

The Yield Curve

A picture of time, perceived risk and market sentiment



Measuring Attitudes of the Market...

The adjacent graph shows three basic states of the yield curve. "ST" denotes short-term interest rates, and "LT" denotes long-term rates. The slope is the spread between ST and LT rates.

The Fed controls ST rates through monetary policy. LT rates represent the market's prevailing view of economic growth, inflation, interest rate and currency trends, and other factors. Either end may change the curve. But a Fed rate hike or cut usually triggers a slope change. The LT rate end responds accordingly.

A: Positive Slope. The wide gap indicates a risk premium paid to lenders for committing long-term money. Higher economic growth, rising inflation and future ST rate hikes are expected.

B: Flat Slope. The spread is narrowing. Slower growth means reduced inflation and possible lowering of ST rates to combat a recession. LT rates offer little or no risk premium.

C: Negative Slope. Curve inverts as investors predict recession and inevitability of Fed rate cuts.

(1) Research by the Fed and academic institutions has shown a high correlation between changes in the yield curve and subsequent changes in economic output over the next year.

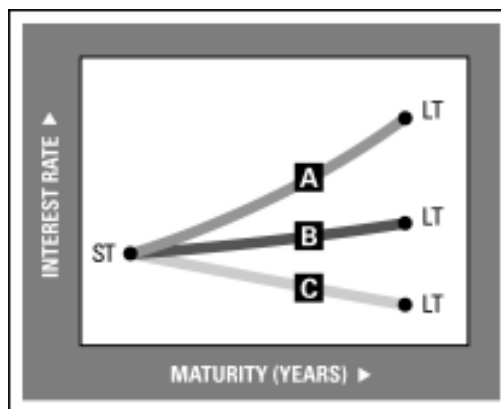
(Sources: "Economics and Finance," Federal Reserve Bank of New York, June 1996; World Economic Outlook, May 1994, p 89.)

A quick study of the yield curve offers a good opportunity to understand several fundamentals at work in the bond markets. Economists and financial reports often refer to this curve but rarely explain its underlying principles.

These basic questions may help clarify the technical talk and bring meaning to the terms:

■ What is the yield curve?

It is the graph which plots the current interest rates available to government bond



investors, based on length of maturity for the instrument. The line connecting the short-term and long-term rates forms the curve or "slope".

■ What are the major plot points?

A Treasury bill with a maturity of one-year or less represents the short-term instrument. The longer-term end usually plots a 30-year Treasury bond. You will see curve variations that include plotted points along the curve, such as two, three, five and ten-year bonds. A normal curve slopes upward; abnormal curves are flat, inverted or peaked at the midpoint. The fundamentals are the same, regardless of the slope.

■ What does the curve say?

The spread between the current short-term and long-term rates represents the risk premium paid for holding a longer-term bond. This premium equals the expected direction of interest rates plus anticipated inflation. The time/reward relationship is best understood from the bondholder's view. Acting as lender, a bond investor must consider how future interest rate movements will affect the bond's market value, and how inflation will erode the purchasing power of the principal.

For instance, a rise in short-term interest rates is of little consequence to a six-month Treasury bill because the principal can soon roll over at a higher rate. However, a long-term bond holder experiences the positive or negative effects of rate changes and inflation, and the market tries to factor these uncertainties into long-term rates.

■ How is the curve interpreted?

Many economists use the curve to assess Federal Reserve policy at the short-term end, and at the long-term end, the debt market's attitude toward the Fed's monetary stance, the economy and future interest rates. The slope is the key to reading the curve—and the greater the rate differential, the steeper the slope. (See adjacent graph for a general description)

■ What changes the slope?

The Federal Reserve essentially controls the short-term end of the slope since it sets borrowing rates. The slope's long-term end moves according to the market's assessment of Fed policy, the economy, inflation, interest rate and currency trends, the cost and return of capital, international money flows, government spending and other long-term economic variables.

Usually (but not always), the Fed sets the stage for a possible slope change by raising or lowering short-term rates. If longer-term rates respond disproportionately, or don't respond at all, the slope steepens or flattens. The net effects of movement at opposite ends of the curve summarizes the attitudes of the Fed and debt market to each other, and to the expected developments in our economy and financial system.

■ Who watches the curve?

Just about anyone interested in the debt and equity markets. The yield curve offers a simple and surprisingly reliable barometer of financial sentiment and potential economic performance.(1) Institutional investors and portfolio managers watch the curve to get strategic insight on major trends at work in the economy.

Individual investors can study it to understand the prevailing market attitude. The curve is also useful to help determine the most appropriate rates and maturities for fixed income investors and for portfolios which have a fixed income component in their asset mix.