

United States

Who pays the ferryman? On the disappearance of the treasury market risk premium

- The term premium reflects the extra reward investors receive for taking duration risk.
- Several factors, including QE, explain the decline in the term premium in recent years.
- In the US this premium is now very negative, which is a source of concern.

In Greek mythology, Charon the ferryman is paid to transport the deceased across the river Styx. It is tempting to use this as a metaphor for the world of fixed income investing where investors are paid a risk premium to 'cross the river' between different economic regimes, literally, to move from a world of low policy rates/subdued growth to a tight monetary policy/strong growth environment or vice versa. In government bond markets, this risk premium is called the term premium. It is the extra return that an investor receives for investing in long maturity bonds rather than rolling over very short maturity investments (e.g. 3-month treasury bills). In a world with very liquid instruments and without uncertainty, the cumulative return of the two strategies should be equivalent. However, such a world doesn't exist. There is uncertainty about growth, inflation and central banks' reaction to news. In case of shocks, the longer the duration of the bond portfolio, the bigger will be the impact (a capital gain or loss). This explains the existence of a term premium as a reward for duration risk.

In recent years, central bankers have increasingly referred to the term premium in their speeches. Ben Bernanke made an extensive analysis of it in his 2013 speech on long-term interest rates. Peter Praet stated in 2015 that asset purchases by the ECB "have contributed to a compression of term premia" and very recently Janet Yellen emphasized at Jackson Hole that central bank asset purchases can push down long-term interest rates and hence stimulate the economy by reducing the term premium. This premium can indeed be considered a channel for transmission of a monetary policy aimed at influencing interest rates that is separate from the policy rate channel (rate hikes or cuts) and the so-called signalling channel¹. However, as will be explained later, the evolution of the term premium also depends on other factors.

Nominal long-term interest rates are the sum of expected inflation, expected real short-term interest rates and a term premium. Models have been developed to separate the term premium from the other components. The Federal Reserve Bank of New York provides estimates for the US. Chart 1 shows the evolution of the US 10-year treasury yield, its model-based estimate ("fitted yield") and the latter's breakout into a risk-neutral yield and a term premium. This premium fluctuates quite significantly over the business cycle but has been

¹ The signaling channel indicates the future evolution of the policy rate in order to influence expectations about monetary policy. It operates via central bank communication, forward guidance and asset purchases (which are an implicit statement that the policy rate will be kept low for a very long time).

■ 10-year treasury yield, fitted yield, risk neutral yield, term premium since 1962

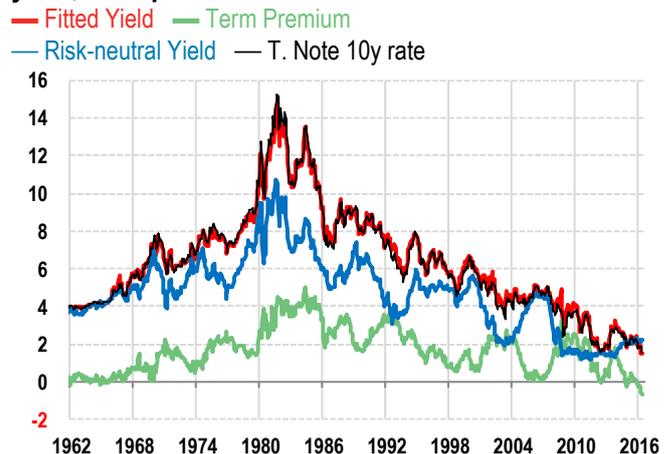


Chart 1

Sources: Federal Reserve, BNP Paribas
trending down since 2009. In recent months, it has become increasingly negative (chart 2). The Federal Reserve Bank of New York also provides estimates of the term premium for different parts of the yield curve, which allows drawing the term structure of the term premium as is shown in chart 3. The evolution in recent years has been spectacular. Normally one would expect a positively sloped curve with longer maturities to command a higher risk premium. This was indeed the case between 2007 and 2010 as well as in 2013 following the debate about the Fed scaling back its QE (taper tantrum). At the end of 2014 and 2015, the curve was flat and close to zero whereas at the end of July this year, the curve was flat and negative for all maturities.²

■ 10-year treasury yield and term premium since 2009 and 2010

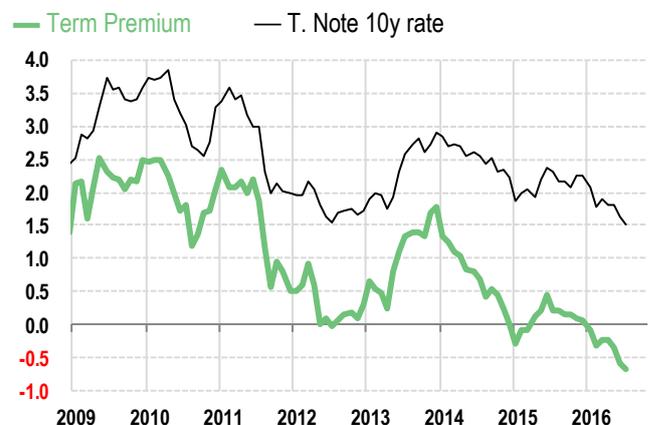


Chart 2

Sources: Federal Reserve, BNP Paribas
² <http://libertystreeteconomics.newyorkfed.org/2014/05/treasury-term-premia-1961-present.html#.V9AGmJf1zk>



Before going into the issues this may eventually create, it is important to discuss factors underpinning the dynamics of the term premium. According to Ben Bernanke,³ the term premium's downward trend reflects a reduction in the volatility of treasury yields because short-term interest rates are close to zero and, at the time of his speech, were expected to stay there for quite some time. Another factor is the negative correlation between bond prices and stock prices: when bad news drives down stock prices, bond prices tend to rise (bond yields to drop) because the bad news weighs on the growth and inflation outlook. Investors who are exposed to both asset classes benefit from a diversification effect that reduces the volatility of their portfolio's overall return. This implies that investors are happy to accept a lower yield on bonds, which is reflected in a lower term premium, because the negative correlation with equities makes bonds valuable as a hedge. Other factors influencing the term premium are safe haven demand for bonds in times of turmoil, demand from international reserve managers of countries with structural current account surpluses⁴ and sustained demand for safe assets because of high levels of uncertainty and/or regulation⁵. In addition, quantitative easing has also played a role whereby, as mentioned above, the compression of the term premium was an explicit objective of this policy.

Why is a very low or even negative term premium a concern? An intuitive answer would be that risk needs to be rewarded, so when the premium is negative, one actually pays to take risk. This may cause a mispricing of riskier asset classes (equities, corporate bonds, emerging debt, real estate) on the back of the strong demand of yield hungry investors, which can squeeze their respective risk premia. The existence of a low or even negative premium can be rationalized by a host of factors, as explained above, but it is difficult to see this as a permanent situation: at some point the outlook for short-term rates will change, leading to increased volatility⁶. The equity/bond correlation may also change, inflation expectations may rise causing an increase in expected inflation volatility and central banks may stop their QE programme and eventually strive to reduce the size of their balance sheets. All these factors should be reflected in an increase in the required premium to take duration risk, i.e. in an increase in the term premium. The question is whether this process goes smoothly or not. In the latter case of sudden increases in bond yields on the back of changes in the outlook for inflation, the real policy rate and the term premium, this may have consequences for other financial markets, domestically as well as abroad⁷, and eventually for the real economy. A low or negative term premium then implies the risk of a sudden increase in this premium causing yields to snap back⁸ like a rubber band that had been extended to the extreme.

³ Ben Bernanke, Long term interest rates, March 1, 2013
⁴ Ben Bernanke, The global savings glut and the US current account deficit, March 10, 2005
⁵ Laura Veldkamp, Commentary: Funding Quantitative Easing to Target Inflation, Jackson Hole 2016
⁶ Interestingly, as shown in chart 4, monetary tightening cycles have seen a decline in the term premium. It remains to be seen whether the same would happen when the term premium is negative to start with.
⁷ It is likely that equity markets would decline and corporate bond spreads would widen. The dollar could strengthen. Capital flows to developing economies could slow down.
⁸ However, Charles Evans of the Federal Reserve Bank of Chicago is of the view that everything would go smoothly: "if inflation or term premium risks rose substantially, the alternative funds rate path for funds rate increases that might accompany a tighter-

The term structure of the term premium

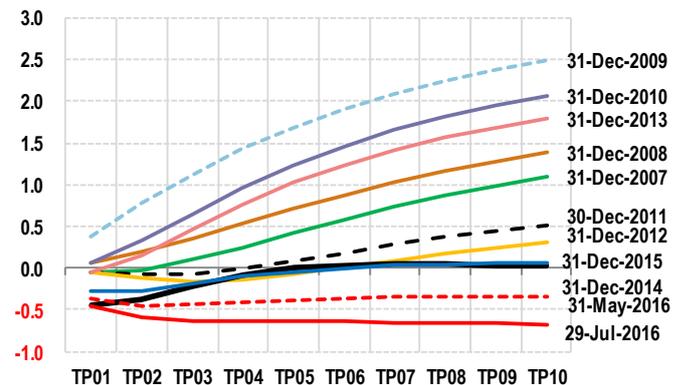


Chart 3 Sources: Federal Reserve, BNP Paribas

Federal funds rate and the term premium

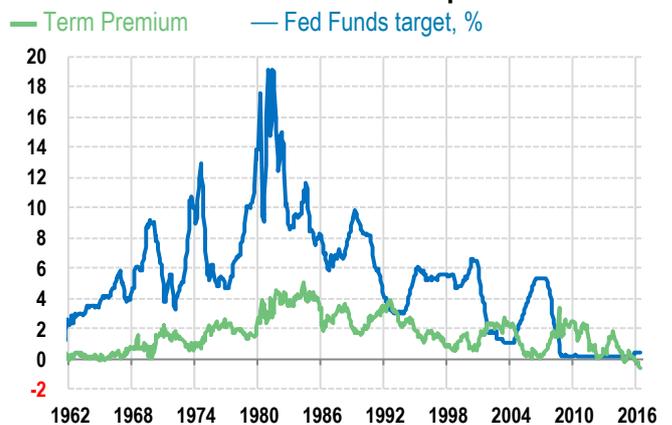


Chart 4 Sources: Federal Reserve, BNP Paribas

Another reason is that a low term premium reduces the ability of monetary policy to stimulate the economy when the next recession hits⁹. One is left with a sobering conclusion: on the one hand, an increase in the term premium would be welcome because it creates leeway for future monetary policy, but on the other, this increase could also be a source of volatility in markets and the real economy.

than-expected policy is still likely to be quite gradual... we could normalize policy much faster than currently envisioned and still keep the pace gradual enough to avoid a disorderly change in financial conditions" (Are Low Monetary Policy Rates the New Normal? August 31, 2016)
⁹ Janet Yellen at Jackson Hole last August was explicitly referring to how in a future recession, asset purchases and forward guidance are expected to push down bond yields by reducing term premiums and expectations about the policy rate.