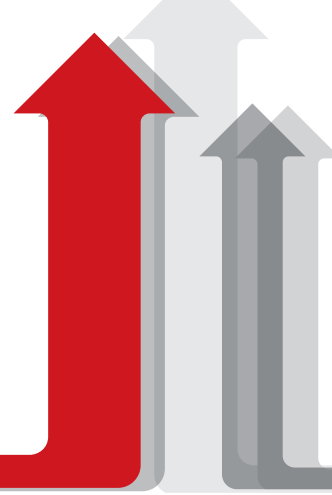


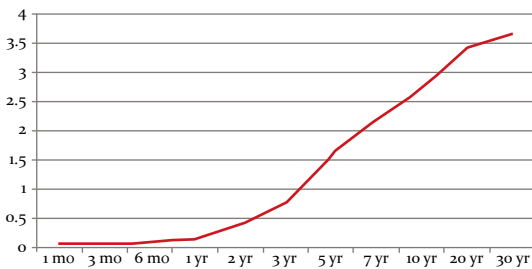
# UPWARD SLOPE

Yield curves are among the most important pieces of market information that treasurers have at their disposal, argues Will Spinney



A yield curve is simply a graphical display of interest rates in the market for different periods of time. While simple in concept, they have enormous value given what they say about an economy, and therefore provide useful information to treasurers. This is an example of a yield curve, based on real data:

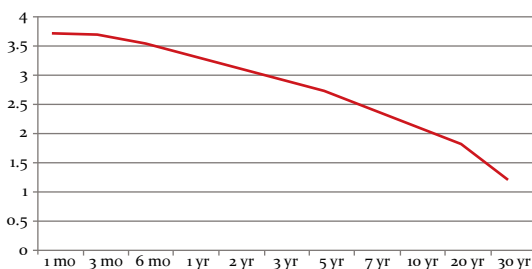
## Example of a yield curve - US treasuries (5 July 2013)



In this example, the yield on US treasuries rises as funds are invested for longer. It is an 'upward-sloping' yield curve and its broad shape is usually considered to be the 'normal' yield curve. This is because it implies that interest rates should rise over time, indicating a healthy economy, as well as offering some reasonable reward to long-term investors against inflation and illiquidity. There are several other 'shapes' that the yield curve can take.

An 'inverse yield curve' looks like this, based on fictitious data:

## Example of an inverse yield curve



This is less common, but indicates that rates are expected to decline over time, suggesting a slowing economy.

There are, of course, many shapes that a curve can take and perhaps the other important one is a 'humped' yield curve, which has been common in the UK.

This predominantly upward-sloping curve has a dip at the far end, probably because of large purchases of long-dated gilts by pension funds. These purchasers, hedging their long-term liabilities, raise gilt prices and push yields down.

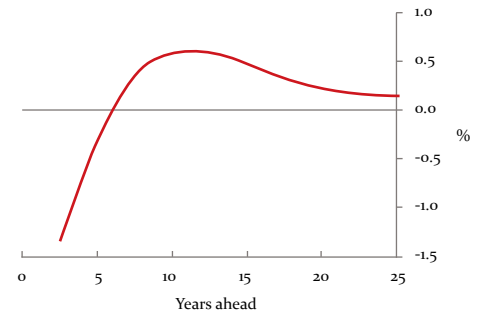
To complicate things, yield curves can be drawn from different instruments, such as Libor rates or swap rates, government securities, nominal instruments to give a nominal curve, or data from inflation-linked instruments to give a real curve. A further complication is that for any instrument there are actually three interest rates for any period:

- ◆ The *par curve* is essentially the rates quoted on market instruments.
- ◆ The *zero coupon curve* is a rate calculated to show the same information from the par curve, but with no coupons. It is the purest form of an interest rate.
- ◆ The *forward curve* includes the rates implied for the future. As an example, by looking at the rates for one year and two years, we can imply where the market expects a specific one-year rate to be in a year's time.

In an upward-sloping yield curve, the forward rate is higher than the zero coupon rate, which in turn is higher than the par rate.

The following is an example of a real forward curve and shows the current negative real interest rates in sterling. It also shows that the market expects the rate to become positive in about five years' time. Implied negative real rates can indicate expectations of future deflation.

## Example of a real forward curve



SOURCE: BANK OF ENGLAND, 4 JULY 2013

There is an enormous amount of information in a yield curve that the treasurer needs to be able to interpret. The information is there because of market transactions – supply and demand has generated the curve. The forward information is the market's best guess for the future and there are two things the treasurer should understand:

- ◆ The market is often wrong and forward curves are not a good indicator of future interest rates (or any other forward rate, in other markets).
- ◆ If you take decisions that have a view that differs from that of the market, you need to ask yourself what you know that the market does not know. The market has a lot of collective wisdom even though it can be wrong.

Information of particular interest to treasurers in the yield curve includes:

- ◆ Economic information, reflecting economic expectations.
- ◆ Curve steepness, which is the difference between short-term rates and longer-term ones.

Interest rate fixing or unfixing decisions have a greater immediate impact on the interest bill when the curve is steep. Many treasurers consider yield curves as one of the most important pieces of market information that they should have available and understand. ♥

**Will Spinney** is associate director of education at the ACT