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THE MARKET MATTERS

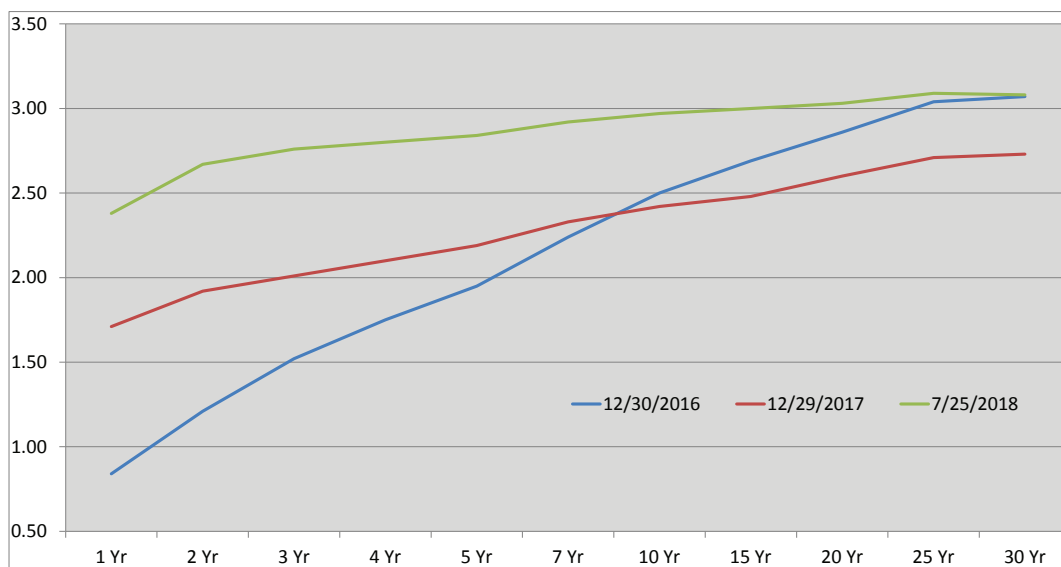
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The Anatomy of Yield

The U.S. Treasury yield curve is the single best barometer of economic health and market sentiment in the world. Its movements provide us with real-time indications of risk-on and risk-off biases. It is the closest thing we have to “tea leaves” for forward growth expectations – domestically and globally. The curve maintains powerful relationships with global markets. Significant correlations with commodities, currencies and foreign fixed income are expressed bilaterally through the U.S. curve. And, U.S. yields can drive behavior in other market alcoves. Just a few months ago, an abrupt rise in U.S. rates was responsible for a -10% correction in U.S. equities. Its importance in global finance cannot be overstated.

The curve is best viewed as a living, breathing organism. Each maturity – from 30 days to 30 years – creates a piece of its molecular make-up. Individual spots along the yield curve offer insights about monetary, fiscal and political policy, and how each affects global growth outlooks. But when we look at a particular spot on the yield curve, what exactly are we looking at? How is a given U.S. interest rate determined? What does it mean that a 10 Year U.S. government-backed Treasury note offers 2.95% yield? Let’s take a look at the five underlying components that comprise a U.S. Treasury (UST) yield – and what each is currently telling us.

**Real Risk-Free Rate R[f]** – This first element assumes there is zero risk in the investment and does not consider inflation (i.e., “real”). Generally the 30- or 90-day T-bill is used as the proxy for R[f]. It reflects the lowest return required by an investor that entices investment over spending. Today’s 30-day T-bill offers 1.88% and is generally viewed as the closest real world example of a riskless investment. This yield has been skewed by the seven rate increases implemented by the Fed. That is the primary reason why short rates appear high relative to their longer-dated counterparts.



Graph 1. The Evolution of the U.S. Yield Curve since December 30, 2016

Source: Bloomberg

**Inflation Expectations** - This portion of the total yield reflects how much the market expects prices to rise over the holding period (i.e., until maturity). Inflation erodes purchasing power; therefore, an investor must be compensated for the expected loss. In a normal market, inflation expectations should increase over longer investment periods (i.e., longer maturities) and support steepness in the

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yield curve. However, the curve is very flat right now. Long-term inflation expectations are weak as a result of slow wage growth, stubborn PCE/CPI prints, and subdued global growth outlooks. This combined with the Fed's rate increases in the front of the curve (which, in this context, are artificial manipulations of the curve's natural state to control economic conditions) have resulted in flattening. Small inflation rates are being built into the curve. The best way to isolate the inflation component is to look at the yield difference between Treasury-inflation protected securities (TIPS) of a given maturity and the corresponding U.S. Treasury yield. Right now, 10-Year UST yields minus 10-Year TIPS yields (2.95% - 0.83%) suggests the inflation premium equates to roughly 212 basis of the UST 10's 295 total basis points of yield (Bloomberg). The market's assumption for annual inflation for the next 10 years is 2.12%.

**Default-Risk Premium** – This piece reflects the creditworthiness of the issuer. What is the perceived likelihood the entity will miss an interest and/or principal payment prior to maturity? U.S. Treasuries generally carry “0” default-risk premium. However, this could change. This is the component that would increase and push U.S. yields higher should U.S. borrowing (i.e., budget deficits) spiral out of control. Our debt-to-GDP ratio is still manageable – but it has been steadily growing since 2001 (Bloomberg). The U.S. government's backing remains the gold standard among global fixed income. But there is always a breaking point. If a higher default-risk premium drives U.S. yields higher – like in Greece, Venezuela, or Italy in the most extreme examples – it will be a clear indication the market believes we are living beyond our means. We will have to face the music one day for our recent borrowing glut. But the fallout is well off into the future, and it still can be addressed by fiscal reforms down the road. That's comforting, but is also why this issue lacks the appropriate sense of urgency.

**Liquidity Premium** – This is virtually zero, too. U.S. Treasuries are the most liquid securities in the world. Therefore, they offer de minimis extra yield to compensate investors for any expected loss as a result of transacting in them. That being said, liquidity premiums can spike in periods of super-high stress where sellers overwhelm bidders of government debt. But the liquidity premium in Treasuries should move back to zero once volatility subsides. For instance, it's probably safe to assume the liquidity premium was well-above average during the onset of the ‘taper tantrum’ in May 2013. But we are in no such environment now. Therefore, the liquidity premium at the moment is virtually nil.

**Term Premium** – Also referred to as maturity premium. This is where things get dicey. Term premium is the incremental yield an investor is paid for moving out the yield curve. An investor typically needs to be compensated more for longer holding periods and to accept higher sensitivity to interest rates (i.e., longer duration). But pinpointing that exact amount per maturity is very difficult. Therefore, term premium is often viewed as the “catch-all” – the remainder left over after the other four components are summed. What we do know: this measure is upside down right now. It appears there is actually a growing term discount as you move out the curve, not a premium. Why? It could be a byproduct of the Fed's massive UST purchasing programs that targeted the longer regions of the curve. Or it could be the foreign demand we still see for the U.S.'s relatively high yields in 5-30 year maturities. This creates a demand vs. supply imbalance that can keep the term premium low (or even negative). This anomaly is at the core of why so many economists continue to say “this time is different” with respect to our flat yield curve and its warning signs. They contend once the Fed is further along in its balance sheet reductions and global rates rise, this will raise the term premium. That would presumably raise longer rates and steepen the curve. We are not convinced. Given the fragility of growth, these forces may not have ample chance to take root. An economic contraction would force the Fed to stop unwinding its balance sheet and would keep foreign rates low. The underlying reasons our curve is so flat may be different. But that does not mean the curve's recessionary warnings should be taken any less seriously. The Fed can afford patience and allow growth to move long rates up organically. There's no reason to flirt with inversion by way of overly tight monetary policy.

Put together, these five components make up a U.S. Treasury bond's yield. The yield on one maturity creates an interesting narrative. String each maturity together into a yield curve and you have volumes of valuable, actionable information. Today, the curve shows signs of global economic stability being threatened by misguided policy – namely, monetary and trade policy. It's not too late to address the issues, but the curve is sending a clear message to politicians and policymakers.

The clock is ticking.