An Options Perspective on US Interest Rate Scenarios

Debates in the market place which are characterized by competing scenarios with widely divergent directional outcomes often spillover into heightened concerns about timing and volatility shifts. Since options come with well-defined exposures to timing (theta) and volatility (vega), they are a natural tool for the management of the risks associated with the different and changing probabilities one might attach to the competing scenarios. And, it can help focus the debate to frame the analysis in terms of an options pricing paradigm – direction, timing, and volatility.

But first, a little background on market activity to set the stage. In the last two years, the US Treasury market has evolved through three phases. Phase one began in 2012 and continued through the end of April 2013, with US Treasury 10-Year yields hovering at QE depressed levels around the prevailing rate of inflation and below 2.0%. Phase two was a transition period ignited in May 2013 by former Fed Chair Bernanke’s “Taper Talk” and ending by our accounting with the release of the strong June payrolls data on the 5th of July 2013. Phase three, in which markets have been mired ever since, has been one of range trading. Nevertheless, there has been a vigorous debate about when, if, and why the market might break-out to sharply higher or lower yields.

Competing Scenarios and Directional Implications

Expectations of higher yields in US Treasury bonds often come from a perspective that five years of highly accommodative monetary policy should eventually cause some inflation pressures. The counter argument, and advocated by a majority of FOMC members, however, is that inflation pressures are unlikely to develop as long as there is material slack in the US labor market. And then one needs to consider the low-probability, big impact scenarios that suggest the potential for much lower bond yields. These scenarios include (a) the possibility of heightened geo-political risks, such as in the Ukraine, which could lead to a flight-to-quality environment for US Treasuries, or (b) a worsening of Chinese shadow banking problems leading to a further deceleration of growth and weaker commodities prices, setting off a US Treasury bond rally as deflationary pressure emerges.

Timing Uncertainty

The US inflation perspectives captured in the monetarist versus labor market slack debate seriously complicate timing considerations. If inflation pressures require a tight labor market before they can develop, then the likelihood of a breakout to higher bond yields would seem to depend on an acceleration of US economic growth. The more optimistic one’s base case real GDP scenario, the more likely a rise in the target federal funds rate might come sooner rather than later. Believers in a more pessimistic scenario for real GDP growth would tend to favor selling rates sector put options, letting the decaying time value work for them.
Range Trading or a Break-Out: Volatility Uncertainty

The volatility component of options valuation collides with the observation that since July 2013, the US 10-Year Treasury market has been stuck in a trading range: 2.5% to 3.0%. During this period, range trading has rewarded sellers of volatility (i.e., short put and call options on rates). Some risk analysts, however, see extended periods of range trading (e.g., statistically speaking, high kurtosis) in the face of divergent scenarios with uncertain timing as a leading indicator of the heightened potential for a volatility regime shift. The original Black-Scholes options model assumes a stable volatility regime, and a shift to higher volatility regime would raise the value of options.

Given the Fed’s messaging and dual mandate, any break-out to higher Treasury yields would seem to depend jointly on sustained job growth and some whiff of inflation, allowing for a more vigorous debate within the FOMC of when to raise the federal funds rate once QE has ended. Under the current timetable, QE ends in Q4/2014. Since markets typically respond more to the debate than the actual event (i.e., “sell the rumor, buy the fact” type of activity), the second half of 2014 could see the battle of competing scenarios take on more urgency, with rates sector options pricing responding quickly to any perceived shifts in relative probabilities.