EUR swap spreads are rich by our fair value model

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- Swap spreads have been very volatile in February. Expectations of ECB rate hikes have gained momentum, prompting investors to hedge their interest rate risk more actively, while healthy demand for collateral has slowed down the rise in Bund yields.
- The rolling correlation between swap spreads and Bund yields has been consistently negative over time. The recent widening of swap spreads that occurred alongside rising yields has been driven more by flows than by fundamentals.
- Our model indicates that the fair value for the 10Y EUR swap spread is 35bp. Based on our expectations for the key drivers of the model, we expect the fair value to decline to around 30bp later this year. By this metric, the 10Y swap spread is some 25bp too expensive.

Swap spreads have widened sharply recently

Swap spreads have been very volatile in February: the yield spread between 10Y swaps and the 10Y Bund yield moved from 45bp at the beginning of the month to 60bp in mid-February, its highest level since late 2018.

While the outlook for lower ECB purchases should have led to tighter swap spreads, the ECB's more hawkish rhetoric on rates has likely prompted investors to reduce their duration risk. This has pushed up swap rates while Bund yields have been slowed down by strong demand for collateral in the repo market and by ECB purchases. In January, net supply of German government bonds after QE was around EUR -17bn. Rising geopolitical uncertainty has provided additional tailwind.

In this note, we look in detail at the recent developments in EUR swap spreads and compare current levels with our fair-value model. 10Y swap spreads are wider than our fair-value estimate. Furthermore, using our expectations for the main drivers of the model, we project that the fair value should ease moderately in the coming quarters. Hence, we expect that the recent richening will fade over time. The adjustment may require time to materialize as investors are likely to wait for lower yield volatility and for more clarity on the Russia-Ukraine crisis before taking entering swap spread tightening trades again.

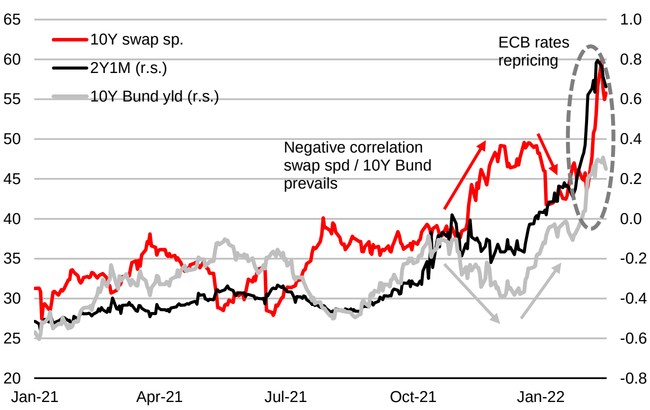
Risks of further swap spread widening may come from a further escalation of geopolitical tensions, pronounced spread volatility caused by excessive ECB tightening or if inflation remains elevated, causing investors to price a higher peak for the depo rate than the 0.70% currently priced in. This could further interest rates hedging and more swap paying.

The recent move in context

As a first step, we put the recent swap spread widening into context. As Chart 1 shows, the correlation between swap spreads and Bund yields was negative for most of 2021. More recently, swap spreads blew out when expectations of ECB rate hikes gained momentum. In this environment, investors increasingly wanted to stay short duration and ALM desks started to hedge their interest rate risk more actively by paying swaps. At the same time, demand for collateral remained healthy as investors needed to make up for margins with clearing houses and with the ECB. This contributed to slowing down the rise in Bund yields, leading to a widening in swap spreads.

The move was probably amplified by investors being caught wrong footed. Given that the ECB began to prepare investors to a reduction of QE in October, indicating that PEPP would end in 1Q22, investors probably started to build up positions that would benefit from tighter swap spreads late last year and had to close these trades.

CHART 1: SWAP SPREADS BLEW OUT ON ECB RE-PRICING



Source: Bloomberg, UniCredit Research

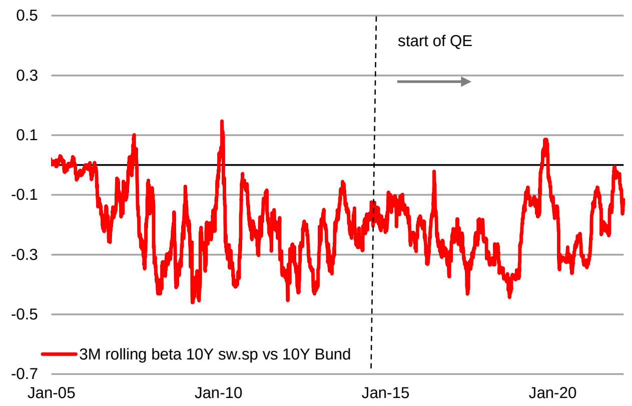
What happens to swap spreads during bearish bond markets?

The mood has become more bearish for bonds since late 2021, as major central banks have progressively turned hawkish. The 10Y Bund yield has risen by around 70bp from mid-December to mid-February, the largest rise since the sell-off that occurred in May 2015. OIS forwards have risen 70bp from mid-January to mid-February with the 10Y EUR swap spread widening by around 15bp.

This widening is somewhat counterintuitive: long-dated yields rise to reflect an improved economic outlook, a situation that calls for less, not more credit risk compensation. The widening is even more strange given the ECB is also reining in QE, possibly announcing a steeper decline in net purchases at its upcoming meeting in March compared to what it announced in December. This should reduce scarcity and lead to tighter swap spreads.

Indeed, the three-month rolling beta of the 10Y swap spread versus the 10Y Bund yield shows that the relationship has been consistently negative over time. In this respect, the recent widening in swap spreads can be seen as more flow-driven than “fundamentally”-driven. Alternatively, investors are attaching increasing probability to a stagflation scenario, which would be bad for credit. We do not see such as scenario as very likely.

CHART 2: SWAP SPREADS SHOULD TIGTHEN WHEN BUND YIELDS RISE



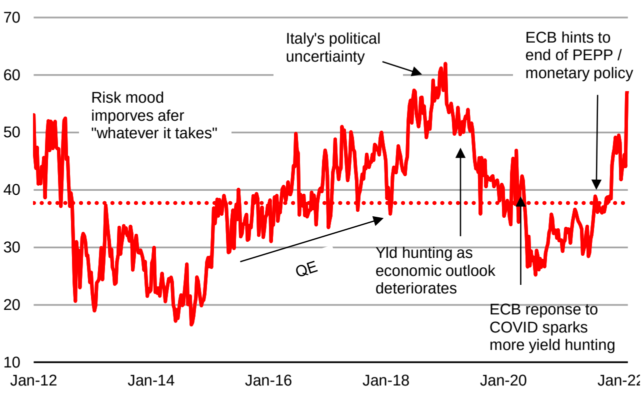
Source: Bloomberg, UniCredit Research

Fair value model for EUR swap spreads

To evaluate the current swap spread level, we turn to our fair value model for the 10Y EUR swap spread, which is based on macroeconomic and financial variables.

Over the last ten years, the 10Y swap spread has traded between 20bp and 60bp, averaging around 40bp, responding to changes in risk appetite as well as monetary policy measures.

CHART 3: MAIN DRIVERS OF 10Y SWAP SPREADS



Red dotted line is the average of last ten years

Source: Bloomberg, UniCredit Research

Economic theory suggests that the most relevant drivers should be the following:

Supply of German govies (-): swap spreads are a measure of the relative price between government bonds and swaps and hence should be affected by supply. The higher the supply of Bunds, the higher their yield should be relative to swaps. The expected sign of the relationship is therefore negative. We use the German deficit as a percentage of GDP as a proxy for supply, interpolating yearly data to obtain a monthly series. If used alone, this variable accounts for 25% of changes in the 10Y swap spread since January 1999.

QE (+): Net QE purchases have led to scarcity of German public securities and should have been an important driver of Bund-swap spreads. We use the share of German public securities held by the ECB as a measure of the intensity of QE. The expected sign of the relation is therefore positive, although one should consider that, as second round effect, Bund yield compression can then lead to yield hunting and hence tighter swap spreads. If used alone, this variable accounts for slightly less than 10% of changes in the 10Y swap spread since January 1999.

Risk aversion (+): Given that German government bonds are considered the safe asset for the euro area, investors prefer to hold Bunds over swaps during times of rising uncertainty or financial market volatility. The expected sign of this variable is therefore positive. We measure risk aversion by calculating the first principal component of a set of variables that are related to risk aversion (VIX, Vstoxx, ECB stress indicator, JPY and CHF). If used alone, this variable accounts for slightly less than 10% of changes in the 10Y swap spread since January 1999.

Curve slope (-): A steep curve should signal better growth prospects and lead to tighter yield spreads between swaps and Bunds as the need for credit risk compensation is less compelling when the economic outlook is improving and as issuers are more likely to swap new issues into floating. The expected sign of the relationship is therefore negative. If used alone, this variable accounts for slightly less than 15% of changes in the 10Y swap spread since January 1999.

Spread between Bubills and Euribor (-): This represents the funding of a position in sovereign bonds relative to swaps and should therefore affect their yield spread. When there is strong demand for sovereign bonds to be used as collateral, repo rates stay low relative to the Euribor (we use Bubill rates as a proxy for repo rates). Tight repo market conditions can arise, for example, when investors have a preference for short duration. Since we express this spread as bills-Euribor, the expected sign of the relation is negative (when bills are expensive relative to Euribor, Bunds are expensive relative to swaps). If used alone, this variable accounts for slightly less than 25% of changes in the 10Y swap spread since January 1999.

We use all five variables to estimate a linear model for the 10Y EUR swap spread, using monthly data since 1999. The following table shows the coefficient estimates:

TABLE 1: FAIR VALUE MODEL FOR 10Y SWAP SPREAD

Variable	Coeff. estimate	Std error	Significance
C	38.8	1.47	***
Deficit	-2.6	0.36	***
QE %	0.31	0.06	***
Risk aversion	3.45	0.49	***
Slope of the curve	-0.13	0.02	***
3M Bubill- 3M EUR	-0.08	0.02	***
R2	58.8%		

*** denotes 95% significance level

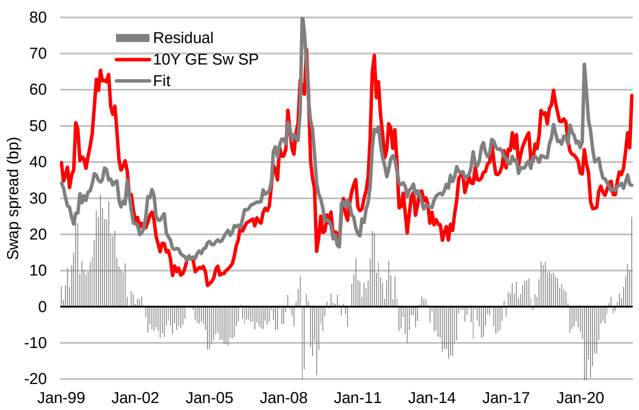
Source: UniCredit Research

All variables are statistically significant and have the right sign. The model R2 is close to 60%, so these variables can explain a good portion of movements in the swap spread. Around 40% of monthly changes are caused by variables that are not included in the model, for example hedging activity related to the issuance of bonds.

Chart 4 shows the model fair value, which is currently close to 35bp. By this metric, the 10Y EUR swap spread is about 25bp too rich.

What can we say about the model's fair value going forward? We expect QE to come to an end this year, so the share of Bunds held by the ECB will most likely start to decline later this year. This should drive down the fair value. Furthermore, we expect the German deficit to increase moderately in 2022 relative to 2021, to 5% of GDP, which also calls for a lower fair value. We assume that risk aversion will normalize at the average of the last year, and the same for the repo-Euribor spread. We assume that the 2/5Y spread will be 30bp. Under these assumptions, the model's fair value drops to around 30bp.

CHART 4: SWAP SPREADS ARE RICH BY OUR MODEL



Source: Bloomberg, UniCredit Research

Conclusions

The 10Y EUR swap spread has been very volatile in February and has widened significantly, to 60bp. The widening of swap spreads in a context of rising Bund yields and an outlook for lower QE purchases is counterintuitive and indicates that flows related to interest rate risk hedging and position adjustment were likely a key driver.

The current level of the 10Y EUR swap spread is still some 25bp wider than our fair-value estimate. Taking into account that we expect the model fair value to drop later this year as QE comes to an end and risk aversion eases, we expect Bund-swap spreads to decline. The adjustment may take time to materialize: investors will need to see lower volatility and have more clarity on the Russia-Ukraine crisis before taking positions in favor of tighter swap spreads again. Also, if our interpretation that part of the swap spread widening was related to stops is correct, investors will need better visibility to enter this trade again.

What are the factors that could lead to even wider swap spreads? A further escalation in geopolitical tensions would lead to further widening in swap spreads. Also, pronounced sovereign spread volatility were the ECB tightening too much or too fast could also lead to further widening of swap spreads. Demand from foreign official investors as Bund yields rise back into positive territory could also create some headwinds.

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