# The Long View on Short Rates

Since the 2008 financial crisis, the market has suggested a rapid rise in short-term rates to a higher equilibrium level. And while that future equilibrium yield has fluctuated between 4-5%, it is currently at the low end of the range. Will the market's expectations about future interest rates continue to bounce around or is this a signal about lower interest rates and perhaps economic growth in the long run?

Of all the graphs that flash across investors' screens, the yield curve of interest rates is perhaps the most recognizable. Less popular but equally informative is the yield curve's first cousin – the forward rate curve – which is often used as a starting point for making projections of interest rates into future periods. The forward rate curve is derived directly from the yield curve. For example, by observing today's one-year and two-year rates we can infer the forward rate at which the market is willing to borrow and lend next year, revealing the baseline for how future interest rates are projected to change over time. While one should be cautious in interpreting forward rates as direct predictions of future rates, the exercise can be quite thought provoking.<sup>1</sup>

In the charts that follow, we let the data lead the conversation about how the market's projection of changing short-term rates has evolved since the financial crisis by presenting the forward rate curve at various points in time. We note some interesting developments and perhaps some bigger picture implications worth considering.

**Exhibit I – Unfulfilled expectations for rising rates** One-year US T-Bill yield, %

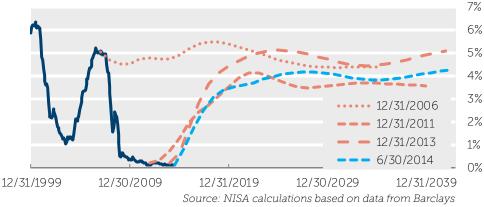


Exhibit II – Rates sank and have stayed there



• The solid blue line reflects historical 1-year rates, while the dashed lines reflect the break-even path of future 1-year rates (the forward rate curve) at different dates over the last few years.

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- For example, the line labeled 12/31/2013 shows that on that date, the 1-year rate was projected to rise from 0.5% to a plateau after ten years of around 5%.
- The following exhibits focus on components of this chart.
- Short rates have been well below 1% since the onset of the financial crisis and have averaged only 0.14% for the last three years.
- Clearly they have little room to move, except up.

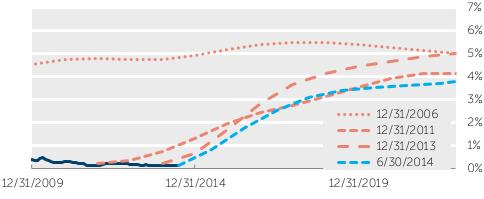
<sup>1</sup>We recognize that the presence of term and other premiums result in interest rate expectations that will differ from the forward rates implied by the forward curve. However, the points we seek to make in this paper regarding the evolution of expectations would seem reasonably insensitive to these potential complications. Therefore, for ease of exposition, we will refer to the forward rates as implied or expected future short rates. See our paper titled Break-Even Yield Curve for a more thorough explanation of how to interpret forward rates.

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#### Exhibit III – Waiting for takeoff

One-year US T-Bill yield, %



Source: NISA calculations based on data from Barclays



One-year US T-Bill yield, %



- The market, as indicated by forward yields, has consistently overestimated the start of Fed policy normalization and the associated rise in interest rates (or has priced in large term premiums).
- Once forward rates begin to rise, their slope is largely similar over the last few years.
- Though delayed by various market and economic setbacks, the data suggest the expected pace of normalization has not changed much.
- Over the last several years, the market has suggested a terminal level of short rates between roughly 4% and 5%. Recently, the terminal level of short rates has dropped to the low end of that range.
- Depending on how one projects long-run inflation, this lower nominal interest rate could imply a lower expectation for real interest rates and even long-term economic growth in the US. We see more chatter in the market about the economic implications of lower forward rates than we saw when forward rate projections were similarly low in 2011.

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