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● Topic of the week: Discussing the bond term premium

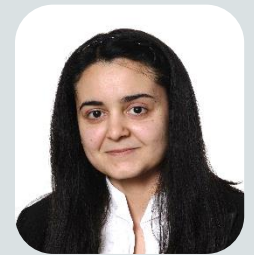
- The Treasury market sell-off appears traceable to a normalization of the term premium from negative levels engineered by years of quantitative easing;
- The term premium is a catch-all concept reflecting risk premiums earned by bond investors;
- The term premium is unobservable and must be estimated. The New York Fed's ACM approach provides a useful framework to estimate the bond term premium;
- The term premium is independent from Fed rate projections and is driven by flows, bond volatility and the bond-equity correlation;



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● Market review: ECB rates may have reached peak

- High volatility on yield curves;
- Italian BTP spread remains at 200bps despite the continuation of PEPP;
- The dollar-yen above 150;
- Earnings growth warnings are strongly sanctioned by investors.



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● Chart of the week



Since Hamas' attack on Israel on October 7, gold prices have risen significantly (+9%) to \$2,000 per ounce. This rise in the price of gold is even more spectacular by converting the price to yen. The price of gold reached an all-time high of 0.3 million yen per ounce. This reflects downward pressure on the Japanese currency against the greenback, linked to the divergence in monetary policy stance between the BOJ and the Fed.

● Figure of the week

1

The Chinese government announced the issuance of 1 trillion (\$140 billion), special bonds for local governments to repay their debt.

Source : Bloomberg



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• **Topic of the week**

Discussing the bond term premium

The sell-off in US Treasuries appears mostly traceable to an increase in the bond term premium, meaning that the rise in yields may be largely unrelated to changes in Fed rate expectations. The term premium is a catch-all concept for a variety of risk premiums earned by bond investors. The term premium is also unobservable and must be estimated. In this piece, we discuss the concept and the possible drivers of the bond term premium.

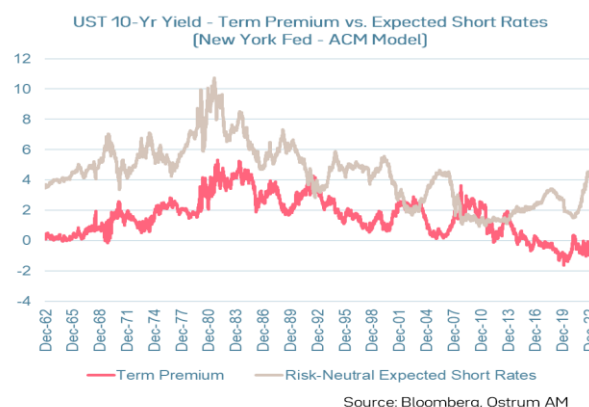
A catch-all concept

In standard financial theory, bond yields on Treasury bonds can be split into two components: expectations of the future path of short-term interest rates (the Fed's policy rate) and a term premium. The term premium is the compensation required by risk-averse investors for bearing 'duration' risk. Long-term bonds are riskier because interest rates may change over the life of the bond. Therefore, long-maturity Treasuries should offer a premium over a naïve roll-over strategy invested in short-dated bills for instance. The term premium is a catch-all concept for excess yield required to compensate for financial risks linked to illiquidity, volatility, inflation or default.

As the term premium is not directly observable¹, it must be inferred from models that may include financial and macroeconomic variables. In the financial literature, there exist many term premium models. New York Fed economists Adrian, Crump, and Moench (ACM thereafter) developed a statistical model to describe the joint evolution of Treasury yields and term premia across time and maturities. Their approach assumes yields can be modelled as a five-factor linear model. The details of the model are out of the scope of this piece, but we will use their estimates to discuss the macroeconomic and policy drivers of the term premium.

Term premium estimates

The ACM model provide estimates for both an expected average short rate and a term premium at maturities from 1 to 10 years. It is easy to infer forward expected average rate and forward term premiums. The forward term premium should represent a steady-state risk premium to be used in fair value models for Treasury bonds for instance. The ACM database uses data from the early sixties. The long-run average of the 10-year term premium is estimated at 154.8 bp using daily data. The long-run median is close at 158.5 bp. The average expected short rate over a 10-year horizon is 4.40% on average since 1962. The latest available estimates (October 16) are respectively 27 bp and 4.52%. Hence, despite its recent rise, the US term premium remains very low by historical standards. Interestingly, the term premium is nearly as volatile as the average of expected short rates looking out ten years.



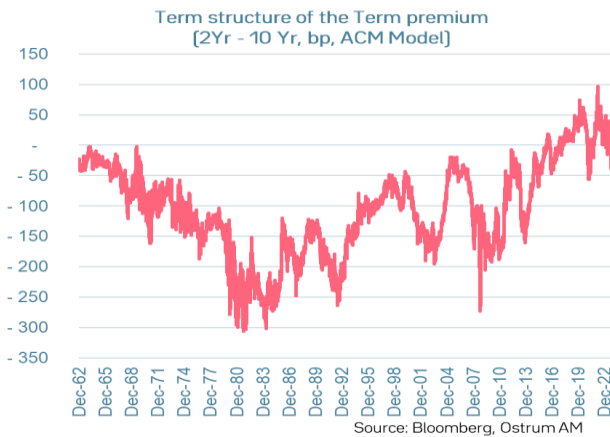
The term premium itself has a term structure. It may be surprising, but the chart below indicates that oftentimes the term premium is larger on 2-Yr maturities than on 10-Yr maturities. The gap is negative most of the time. It must mean that long-term bonds are perceived to be less volatile investments at least by some categories of investors. For instance, pension funds given the structure of their liabilities may find long-term bonds less risky for their investment purposes.

An inverted term structure of the term premium is observed in periods of high inflation when there is a risk of policy overshoot to rein in inflation. A larger term

¹ It is worth mentioning that SOFR OIS swap markets now provide a market-based measure of expected short rates at a defined horizon. Then OIS spreads on Treasury coupon securities may arguably be a

clean estimate of the term premium on Treasury securities. The current 10-Yr swap spread (vs. SPOFR) is -32bp, the term premium would then be 32 bps.

premium on short-term maturities reflects uncertainty about the magnitude of policy firming that will ultimately be required to bring inflation down to target. The 2-10 term premium spread is currently -33 bp. Conversely, in the 2010s, the Fed's forward guidance lowered the term premium on short-term bonds relative to 10-Yr term premium.



The drivers of the term premium

The term premium may vary in keeping with different factors that may relate to the balance of supply and demand for bonds at specific maturities, overall market volatility and bond-equity correlation.

As concerns the balance of flows, increased net supply of Treasuries from August has had a discernible impact on the shape of the US yield curve and its term premium element. Increased net borrowing from the US government is part of the story. In August, the US Treasury announced increases in auction sizes across all maturities in a bid to lengthen the duration of its debt portfolio. Meanwhile, the Fed lets \$ 60 billion Treasuries securities mature each month, which adds to the net cash requirement to balance the market. The total 'duration' sold to the market raised the term premium.

Since the start of the monetary cycle, volatility has been high in US rate markets. This appears to have had an impact on the term premium for the simple reason that a more volatile asset should command a higher expected return. The volatility pickup was very

pronounced in short-term maturities. The exit from zero interest rate policy did raise rate volatility even as the Fed used forward guidance (the 'dot' plot for instance) to keep expectations in check. The pre-QE rate markets were characterized by a hump-shaped term structure of rate volatility that relates to the downward sloping term structure of the term premium. In plain English, this means that there is more uncertainty on the Fed rate path over, say, the next two years than on the average level of rates over the longer run.

Furthermore, the relationship between bonds and equities appears key. In a stable inflation environment, growth dictates the relative performance of bonds and equities. Stronger growth benefits equities whilst bonds outperform in economic downturns. There is a negative correlation regime between bond prices and stock prices. The term premium therefore shrinks as bonds are bid up and equities sell off. In a trending inflation environment, the risk of monetary overkill induces an extra term premium (inflation risk premium) that more than offsets the inflation hedge embedded in stock prices. In this case, higher term premiums raise the discount factor on expected earnings and reduce the fair value of stocks. In this case, a higher term premium is associated with positive bond-equity correlation.

Conclusion

The sell-off in bonds has been explained by a rise in the term premium. Bond yields can be split into two parts: expected short rates and a term premium, an elusive concept aimed at measuring all kinds of premiums earned by bondholders. The term premium is not observable but the concept can be linked to imbalances between bond supply and demand (excess supply should raise the term premium), rate volatility (linked positively to the term premium) and bond-equity correlations.

Axel Botte

- **Market review**

The peak is near for the ECB

Like an air of recession...

A strange pattern has taken place on the financial markets. Treasuries auctions on 5- and 10-year maturities did not have strong demand. The dollar remained firm and US long interest rates stabilized, despite good economic news on the US side. In equity markets, defensive stocks outperformed over the week.

A week of zigzags on sovereign bond markets, reflecting high volatility on yield curves. US long rates have stabilized over the week, like the 10-year interest rate, which exceeded 5% in intraday trading, but seems to be stabilizing around 4.85%. In European sovereign bond markets, yields edged back over the week. The Bund ended the week at around 2.85%. The deteriorating economic situation in the Eurozone and the ECB's dovish pause helped cap the rise in European sovereign bond yields.

The ECB has recorded the deterioration of the euro area economy, which is expected to continue in the coming months, as well as the disinflation process. No announcements were made on the PEPP, QT or minimum reserves. By maintaining the flexibility of PEPP reinvestments until the end of 2024, the BTPs were given a break. Nevertheless, the spread BTP-Bund remains around 200 bps, reflecting concerns about Italy's fiscal sustainability. At the press conference, C.Lagarde said it was premature to discuss rate cuts at this stage... The rate peak is now close for the ECB. Expectations of rate cuts by market expectations were advanced to April 2024, compared to July 2024.

On the foreign exchange market, the dollar remained firm. The euro-dollar parity remained stable around 1.05, despite the divergence in the dynamics of activity between the two zones. The ECB's well underway QT is a factor supporting the single currency.

Conversely, the dollar-yen parity has settled above 150, reflecting the questioning of the sustainability of its YCC policy. Inflation in Tokyo, a proxy for national

inflation, accelerated to 3.3% in October, above the 2% target. The dollar-yuan parity remains on the lower bound authorized by the PBoC around 7.3. Chinese authorities have announced the issuance of 1 trillion yuan (\$140 billion) of special bonds to enable local governments to repay their debt. Senior Party officials, including Xi Jinping, visited the PBoC and the foreign exchange regulator (SAFE).

In European equity markets, defensive stocks outperformed over the week while cyclical stocks were down. Note that earnings growth warnings are strongly sanctioned by investors. Investors also sell companies that are over-leveraged or can no longer generate cash flow.

Oil prices fell slightly over the week reflecting the prospect of a de-escalation of tensions in the Middle East. Gold prices rose 0.5% on the week to \$2000. Since the Hamas attack on Israel on October 7, the correlation between crude and gold prices, is positive.

On the fundamentals, the US Q3 GDP (4.9% on an annualized quarterly basis) reflects the acceleration of US activity during the summer. Consumption contributed to more than half of growth, returning to levels prior to the start of the Fed's monetary tightening. US GDP growth is expected to slow in Q4 related to the real estate sector which is expected to suffer from rising mortgage rates above 8%. But still... PCE accelerated to 0.7% in September. U.S. household spending accelerated more than wage growth (0.3%).

In the euro area, flash S&P Global manufacturing surveys for the month of October indicate a contraction in services-related activity. This is the first time since the Russian invasion of Ukraine, that the activity of services is contracting. The glimmer of hope came from the IFO, which stabilized in October, but remains at low levels.

On the monetary policy side, the Central Bank of Turkey raised its policy rate by 500 bps to 35%, to try to curb its inflationary spiral.

Zouhoure Bousbih

● Main market indicators

G4 Government Bonds	30-Oct-23	1 wk (bp)	1m (bp)	2023 (bp)
EUR Bunds 2y	3.01%	-12	-19	+25
EUR Bunds 10y	2.82%	-7	-4	+23
EUR Bunds 2s10s	-20bp	+5	+15	-1
USD Treasuries 2y	5.05%	-1	-1	+61
USD Treasuries 10y	4.88%	+1	+29	+99
USD Treasuries 2s10s	-16.6bp	+3	+30	+38
GBP Gilt 10y	4.57%	-5	+12	+88
JPY JGB 10y	0.89%	+2	+4	-12
€ Sovereign Spreads (10y)	30-Oct-23	1 wk (bp)	1m (bp)	2023 (bp)
France	61bp	+1	+5	+7
Italy	193bp	-3	-1	-21
Spain	108bp	-2	-2	-1
Inflation Break-evens (10y)	30-Oct-23	1 wk (bp)	1m (bp)	2023 (bp)
EUR 10y Inflation Swap	2.47%	-7	-2	-8
USD 10y Inflation Swap	2.67%	+1	+7	+13
GBP 10y Inflation Swap	3.9%	+0	-5	+0
EUR Credit Indices	30-Oct-23	1 wk (bp)	1m (bp)	2023 (bp)
EUR Corporate Credit OAS	163bp	-2	+10	-4
EUR Agencies OAS	78bp	-2	+4	-1
EUR Securitized - Covered OAS	85bp	-4	+2	+1
EUR Pan-European High Yield OAS	494bp	+0	+49	-18
EUR/USD CDS Indices 5y	30-Oct-23	1 wk (bp)	1m (bp)	2023 (bp)
iTraxx IG	88bp	-1	+6	-3
iTraxx Crossover	461bp	-3	+23	-13
CDX IG	81bp	+3	+6	-1
CDX High Yield	528bp	+16	+36	+44
Emerging Markets	30-Oct-23	1 wk (bp)	1m (bp)	2023 (bp)
JPM EMBI Global Div. Spread	447bp	-7	+23	-5
Currencies	30-Oct-23	1 wk (%)	1m (%)	2023 (%)
EUR/USD	\$1.058	-0.750	0.915	-1.1
GBP/USD	\$1.213	-0.850	0.182	0.4
USD/JPY	JPY 150	0.040	0.134	-12.4
Commodity Futures	30-Oct-23	-1wk (\$)	-1m (\$)	2023 (%)
Crude Brent	\$89.2	-\$0.7	-\$3.1	9.2
Gold	\$1 996.6	\$22.1	\$165.0	9.5
Equity Market Indices	30-Oct-23	-1wk (%)	-1m (%)	2023 (%)
S&P 500	4 117	-2.53	-3.98	7.2
EuroStoxx 50	4 038	-0.12	-3.30	6.4
CAC 40	6 833	-0.26	-4.23	5.5
Nikkei 225	30 697	-0.98	-3.64	17.6
Shanghai Composite	3 022	2.80	-2.86	-2.2
VIX - Implied Volatility Index	20.81	2.16	18.78	-4.0

Source: Bloomberg, Ostrum AM

Additional notes

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