

31 July 2018



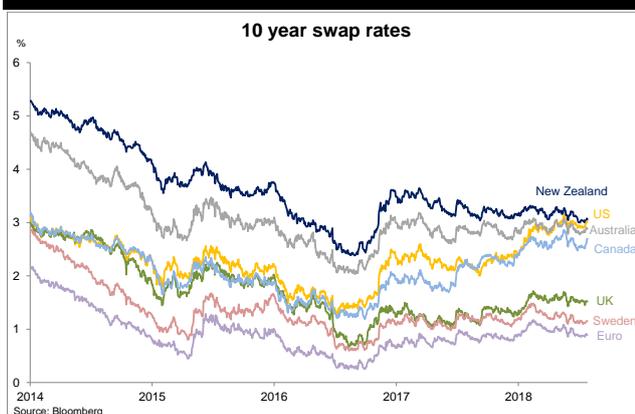
## How Long Will The NZ 10 Year Remain Decoupled From The US?

- **The US 10 year Treasury yield has increased almost 100bps since last September. The NZ 10 year swap rate is basically unchanged over this period.**
- **Such divergence between NZ and US long-end rates is rare but not unprecedented. The primary reason for the divergence in NZ and US 10y rates is clearly the divergence in monetary policy cycles.**
- **The NZ 10y rate can be broken down into the 2 year rate and the 2s10s curve. The 2 year rate is currently anchored by expectations the OCR will be on hold for some time. The 2s10s curve has not steepened despite the increase in the US 10y, which we think is because the US term premium has been depressed and the US curve has flattened significantly.**
- **Seen through this lens, a re-coupling of NZ and US 10 year rates will need to come from either monetary policy convergence (anticipation of OCR hikes or the Fed going on hold) or an increase in US term premia and steepening in the US curve.**
- **We expect the RBNZ to lift the OCR mid-next year and the NZ 10y rate should rise in anticipation of OCR normalisation nearer the time. But until OCR hikes come into clearer view, we can see a scenario where the US term premium remains depressed and the NZ 10 year remains decoupled from the US.**

### Monetary policy divergence; NZ and US 10y divergence

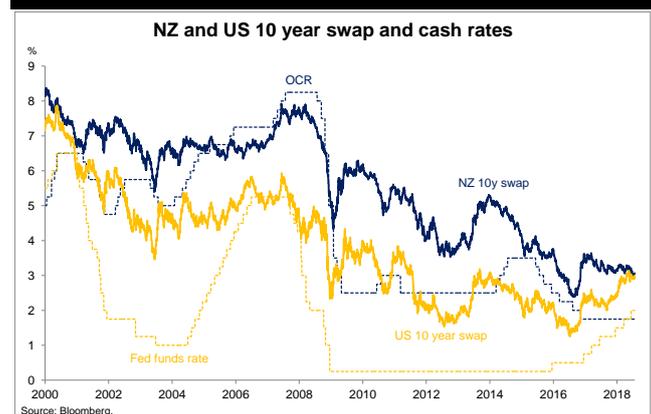
The US 10 year Treasury yield has increased almost 100bps from the local trough reached last September. Over that same period, the NZ 10y swap rate is unchanged – see Chart 1. NZ is not alone; Australian, European and Swedish swap rates have barely increased over that same period.

### NZ 10y swap has moved sideways the past 12m



The obvious explanation for the divergence in NZ and US long-end rates is the divergence in monetary policy cycles. The Fed has raised the Fed funds rate from 0.25% in late 2015 to 2% now, over which time the RBNZ has cut the OCR from 2.75% to 1.75%. This divergence will obviously lead to a different path for NZ and US short-to-intermediate rates (as has been the case). But historically, the NZ 10y has tended to follow the US 10y almost irrespective of the NZ monetary policy cycle – something that hasn't happened this time around. The last comparable period of divergence happened in 2007/08, when the RBNZ kept the OCR at 8.25% while the Fed cut from 5.25% to 2%.

### NZ 10y has historically been highly correlated with US 10y

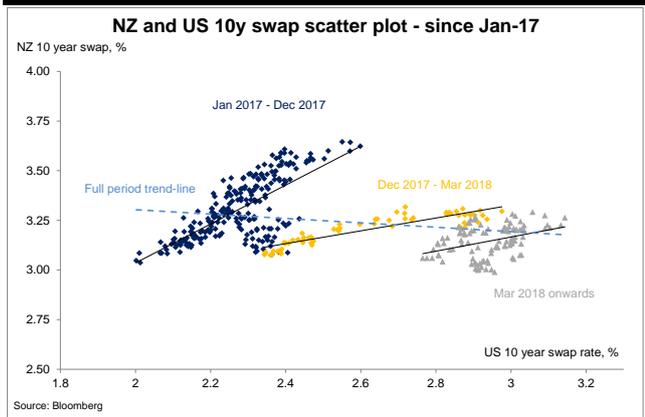


In the past, NZ longer-term rate expectations (i.e. 5y5y swap) have tended to co-move with the US, even when monetary policy was not in sync. But so far this year, the US 5y5y swap is 50bps higher while the NZ 5y5y swap is 8bps lower. The last period when these forward rates diverged to this extent was also 2007/08.

### NZ / US 10y relationship tends to break down over the first year of Fed rate cycles

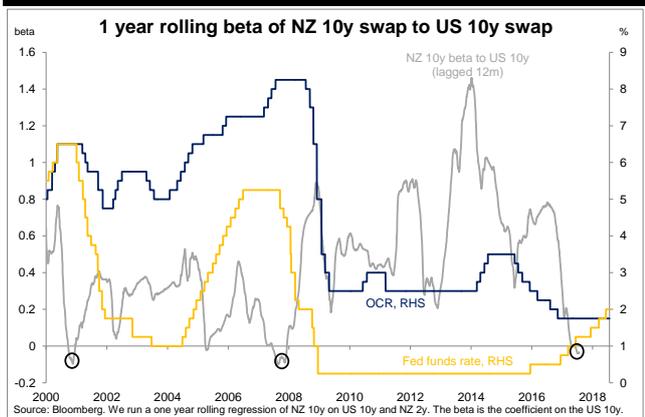
Over short time periods, the NZ and US 10 year swap rates tend to move in the same direction; the NZ 10 year is likely to rise on days when US yields are higher. The chart on the following page shows the respective swap rates have been positively correlated over three separate periods since the start of 2017. Over the entire period however, the relationship between the NZ and US 10 year rates has been slightly negative (as shown by the blue dotted line).

**NZ and US 10y are positively correlated most of the time**



Such a negative relationship between the NZ and US 10y has happened a few times in the past. The chart below shows the beta of the NZ 10y to the US 10y from a rolling one year regression (we include the NZ 2y swap in the regression to control for NZ monetary policy expectations). Over the first year of the 2001 and 2008 Fed rate cutting cycles the beta briefly went below zero. If we take Dec-16 as the start of continuous Fed tightening this cycle, a similar pattern has emerged this time around.

**NZ / US 10y relationship can break at start of Fed cycles**



In those previous instances, the beta between the NZ and US 10 year swap rates moved back into positive territory reasonably quickly. And historically, NZ monetary policy has not remained disconnected from the US for sustained periods, providing a further reason for the NZ and US 10y relationship to recouple.

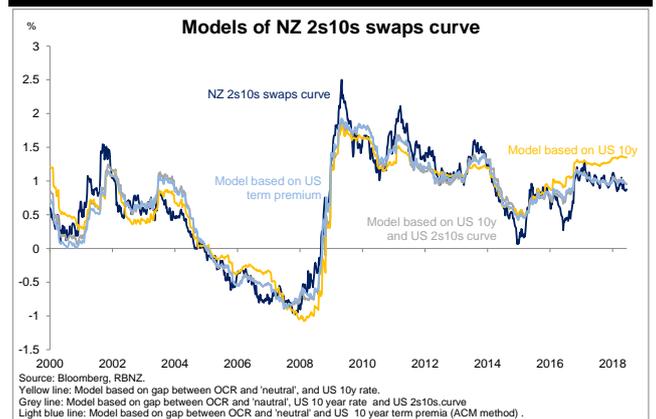
The question is how long it will take for the NZ 10y and US 10y relationship to re-establish itself given the potential for monetary policy to remain divergent for some time yet; we don't forecast the first OCR hike until mid-next year while the Fed's 'dot plot' shows a forecast for two rate hikes over the remainder of this year and three further hikes in 2019, which is more than the market currently prices.

**US term premia one reason why the NZ 10y hasn't followed the US higher**

A different lens through which to view the relationship with the US 10y is to break the NZ 10y rate up into the 2 year swap and the 2s10s swap curve. Assuming the NZ 2 year swap rate remains reasonably anchored (i.e. the market prices the OCR to remain on hold for an extended period), the NZ 10 year rate should be driven primarily by movements in the 2s10s curve.

In previous [research](#), we've found that the 2s10s curve can be modelled with a combination of the OCR-neutral gap (reflecting the stance of monetary policy) and US 10 year rate, as shown by the yellow line below. The relationship has been reasonably reliable over the past 20 years but it has diverged notably over the past 12 months. Based on this historic relationship, the NZ 2s10s curve should be closer to 135bps and implicitly the NZ 10 year swap rate should be around 50bps higher than it is now.

**NZ 2s10s curve better correlated to US term premia**

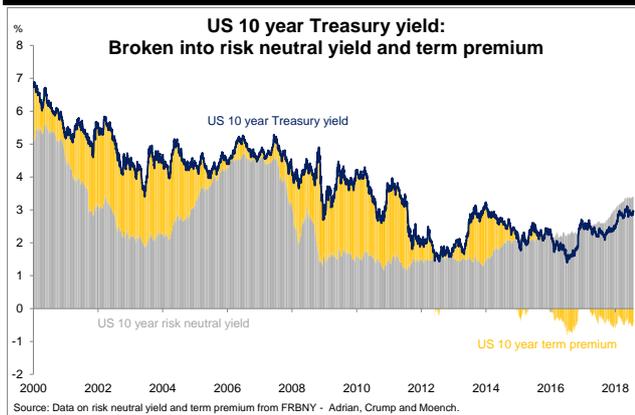


We think the recent divergence between the model estimate and the NZ 2s10s curve can be explained by the depressed level of US term premia and the flattening of the US curve. The light blue line shows a model of NZ 2s10s which incorporates US term premia instead of the US 10 year rate; it shows a much better fit over the past 12 months. Likewise, a model of the NZ curve which incorporates both the US 10 year *and* the US 2s10s curve – shown by the grey line – produces very similar estimates.<sup>1</sup>

The implication is that the NZ 10 year rate has decoupled from the US 10 year because (a) monetary policy has diverged, so the NZ front-end has been anchored and (b) the US 10 year has been driven by the rate expectations component (i.e. the risk neutral yield) rather than the term premium this cycle. Of the 90bp increase in the 10 year Treasury yield since last September, 83bps has been due to higher Fed rate expectations and 7bps from the term premium. This is consistent with IMF [research](#) that found it

<sup>1</sup> Historically, the US 2s10s curve and the FRBNY's measure of the 10 year term premium have been correlated, which explains the similar model estimates from the light blue and grey lines.

## US 10y yield rise driven by rate expectations component



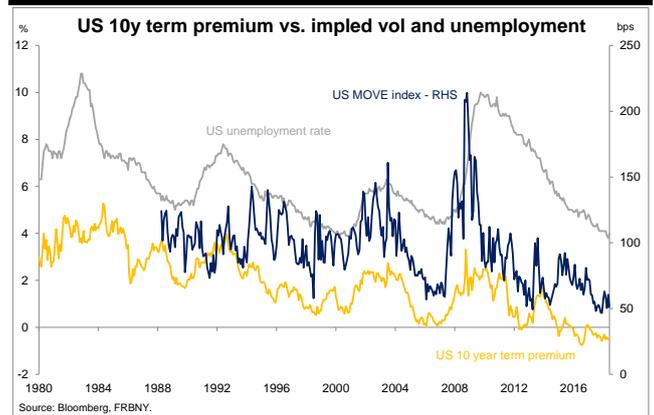
was the term premium component of US 10 rate moves that has historically had the strongest transmission to Advanced Economy bond markets, including NZ.

**What if the US term premium remains depressed?**

We've been of the view that the risks to the US term premium were skewed to the upside, given both the starting point (near record negative levels) and the Fed's balance sheet reduction. But it is coming up to a year since the Fed started reducing its balance sheet and there has been hardly any discernible impact on the term premium, at least on the NY Fed's commonly cited measure.

Some of the cyclical drivers – i.e. the low unemployment rate (indicative of subdued macroeconomic volatility) and low implied vol – are probably still weighing on the term premium. Additionally, in an environment where inflation expectations are well anchored and the Fed has room to cut rates, US Treasuries provide portfolio insurance against recessionary risk (given the likely negative correlation with other risk assets).

## US term premium correlated to unemployment rate and vol



Yes, the Fed balance sheet reduction is only now getting up to its maximum pace, so the impact on US term premia could be yet to emerge. And a faster increase in US and global inflation which impacts inflation expectations should push up on the term premium. A change to the BoJ's Yield Curve Control policy framework that generated a significant rise in Japanese yields could be another trigger for higher global term premia.

But there is a scenario where the US term premium remains depressed and the US curve continues to flatten through this Fed tightening cycle. The implication would be that the NZ 2s10s curve remains reasonably range-bound and the NZ 10y swap de-coupled from the US 10 year rate. In this case, the NZ 10y swap rate would move higher when the market starts to contemplate near-term OCR rate rises and the short-end of the NZ curve moves higher. That still seems a more likely story for 2019 than this year.

In summary, we think the decoupling between the NZ and US 10 year rates can persist for as long as monetary policy diverges and US term premia remains suppressed.

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