadly equivalent to the current \$100m monthly pace of linker tenders), the proportion of the NZGB market made up of linkers steadily rises (see grey line in the chart below).

The NZDMO has previously indicated it is committed to linkers being ‘around’ 20 percent of portfolio over time, although without this being a strict target. Clearly, the increase in the proportion of linkers outstanding in future years is mainly a function of the upcoming nominal bond maturities and an assumed steady pace of linker issuance (the first linker matures in 2025). The current proportion of annual bond issuance devoted to linkers is around 15%.

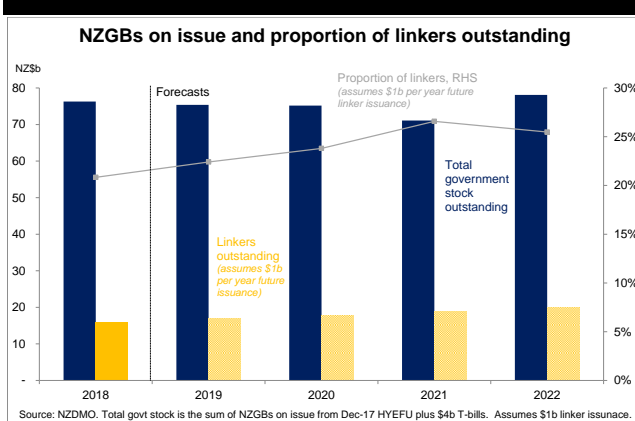
issuance at some point.⁶ On that basis, we can’t see linker issuance being increased any time soon, even in an environment where the bond programme is increased (we envisage any additional issuance being directed towards nominals, with the proportion of linkers outstanding being diluted). There is even the risk that linker supply is reduced at some point. So from a supply perspective, linkers look to have much less risk than nominal NZGBs.

Global term premia adjusts higher

With the Fed in the process of reducing its balance sheet, we think the risks to US term premia are to the upside (especially since the starting point for the 10 year US term premium, according to the commonly used ‘ACM’ method, is already in negative territory). We’ve found in previous [work](#) that the NZ yield curve seems to be more correlated to the US term premium than the level of 10 year Treasury yields. This implies that we should expect a ‘normalisation’ in US term premia to transmit to higher long-end NZ yields.

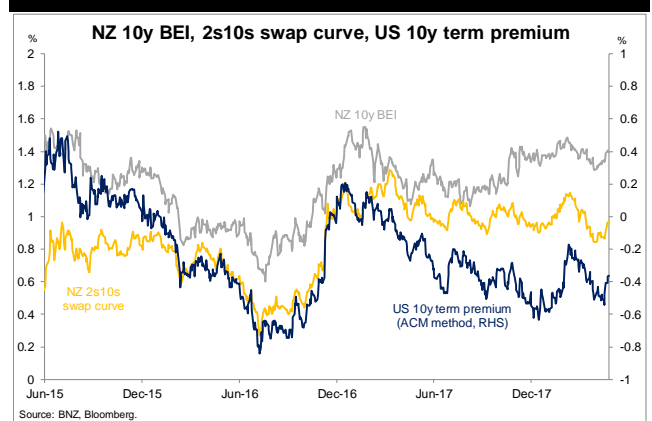
NZ breakeven inflation has been correlated with both the NZ 2s10s curve and the US term premium over the past few years. To an extent, this probably reflects the fact that linkers have a lower beta to moves in nominals, so they tend to outperform when the bond market sells off. Additionally, to the extent that an increase in the US term premium is associated with an increase in US inflation risk premia, we would expect that to put some upward pressure on breakeven inflation rates globally.

Current pace of issuance will see linkers rise as a % of total



On our back-of-the-envelope calculations, the proportion of linkers outstanding won’t fall to 20% until well into the future (possibly 2030) unless total government bond issuance is increased or the NZDMO cuts back on linker

NZ 10y BEI has been correlated with US 10y term premium



⁶ We used the December HYEUFU and projected NGDP at a 4.2% pace in the future (the pace of growth between the last two years in the forecast horizon) and experimented with various future bond issuance programmes that would keep the level of NZGBs on issue not less than 20% of GDP (in line with the Government’s commitment).

Trade idea: Buy NZGB 2.5% 2035 linker vs. sell NZGB 2.75% 2037 nominal

We think there is a strong medium-term case for owning linkers both outright, or on a breakeven basis, depending on one’s view of duration. We opt for a breakeven widener position, as we have a mild bearish bias on rates and we want exposure to the scenario where the bond issuance is increased at May’s Budget (which, as noted above, we would expect to be directed entirely into nominals). We also think NZ breakevens would come under some upward pressure if the depreciation in the NZD were to continue. Finally, we suspect that NZ breakevens will struggle to fall materially further from present levels in an environment where CPI is expected to head towards 2% later this year, unless oil prices fall sharply.

The NZ breakeven curve is relatively flat and we target the 2035 linker against the 2037 nominal, at a spread of 146bps. The 2035/2037 breakeven spread is almost 20bps off the wides set in early February and has underperformed the move higher in oil and increase in US breakeven inflation. The 2035 is no longer being tendered (the NZDMO is currently tendering \$100m a month of the 40s), while the 2037 nominal is being tendered for \$200m per month. In a scenario where the bond programme is increased, we would expect some pressure on the longer-end of the NZGB curve, where issuance is being targeted at present.

NZ breakeven curve is relatively flat

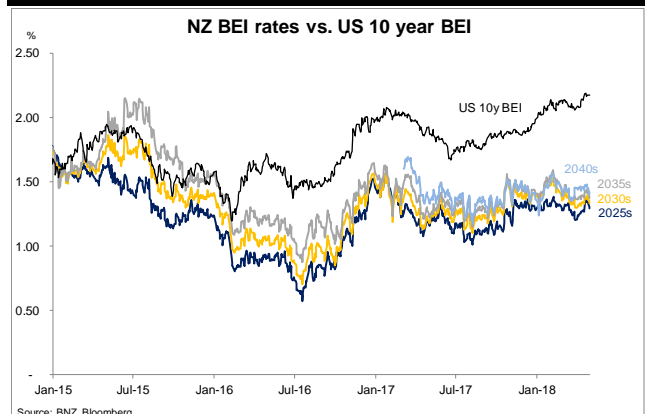
Linker	Real yield	BEI rate	Outstanding (NZ\$m)
Sep-25	1.36%	1.30%	5,200
Sep-30	1.72%	1.33%	4,200
Sep-35	1.92%	1.37%	4,000
Sep-40	2.11%	1.40%	2,200

* Nominal curve linearly interpolated, and extrapolated to 2040

Reflecting the medium-term nature of the position and the fact that transaction costs are higher when trading linkers, we target a move to 185bps in the 35s/37s breakeven spread, with a stop-loss at 120bps, which would represent new lows since the US Presidential election. The 37s are trading slightly special in repo (1.5% vs. GC at 1.75%) but that doesn’t change the carry calculations much given the long maturities of the bonds. The trade carries slightly negatively (around -0.4bps a month at present).

The risk is that NZ nominal bonds rally further from here, and linkers lag the move, tightening the breakeven spread. Another risk is that oil prices reverse recent gains, and depress breakeven rates globally. Finally, while we expect NZ CPI inflation to go higher this year, further downside surprises may impact long-dated breakevens (although we think the market has already priced a very subdued NZ inflation outlook already. The next CPI release is in July.

NZ breakeven rates well below those in the US



Annex: Comparison of BEI vs. inflation metrics globally

We compare NZ breakeven inflation to core inflation metrics in NZ as a rough-and-ready barometer of breakeven inflation valuations. While 10 year NZ breakeven inflation is higher than CPI ex-food and energy, it is below all the other measures of core inflation in NZ. NZ CPI ex-food and energy was affected by the recent imposition of fees-free tertiary education in NZ.

The table below shows 10 year breakeven inflation (without any adjustment for seasonality) for other countries vs. core CPI ex-food and energy, some alternative measures of core inflation and headline CPI. Australian 10 year BEI is around the same as the average of the RBA’s trimmed mean and weighted median measures of core inflation and 10y BEI is well above core inflation in Japan, Europe and Sweden. 10y BEI in the US and Canada looks more attractively priced versus core inflation in these countries, although monetary policy tightening by the Fed and the Bank of Canada will probably act as a headwind going forward.

Global BEI vs. inflation metrics

	10y BEI rate	CPI ex-food and energy	Alternative core**	Headline CPI	CB target
New Zealand	1.34	0.9	1.55	1.1	2.0
Australia	1.96	1.7	1.95	1.9	2.5
Canada	1.80	1.9	2.00	2.3	2.0
Sweden	1.95	1.2	1.50	1.9	2.0
USA	2.17	2.1	2.25	2.4	2.2
Eurozone*	1.57	1.0		1.3	1.9
Japan	0.60	0.3		1.1	2.0

* the euro 10y inflation swap rate is shown. CPI ex food, energy, alcohol and tobacco shown.
 ** Average of 4 Stats NZ measures for NZ. Average of WM and TM for Australia. Average of 3 BoC measures for Canada. CPIF-ex energy for Sweden. Cleveland Fed 16% trimmed mean, median CPI and Atlanta Fed sticky CPI for the US. CPI ex food, energy, alcohol and tobacco (i.e. core CPI) for EU

Notwithstanding the relative illiquidity of NZ linkers, our broad assessment is that NZ breakeven inflation compares favourably to other countries, especially when combined with the short and medium-term tailwinds we see for the NZ inflation outlook and the risks around future supply of NZ nominals vs. linkers.

Contact Details

Stephen Toplis

Head of Research
+64 4 474 6905

Craig Ebert

Senior Economist
+64 4 474 6799

Doug Steel

Senior Economist
+64 4 474 6923

Jason Wong

Senior Markets Strategist
+64 4 924 7652

Nick Smyth

Interest Rates Strategist
+64 4 924 7653

Main Offices

Wellington

Level 4, Spark Central
42-52 Willis Street
Private Bag 39806
Wellington Mail Centre
Lower Hutt 5045
New Zealand
Toll Free: 0800 283 269

Auckland

80 Queen Street
Private Bag 92208
Auckland 1142
New Zealand
Toll Free: 0800 283 269

Christchurch

111 Cashel Street
Christchurch 8011
New Zealand
Toll Free: 0800 854 854

National Australia Bank

Peter Jolly

Global Head of Research
+61 2 9237 1406

Alan Oster

Group Chief Economist
+61 3 8634 2927

Ray Attrill

Head of FX Strategy
+61 2 9237 1848

Skye Masters

Head of Fixed Income Research
+61 2 9295 1196

Wellington

Foreign Exchange +800 642 222
Fixed Income/Derivatives +800 283 269

Sydney

Foreign Exchange +61 2 9295 1100
Fixed Income/Derivatives +61 2 9295 1166

London

Foreign Exchange +44 20 7796 3091
Fixed Income/Derivatives +44 20 7796 4761

New York

Foreign Exchange +1 212 916 9631
Fixed Income/Derivatives +1 212 916 9677

Hong Kong

Foreign Exchange +85 2 2526 5891
Fixed Income/Derivatives +85 2 2526 5891

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