Rates outlook 2023

November 2022

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Contents

Rates outlook for 2023: Belt up, we're going down	3
USD rates: Get ready for big falls in rates	5
EUR rates: Beware of false dawns	9
GBP rates: A slow return to normality	12
The System: Holding up but vulnerable	15
The challenges brought by shrinking central bank balance sheets	19
Money markets: Rates to be pressured higher, finally	22
Swap spreads and supply: Bond issuance pressure	26
Cross currency swaps: USD premium to remain intact	32

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Rates outlook for 2023: Belt up, we're going down

Bond market returns for 2022 have been horrific, right along the credit curve. For 2023, returns will be helped by a higher starting running yield, and subsequent falls in market rates. Bonds will be a good place to be, especially higher on the credit spectrum. Brace for a reduction in liquidity and more available collateral as key themes, too

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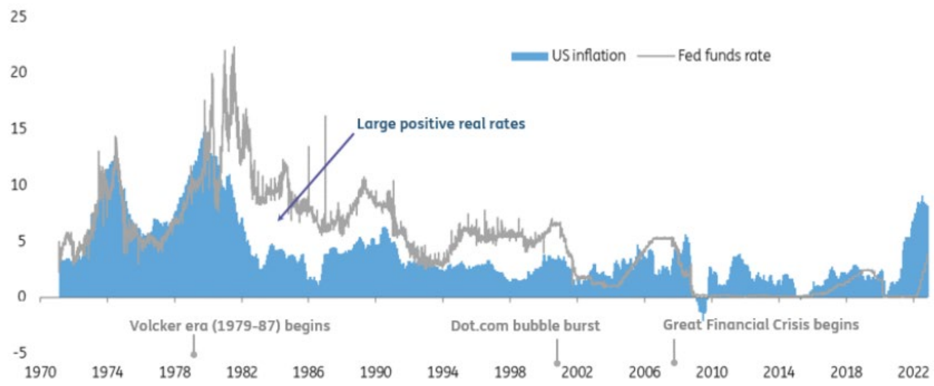
The energy crisis this year saw us drawing parallels to the 1970s and 80s. Dollar strength was a net outcome as the Volcker years generated high real rates to kill inflation. The collapse in tech stocks, meanwhile, has struck a similar chord to the dot com boom and bust of 1999/2000. That period also saw the dollar in vogue. And as we pick through the bones of the 2019/20 pandemic fallout, we're reminded of the great financial crisis in 2007/08, as housing markets suffer intense pressure. So many parallels, but none are perfect. Our story for 2023 draws on these, with a modern twist. As we know, history doesn't repeat itself but it often rhymes.

Inflation and the Fed funds rate back to the 1970s (%)



Source: Macrobond, Fed, ING

Welcome to 2023! Now what ...

So what do we see? The Federal Reserve, the European Central Bank (ECB) and the Bank of England will all undershoot the current market discount for terminal rates, but we should get quite close to the tops that the market expects. For market rates, we need to see those peaks before we can conclusively declare the top. That implies that market rates should remain under upward pressure at least through the turn of the year, and likely into the early part of the first quarter of 2023. After that, it's all about market rates concluding that if indeed we have peaked, the next move must be down. Actual Fed rate cuts in the second half will solidify this move, even if the ECB decides to stand still.

"Overall, market rates in the 10yr are projected to fall by some 100bp in 2023"

Overall, market rates in the 10yr are projected to fall by some 100bp in 2023 (US by a bit more and eurozone by half that), and the US 2yr should fall by more still if we are right and the Fed does cut in the second half. The US curve should steepen by more than the eurozone curve, as the ECB steers clear from actually cutting rates in 2023. The peak in the Fed funds rate should act to ease the US dollar premium, and we'll see that in an easing in the US dollar cross-currency basis. The second half of 2023 should see some meaningful convergence of eurozone to US market rates. All-in spreads, especially those comprising the Japanese yen basis, should narrow significantly.

> *"All-in spreads to dollars, especially those comprising the Japanese yen basis, should narrow significantly"*

The energy crisis in Europe adds to bond supply pressure as economies struggle to deal with recessions while at the same time buffering their economies from higher energy costs. This increase in supply is a driver for a widening in swap spreads, as government bonds at the same time unwind some of the quantitative easing-induced price premiums. Quantitative tightening is also humming in the background but is a much bigger deal in the US relative to the eurozone or the UK. Tighter conditions also contribute to vulnerabilities in the system, a system that is already being stressed by gaps in prices, wider bid/offer spreads and higher bank funding costs. In the US, repo should be pressured higher.

> *"Tighter conditions also contribute to vulnerabilities in the system"*

While a repeat of the great financial crisis is not anticipated, housing market pressure, resulting in system pressure and decent falls in inflation will ultimately allow the Fed to cut in a dot com bust style, by enough to avert a significant US recession. But recession there will be, with a bigger one in Europe, likely in play before we get to 2023. This all gels with room for decent falls in market rates through 2023.

We're not coming off 1970s-style starting points in terms of the level of rates, but we are coming off peaks in market rates that have not been seen since the noughties. The lows won't be as extreme either; we're not heading back down to zero this time. We should stop to the downside with handles of 2% and 3% rather than 0% (or close to) for market rates in the US and eurozone, and with steeper curves to boot.

> *"More supply (especially in Europe) and balance sheet roll-off (especially in the US) should allow curves to steepen out"*

Even if inflation gets tamed in 2023, as we expect it will, we now know that an inflation vulnerability is back. That, plus more supply (especially in Europe) and balance sheet roll-off (especially in the US), should allow curves to steepen out, and actual US rate cuts will push in the same direction.

While the act of cutting rates will signal that central banks have brought inflation under control, prior hikes will leave deep macro pain. And in that environment, market rates will test lower, adding oomph to bond market returns; a silver lining to what will be a tough environment ahead.

This has been a brief synopsis of the larger and more detailed outlook for rates in 2023 available in modular form. We go into detail on the direction for the dollar, eurozone and sterling rates curves, bond supply, swap spreads, cross-currency swaps, money markets, system risks, balance sheet reduction and more. We hope you find it useful.

USD rates: Get ready for big falls in rates

The year ahead will mostly feature falling market rates, as the Fed peaks out and the market anticipates future rate cuts. The curve should dis-invert through the year, and ultimately will steepen out from the front end. The fall in rates will come from the back end first, but should later be dominated by falls in front-end rates in the second half

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At the start of the year, the Fed will still be in hiking mode but that will quickly change

The first quarter will be all about identifying peak levels for rates

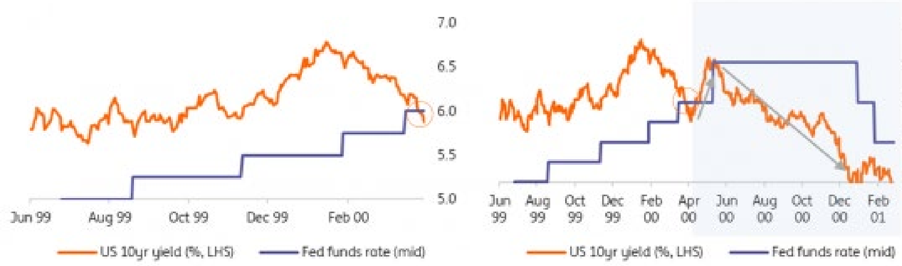
The first quarter of 2023 should be quite different to the following three quarters. As we start the new year, the Federal Reserve will still be in hiking mode. The pace of hikes will have slowed and the peak for the funds rate will be edging closer. But that peak will not be in place at least until we get through the 1 February FOMC meeting. After that meeting, the funds rate ceiling should be at 5%, and that should be it for the hikes.

> *"Market psychology will rapidly morph towards anticipating future easing moves."*

However, we won't know for sure until we get through the 22 March FOMC meeting. A pass here would officially bring the rate-hiking process to an end, and typically once the market senses that the Fed is done, the next job is to start to discount the elevated probability for the next Fed move to be a rate cut. As we progress through the first quarter, the market psychology will rapidly morph towards anticipating future easing moves.

Even if the Fed says with a straight face that interest rate cuts are not being contemplated, history shows that as soon as the Fed hits a peak we're usually less than a half year away from interest rate cuts. The dot com bust provides an example of how market rates can shoot below the funds rate once the peak is in, and for that to be followed by Fed fund rate cuts.

Market rates swiftly move lower once the Fed funds rate has actually peaked (dot com bust example)



Source: Macrobond, Federal Reserve, ING estimates

When the funds rate peaks, the 10yr pre-peaks at 25-50bp below it

History shows that the 10yr yield typically trades some 50-75bp below the funds rate before the Fed reacts and begins to cut rates. The most extreme version of that was during the dot com bust when the 10yr traded some 150bp below the funds rate on the eve of the first cut, and was 100bp below the funds rate a full month before the Fed actually delivered a (50bp) cut, as shown in the chart above.

Moreover, this is starting from a place where the 10yr tends to peak at the same level as the funds rate, with the 10yr typically getting there first (and the 2yr before that). The only material exception to this was during the tightening cycles of the 1970s and early 1980s when the funds rate was pushed to levels considerably above the 10yr yield.

On the downside, the funds rate tends to hit a bottom that is far lower than where the 10yr yield gets to, steepening the curve in the process. That deviation has been in the region of 3% to 4% during the last few rate-cutting cycles. For example, after the great financial crisis, the Fed got down to 12.5bp with the 10yr Treasury yield at 4%. And in 2004, when the Fed bottomed at 1.25% the 10yr yield was in the region of 4.5%.

The second quarter leaves a vacuum for market rates to collapse into

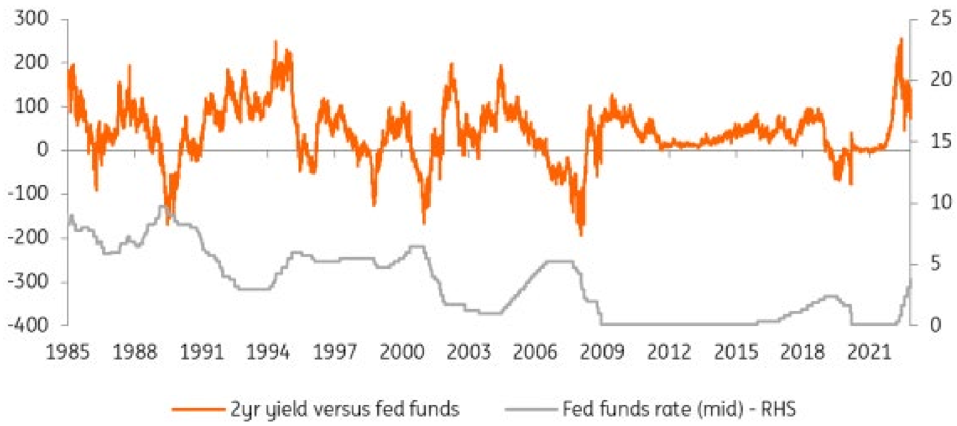
So, what about the cycle ahead of us? We see the effective funds rate peaking at 4.83% (within the 4.75% to 5% range). Given the ongoing shortage of collateral versus liquidity (reflecting past Fed bond buying), the US 10yr Treasury yield could undershoot that peak, we think by some 25bp to 50bp. That suggests a peak in the 4.25% to 4.5% area (rounded). This may well remain a talking point right up to the early part of 1Q 2023.

The Fed then holds at the peak for a few months (three to six perhaps) and then starts to cut by mid-year 2023, to help cushion recessionary forces. We see the Fed getting to a 4% funds rate by the end of 2023, a cumulative 100bp in cuts. And we think they ultimately get down to 2.5% in 2024, giving us an implied effective funds target terminal rate of 2.33%. This is important for mapping out the 10yr yield, where we look at history, and add some modern caveats.

First, we are suggesting that when the Fed peaks, the 10yr yield will be 25-50bp below that peak, reflecting a Fed balance sheet still bloated with bonds. Second, once the Fed does peak, the 10yr should shoot lower, and we are anticipating an initial target of 3.5%, which would be 150bp below the funds rate ceiling. That would happen quite quickly, so much so that we could be there by the second quarter.

Beyond that, trading between 3% to 3.5% with a downside bias would be the call for the second half of 2023. Essentially, we're talking about a structural break back below 4% as being a theme for 2023; and concluding the year much closer to 3%.

The 2yr tends to trade 150bp through the funds rate as the cutting cycle begins



Source: Macrobond, Federal Reserve, ING estimates

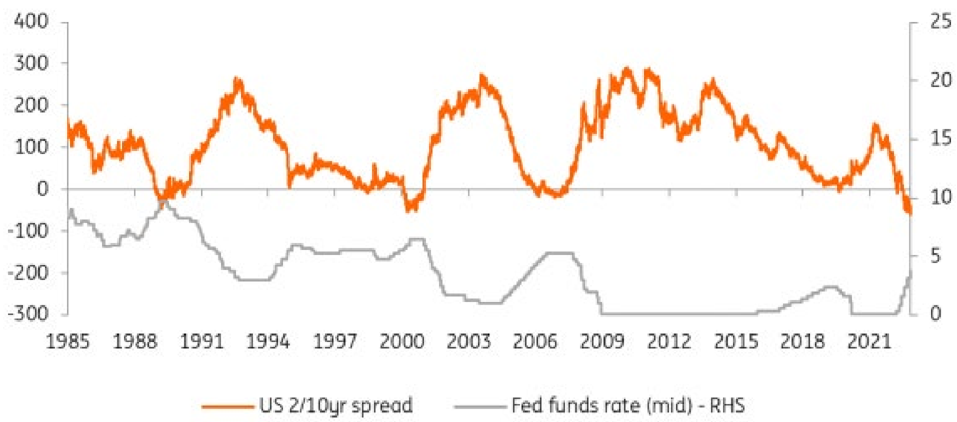
Dis-inversion and curve steepening on the 2/10yr segment ahead

And what about the curve? The dominant theme is dis-inversion, and ultimately curve steepening. The 50bp inversion currently being seen should initially be unwound from the front end. The 2yr yield should move from the 4.5% area when the Fed peaks at 5%, to quickly discount a lower fed funds rate in the coming couple of years.

The 2yr is likely to target an end game in the 2.5% to 3% area, but the dynamics about getting there will be different compared with the 10yr. The initial move lower in rates will come from the 10yr, as the 2yr is more closely tied to the contemporaneous funds rate. So, when the 10yr potentially trends towards 3.5% in the second quarter, the 2yr is likely to be closer to 4%, or just below. So, the 50bp inversion persists longer than many might expect.

But the second quarter into the third quarter is when the curve really dis-inverts and ultimately steepens out, and by the third quarter, the 2yr is heading down to sub 3% while the 10yr remains above 3%. The end game sees the 2yr down at 2.5% while the 10yr settles closer to 3%, marking a 50bp positive difference between the 2yr and the 10yr. This marks a cumulative 100bp swing overall on the 2/10yr segment, from a 50bp inversion to a 50bp positive curve.

The 2/10yr curve typically stretches to over 100bp when the Fed is cutting



Source: Macrobond, Federal Reserve, ING estimates

Watch for a steeper 10/30yr spread, and a richer 5yr to the curve

On the 10/30yr segment, the outcome is more straightforward – we expect to see a gradual one-way re-steepening process. As the 10yr falls to 3.5%, the 30yr should fall by less, settling in the 3.75% area. And should the 10yr head to 3%, the 30yr should not get much below 3.5%. That marks a 100bp curve between the 2yr and the 30yr by 2024, compared with a 40bp inversion currently.

The other big move in the curve will be in its structure. Currently, the 5yr is trading cheap to the curve. Over the course of the first quarter of 2023, the 5yr should richen, targeting a position where it is traded below the interpolated line between the 2yr and the 10yr yield (to trade rich to the curve).

In absolute terms, the 5yr can trade 15bp rich (or 30bp in gross terms) or even deeper versus the 2yr and 10yr interpolation. It should remain there then until the Fed starts to cut, and for most of the rest of 2023 in fact, as the market remains bullish for bonds, and the Fed remains in rate-cutting mode as we slip into 2024.

EUR rates: Beware of false dawns

Recession will weigh on EUR rates in 2023 but Bund yields dipping below 2% is not a normal state of play. Balance sheet reduction at the European Central Bank will bring a new round of tightening even after hikes stop

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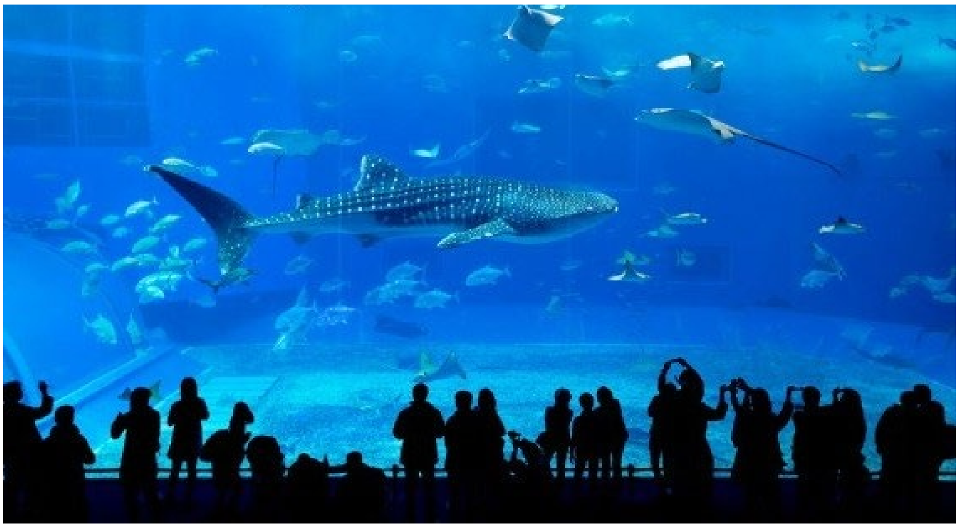


The ECB is cautiously dipping its toe into the quantitative tightening shark tank

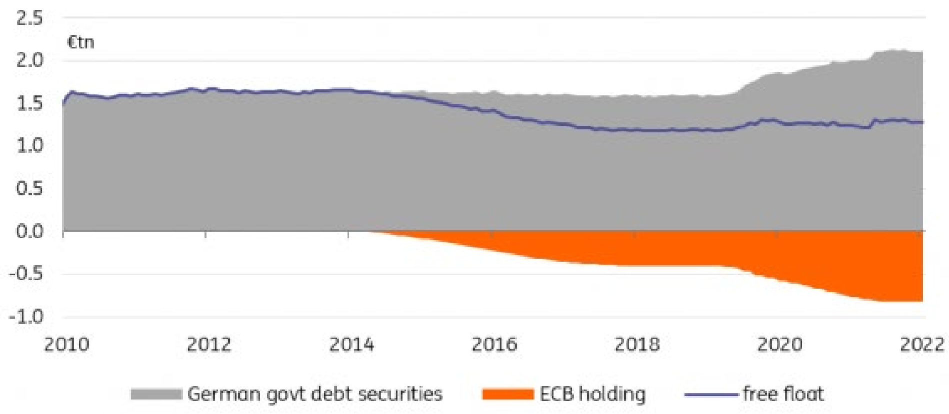
The inflation peak is not certain, and rates are already low

2022 has brought the end of negative interest rate policy (NIRP) and of expanding ECB balance sheet. In 2023, the challenge for markets will be how to deal with contradictory inflation and growth signals. Our economists sit at the more pessimistic end of the growth spectrum in their 2023 forecasts, and there are signs that the ECB is moving in the same direction, albeit slowly. The first order of business in 2023 should be to see tangible signs that inflation is actually on a declining path. Markets have been disappointed in the past.

> *"2% in 10y Bund yields is already low when compared to our (below consensus) call for a 2.25% terminal deposit rate"*

We think this should eventually push EUR rates down further, but one has to be realistic. 2% in 10yr Bund yields is already low when compared to our (below consensus) call for a 2.25% terminal deposit rate. This is all the more true given that financial conditions will tighten further due to a shrinking ECB balance sheet even after the ECB stops its hiking cycle. A dip below 2% should be a temporary one for 10yr Bunds and one we can only justify with significant assistance from declining dollar rates in 2023.

The ECB has reduced the amount of German debt in circulation to record lows



Source: ECB, Refinitiv, ING

Chipping away at the reasons for structurally low rates

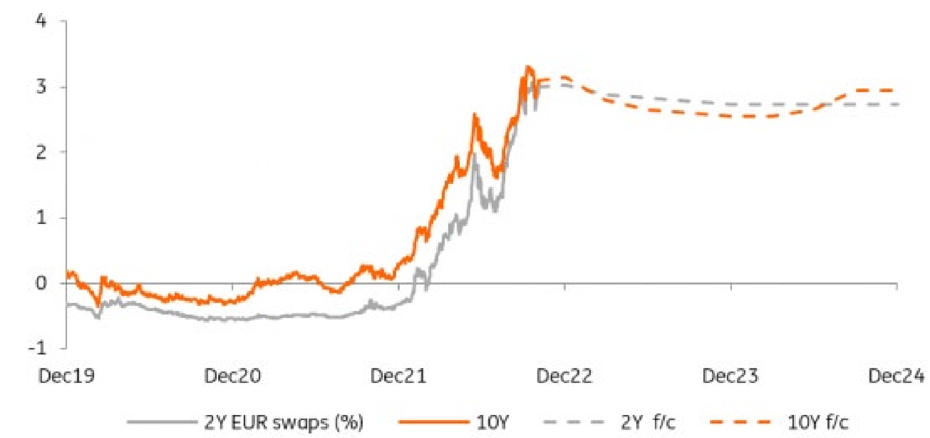
The low EUR rates story has been a structural one since the global financial crisis of 2008. The low growth and perma-crisis environment resulted in ever-lower interest rates, enforced by the ECB's NIRP and ever-growing balance sheet. Another feature of the post-GFC world was a single-minded commitment to fiscal austerity, which contributed greatly to the scarcity of German government bonds. Some, but not all, of these drivers are now going into reverse.

Take austerity, the energy crisis and growing pressure to shield consumers from its effects have tipped the scales in favour of greater issuance. The ECB is also cautiously dipping its toe into the quantitative tightening shark tank. Both processes will be gradual indeed, and fraught with risks, but they are chipping away at the main technical driver for structurally low rates in the eurozone.

> *"We could see 10yr EUR swap rates (vs Euribor) dip towards 2.5%"*

10yr swap rates, which at times this year have been more than 100bp above Bund yields, are less sensitive to these factors but are not entirely insulated from them. Worse still, a new round of upward pressure on rates will come from shrinking excess liquidity and rising Euribor (and eventually Estr) fixings relative to the ECB deposit rate. At a push, we could see 10yr EUR swap rates (vs Euribor) dip towards 2.5% in the course of 2023 but we expect a jump back towards 3% by the end of 2024.

The EUR curve should invert mildly in 2023



Source: Refinitiv, ING

Curve inversion is still ahead of us

Persistent inflation, and so uncertainty about the path of policy rates, should prevent front-end rates from dipping much below their 2022 levels in 2023. This should be mostly true in the first half of 2023. A corollary to our below-consensus call for a 2.25% peak in the ECB deposit rate is that the end of this hiking cycle shouldn't be followed by much easing, unlike what our US colleagues expect. This means that the case for much lower front-end rates is flimsy in our view, and we're expecting 2yr swaps to remain within their late 2022 range in 2023.

"After a shallow inversion of EUR swap 2s10s towards -15bp, we expect the re-steepening process to begin by 2024"

Where the read across from US to European rates is relevant is at the back end. A meaningful drop in Treasury yields will bring 10yr Bund yields through 2% and 10yr EUR swap rates potentially as low as 2.5%. This dynamic will come at a time of worsening recession in Europe but, as the economy recovers, so will the term premia on the curve. After a shallow inversion of EUR swap 2s10s towards -15bp, we expect the re-steepening process to begin by 2024.

GBP rates: A slow return to normality

2023 will be the year the UK yield curve re-steepens. Bank of England hike expectations are still too high and recession fears will bite. Long-dated gilts will continue to trade with a political risk premium but the 10yr will converge to 3% by the end of the year

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2022 was a bruising year for gilts and GBP rates

The long and arduous road to regaining credibility

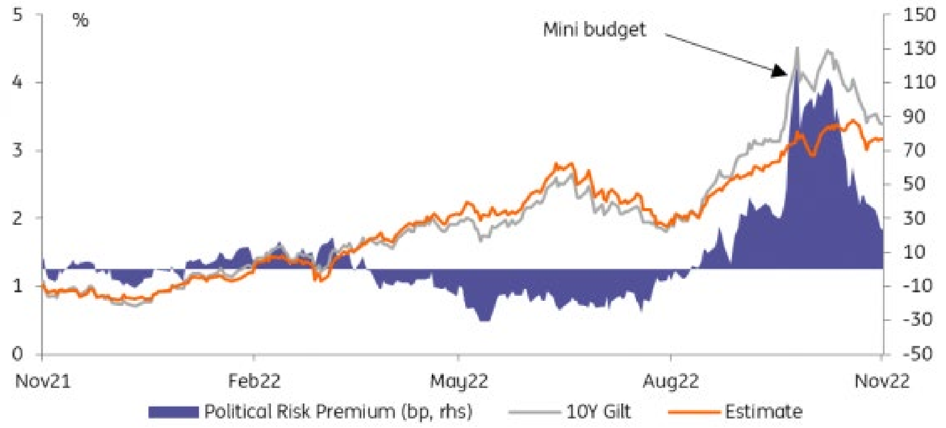
2022 was a bruising year for gilts and GBP rates in general. The bar for a more stable 2023 is not a very high one to clear. Yet, it will take a long time to restore market confidence. UK markets had to deal with a uniquely adverse interplay between fiscal and monetary policy, effectively undoing each other's work. We would love to say that this is a thing of the past and that the two main institutions in charge of the UK's economy, the Treasury and the BoE, are now coordinating better. Sadly, this is far from certain.

> *"Sterling-denominated assets are justified to trade with a greater risk premium"*

In letting the Treasury feel the force of market pressure, the BoE may have won a battle but left the persistent impression that it will only step back into the bond market when it absolutely has to, as it did in September 2022. Barring a more severe crisis of this sort, sterling-denominated assets are justified to trade with a greater risk premium than previously.

Our base case is for the fiscal tightening promised by the incoming government to be delivered at least in part. This, in turn, will ultimately close the gap between hawkish market expectations for monetary policy, in part justified by hopes of intervention to defend the currency, and ours. Markets have challenged the BoE's stance ever since the start of this tightening cycle. Tighter fiscal policy is a potential catalyst for this to happen although we're not holding our breath here. A severe recession could also go some way to convincing market participants that rates aren't heading as high as current pricing suggests.

Gilt yields should decline to 3% in 2023, but will continue to trade with a political risk premium



Source: Refinitiv, ING

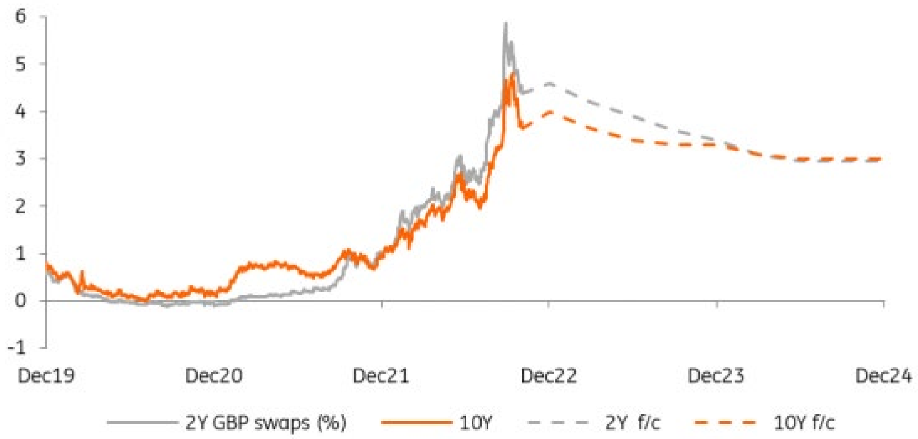
Re-steepening in the cards

Our working assumption for 2023 is that we've seen the peak in market interest rate hike expectations. Markets routinely priced a terminal rate above 5% in late 2022 but we think a more realistic figure is between 3.5%-4%. Even in the case of persistent inflation, this leaves some margin for front-end rate rates to fall further, especially since the end of the BoE's hiking cycle will likely bring expectations of rate cuts, with Bank Rate ending this cycle above what most would describe as the neutral level.

> *"We expect 2Y Sonia swaps to fall below 4% by mid-2023"*

We expect 2Y Sonia swaps to fall below 4% by mid-2023 as cuts come into view but we think longer-dated rates will retain a significant risk premium. This implies that 10Y swap rates will struggle to fall as fast as their shorter equivalent even in the event of a more dovish BoE. Firstly, this is because the Sonia swap curve is already dramatically inverted, and so a re-pricing at the front end would likely re-steepen the curve. Secondly, because the scars of the long-end market meltdown in September/October will take time to heal and we think duration/term premium is here to stay. All this is to say we expect a comparatively smaller drop in 10Y swap rates over the course of 2023. Translating this to 10Y gilt yields, we think 3% is an achievable target by year-end.

2023 will see the GBP swap curve gradually dis-invert



Source: Refinitiv, ING

Market liquidity remains a challenge

Market functioning will remain an issue for sterling-denominated markets for some time. Liquidity indicators in the gilt and swaption markets certainly point to decreased risk-taking ability on the part of participants, also pointing to greater transaction costs. Policy choices may have exacerbated market functioning issues in 2022 but the underlying cause, macroeconomic uncertainty, could persist for a quarter or two in 2023, provided our forecast for a gradual decrease in inflation proves correct.

The System: Holding up but vulnerable

The rapid tightening of monetary policy and significant outlook uncertainty is straining the system and testing the markets' capacity to absorb risks. The UK has shown how sketchy market liquidity can quickly lead to a solvency issue. Central bank ambitions to tighten could be frustrated if confronted with material pressure on the system

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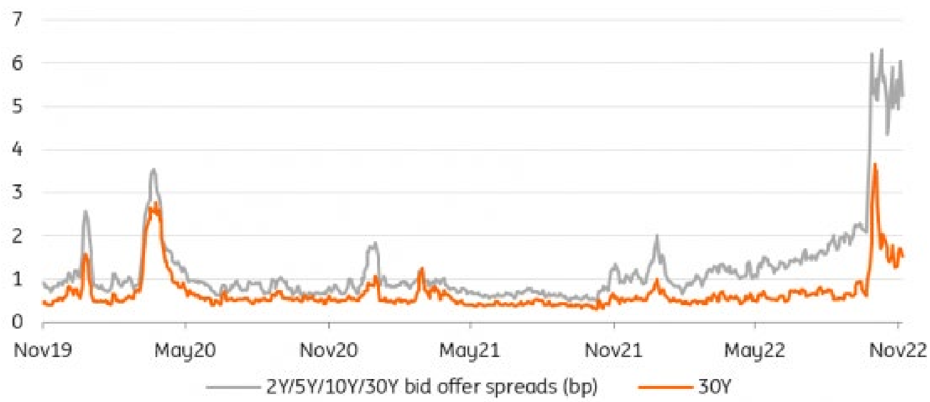
The UK has shown how sketchy market liquidity can quickly lead to a solvency issue

The financial system is vulnerable amid deteriorating market liquidity

As we approach the start of a new year, markets remain in a fragile state. At its foundation is the issue of market liquidity. Many of the common indicators of market liquidity are now at worse levels than they were at the peak of the Covid-19 pandemic. Take bid-offer spreads for government bonds, the go-to safe and supposedly most liquid of assets, which still reside at exceptionally wide levels. High realised and implied market volatility, while also an effect of central banks moving into action and a sign of the uncertainty surrounding the outlook, are straining the market's capacity to absorb risk and lead to higher costs for market making.

Wider gilt bid-offer spreads show that markets are increasingly dysfunctional



Source: Refinitiv, ING

A liquidity problem can quickly morph into a solvency issue. This is what the UK recently experienced when the government's expansionary fiscal plans sent shockwaves through gilt markets. Fears of higher issuance and a more hawkish Bank of England (BoE) reaction sent rates higher, but it was the pension funds' leveraged positions and ensuing margin calls that led to the situation spiralling out of control, eventually forcing the BoE to step in with purchases of long-end gilts, as well as forcing it to revisit fiscal plans.

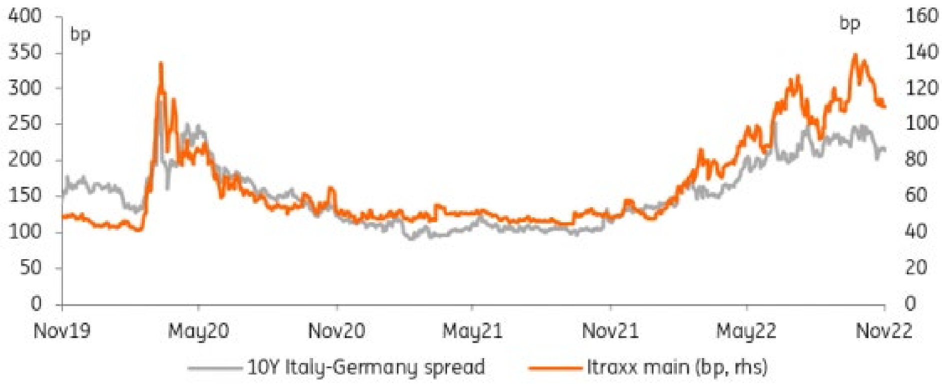
From home grown risks ...

On the back of the UK experience, the fiscal factor has received more attention as a potential trigger of market moves that could eventually put market liquidity to the test. The initial impact on rates can work via the sheer supply and credit channel, but currently also via the anticipated central bank response if the fiscal developments are seen to have a clear inflationary effect.

"A fiscal trigger for sudden moves may look less likely in the euro area and US political setups ..."

Substantial government programmes to support economies in light of surging energy prices have been set up or at least flagged in the euro area. One would think that the political decision process in the euro area – as well as in the US – as an aggregate makes the central bank response channel a trigger for sudden repricing less likely than what was witnessed in the UK. But if the economic slump deepens and another winter with potentially limited energy supply looms, one cannot exclude markets starting to focus on fiscal sustainability again.

Euro sovereign spreads remain a cause for concern, but are holding up better than expected



Source: Refinitiv, ING

This happens against the backdrop of central banks running down their balance sheets, leading to an increased net government debt supply that private investors will have to absorb. The Federal Reserve has been in the process of quantitative tightening (QT) for some time, the BoE just started this November – with the notable hiccup in gilt markets surrounding the pension funds – and the European Central Bank (ECB) is slated to begin in 2023.

"... but sovereign debt crisis fears still linger amid ECB quantitative tightening"

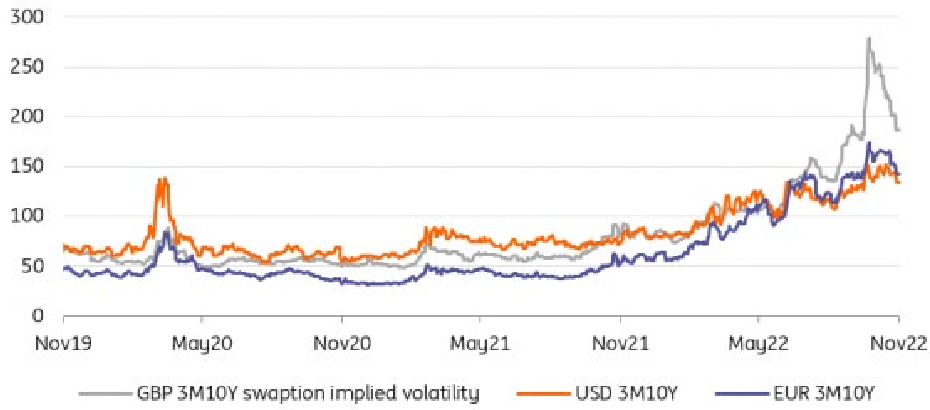
It seems obvious to look at government bond auction metrics which have already suffered, though those are also a reflection of a limited desire for duration risk rather than the credit itself. However, with a view to the eurozone and its experience of the 2012 sovereign debt crisis burnt into collective memory, it is not too hard to imagine how a combination of political choices and geopolitical events could again sour investor confidence. The ECB has put in place a backstop – the Transmission Protection Mechanism – but being tied to conditionalities, its effectiveness could be blunted.

… to outside triggers

Of the outside factors that could put the financial system's capabilities to the test, geopolitical risks are one of the more obvious given the ongoing conflict in Ukraine. A sudden escalation, and in particular an immediate impact on energy prices, could put central banks in a tough spot as their inflation goals move further into the distance, requiring more forceful action while the economic backdrop takes a heavy blow, further straining public and private finances.

One of the outside risk factors, however, relates to the policies of the Bank of Japan (BoJ) which so far has been an outlier amid the global charge of central banks tightening their policy reins. Importantly, the BoJ is conducting purchases at the long end of the Japanese government bond curve to cap yields. Any sign of the BoJ yield curve control ending could have large knock-on effects on yields outside of Japan. It could trigger another large and potentially sudden hike in global bond yields. Markets are already eying the end of the current BoJ governor's (Haruhiko Kuroda) term in April 2023.

Stable markets are no longer an argument for owning fixed income



Source: Refinitiv, ING

Suppression of money market risks about to fade

Money markets can be viewed as the plumbing of financial markets, which is also the reason why we have seen central banks acting quickly to intervene here in the past. We are still seeing the effects of this in the high levels of excess reserves within the banking system and the compression of money market spreads.

> *"The blanket provision of excess reserves is no longer compatible with the goal of tackling inflation"*

But this suppression of risks is bound to be scaled back as the blanket provision of excess reserves is no longer seen as compatible with the broader policy goal of tackling inflation. Markets are left more susceptible to credit events or sudden dashes for liquidity.

For instance, the term funding provided to banks by the ECB via the targeted longer-term refinancing operations (TLTROs) and the excess of reserves flooding the system has led to a compression of Euribor rates over the risk-free 3m ESTR swap, a spread that has traditionally served as a measure of risks embedded in the banking system. In the United States, one indicator that we like to monitor is where banks print 3-month commercial paper as a spread over the risk-free rate (3mth term SOFR). It's a simple measure of how easy it is for banks to fund themselves in the short-term market. Currently, this spread is at around 30bp (and European banks are printing at 50-60bp). That's far wider than it was, but not yet enough to cause any material consternation.

The scaling back of central bank support is adding to the uncertainty investors are already facing as markets are perceived to be more prone to the materialisation of systemic risks, and the UK is considered a warning shot.

The implication should be that risk measures can stay elevated or may even have to rise further. The above are only a selection, but it is especially relevant to monitor systemic risk measures while central banks are still tightening policies, in the sense that ambitions to do so will be frustrated if confronted with material negative pressure on the system. Anything that threatens to take the system down, or to risk doing so, is therefore out of the question.

It's also relevant as we progress through the 2023 slowdown/recession period, as any deep recession can pressure the system, as defaults can rocket. In that sense, it can act to accelerate a transition back to interest rate cuts.

As such systemic risks could be a more credible reason for a "material pivot" than recessionary fears. After all, tighter policies from central banks are designed to slow growth and tend to accept the risk of recession. But what central banks can't accept is any threat to the functioning of the system. No need to panic yet, but this is what we really need to be cognisant of.

The challenges brought by shrinking central bank balance sheets

Quantitative tightening and a reduction in central bank liquidity will add upward pressure to long rates. Money market rates were suppressed in 2022. In 2023, they will be free to reflect systemic risks

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Quantitative Tightening effects have largely been drowned out by central bank hiking cycles

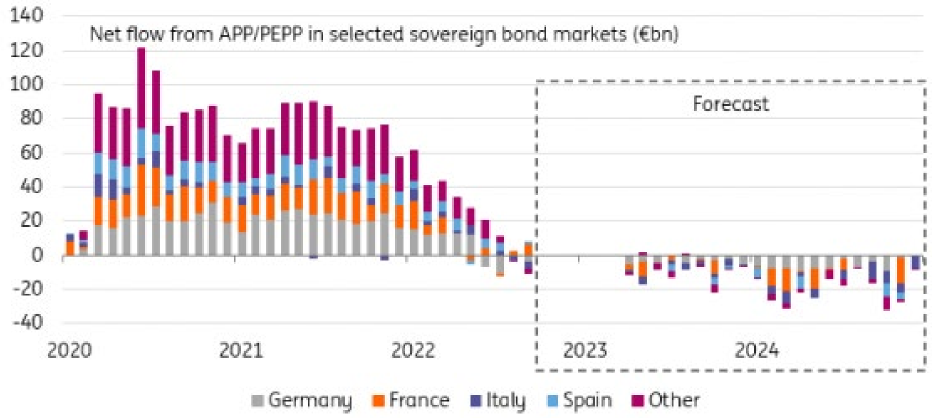
The age of quantitative tightening

The Federal Reserve will continue to allow US$95bn of bonds per month to roll off its balance sheet over the course of 2023. At the end of 2022, the balance sheet will have shrunk by a little over US$0.5tn, and then a further US$1.1tn is scheduled to be rolled off by the end of 2023. That would be a cumulative reduction of over US$1.6tn if all goes to plan. One issue here, however, is the roll-off over the second half of 2023 would co-exist with interest rate cuts from the Fed. While these may seem at odds with one another, remember that balance sheet roll-off is not outright selling bonds (hard quantitative tightening), it's just allowing the Fed's balance sheet to normalise. That can be viewed as a separate exercise to interest rate cuts, at least for a period.

> *"QT can be viewed as a separate exercise to interest rate cuts, at least for a period."*

The Bank of England is also well advanced on the way to quantitative tightening. The first non-reinvestment of a gilt reaching maturity occurred in March 2022, and the first gilt sale took place in November. Overall, the Bank intends to shrink its balance sheet by £80bn a year in the first year through a mix of passive (non-reinvestments) and active (outright sales) QT. This pace may accelerate in future years, but we assume that this is the relevant pace in the near term which, in FY 2023-24, should result in roughly half of that amount in passive and half in active QT.

Net QT flow out of key European government bonds in 2023 should be limited



Source: ECB, Refinitiv, ING

The European Central Bank is only at the beginning of this process. QT will start in 2023 with a gradual phasing out of its Asset Purchase Programme redemptions (one of its two QE bond portfolios), followed by the same process for the Pandemic Emergency Purchase Programme (the other portfolio) in 2025. Assuming a 50% APP reinvestment cap for the second and third quarters, and an end in the fourth, the balance sheet reduction should amount to €156bn.

Counterintuitive and delayed effect on duration

The main effect of QE on markets is to suppress duration premium, the extra yield investors demand as compensation for taking interest risk over long periods of time. There are a variety of models that show how much lower yields are as a result of QE. In the case of the 10yr Bund, our own estimate stands at 230bp. It should also be noted that the effect of QE has typically been priced into yields before purchases actually happened. Markets are, after all, forward looking.

> *"We've already seen part of the increase in yields that QT should trigger"*

As a general rule, we think it is fair to think of QT as QE in reverse. In our view, central bank balance sheet moves have been well-telegraphed months in advance, and so we've already seen part of the increase in yields that this should trigger. Much, however, depends on how long QT lasts. In a world where the process of balance sheet reduction is allowed to continue for years, the upward pressure on yields should gradually build up.

QE has supressed Bund yields by 230bp, but don't expect a sharp reversal

Source: Refinitiv, ING

We're more circumspect, however. We think QT poses financial stability risks and central banks will struggle to carry on once their policy focus shifts to easing. As a result, we suspect most of the upward effect on yields has already been felt. This is at least true for treasuries and gilts, and less so for euro rates. If we're wrong, however, and central banks manage to significantly reduce their balance sheets, then some upside risk to our forecasts will have to be reckoned with.

> *"If central banks manage to significantly reduce their balance sheets, then some upside risk to our forecasts will have to be reckoned with"*

What these models have in common is that the impact of QE is greater at longer maturities. At face value, this means QT should exert a steepening effect on the curve. In practice, it hasn't. The reasons are manifold, but the main one is that the QT effect has been drowned out by central bank hiking cycles, typically a flattening influence on the curve. In places where the sequencing between hikes and QT is clearer, like in the eurozone, there is a better chance of that steepening effect to be visible once the ECB ends its hiking campaign over the course of 2023.

Money markets: Rates to be pressured higher, finally

Central bank balance sheet reduction started in 2022, but it is in 2023 that its effect will be felt in money markets. Expect a better reflection of credit and term premia, and for repo rates to normalise, with liquidity being swapped for collateral

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2023 should see an accelerated reduction in the usage of the Fed's reverse repo facility

US reverse repo volumes and bank reserves to fall in 2023

The way to think about the Fed's balance sheet in round numbers is to start with its current size at around $8trn. Of that, there is $2.25trn showing up at the reverse repo facility, $3trn in bank reserves, and most of the rest is cash in circulation (apart from other bits and pieces). So what comes out of reserves has been going into the reverse repo facility. And as the Fed's balance sheet falls in size through bonds rolling off the front end (soft quantitative tightening), there must be a corresponding fall in bank reserves and/or in usage of the reverse repo facility (or a fall in cash in circulation, but we don't see this as a big mover here).

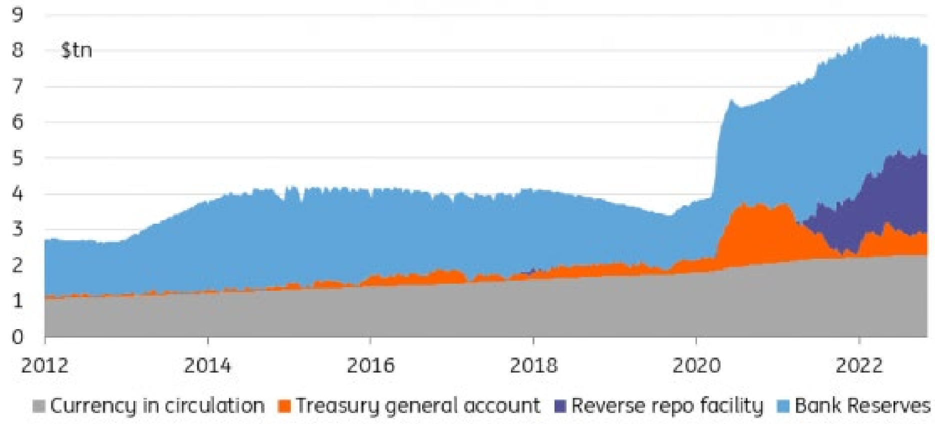
> *"The question is how much balance sheet roll-off is required"*

The question then is how much balance sheet roll-off is required in order to bring about a sense of equilibrium between collateral and liquidity. A measure of this need is the $2trn of liquidity that routinely gets shovelled back to the Fed in its overnight reverse repo facility. The large use of this facility is reflective of an ongoing liquidity overflow that manifests in market repo rates struggling to match the rate being offered by the Fed (at 5bp above the fed funds floor). In fact, at times, the SOFR rate (effectively the general collateral rate) has been trading below the funds rate floor, which is not a great look. To help rectify the situation, more available collateral will help, and the counterpart to this is a better balance versus liquidity.

The rise in usage of the reverse repo window has coincided with a fall in bank reserves, which are now running at $3trn. These peaked at $4.25trn in the fourth quarter of 2021. The previous low for bank reserves was $1.4trn in 2019, having come from a prior peak of $2.75trn in 2014. Back then, the Fed's financial crisis-inspired bond-buying programme came to a conclusion (2014), and a bond roll-off then ran through 2018/19.

Part of the fall in reserves reflected an uptick in economic activity and an increase in currency in circulation, and a requirement to build a buffer of high-quality liquid assets, the other part was a reduction in the Fed's balance sheet as bonds rolled off. Fast forward to today and bank reserves are down from the highs, but still at a relatively elevated $3trn.

Reverse repo balances should be the Fed liabilities that shrink the fastest in 2023



Source: Refinitiv, ING

Repo could see a material move higher as reverse repo volumes drop

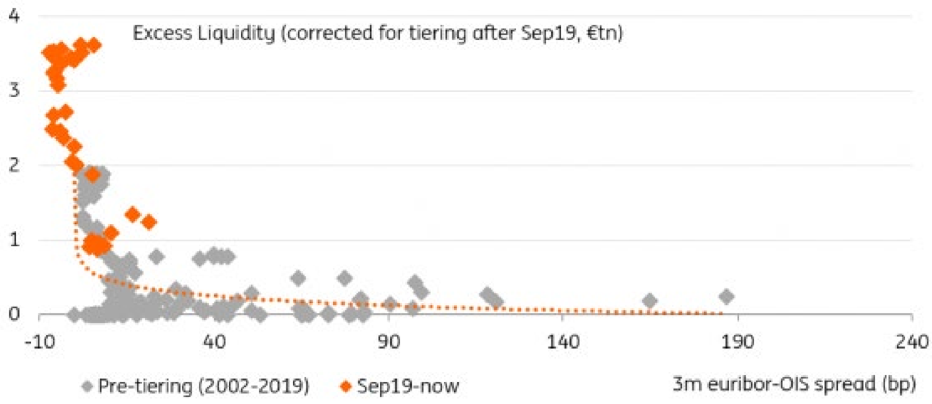
For 2023, we can see the bond roll-off continuing throughout the year. If things get really tough macro-wise, there may be an argument for the roll-off to be put on pause. But barring the unexpected, there is ample room for the Fed to maintain the roll-off. That could have the direct effect of reducing the use of the Fed's reverse repo facility. It does not have to, but this facility can wind all the way down to zero, which would be a desirable outcome as the market should not require recourse to repo away from the market. Should things get tight liquidity-wise, the Fed now has a permanent repo facility, where liquidity can be supplied back to the market (with bonds posted to the Fed). Ideally, the Fed should not be required to do large volumes through either of these windows. But they are there as a buffer - a buffer in both directions.

> *"2023 should see an accelerated reduction in usage of the Fed's reverse repo facility"*

Overall, 2023 should see an accelerated reduction in usage of the Fed's reverse repo facility. This should coincide with a rise in general collateral rates to above the reverse repo rate, ideally towards the effective fed funds rate. This is typically 8bp above the fed funds floor, compared with 5bp above for the reverse repo rate. Something like 8-10bp over the fed funds floor would be a good area for SOFR to settle at, correlating with a drying up of the usage of the Fed's reverse repo facility.

Beyond that, there could also be pressure for bank reserves to ease lower, but these should ease lower by far less than the contraction in the reverse repo volumes. We think reserves could slip down to the $2.5trn area, and if they go lower, we'd be surprised to see them dip below $2trn. This leaves them likely some $1trn above the lows seen before the pandemic but in any case at least $0.5trn above those lows.

Lower eurozone liquidity will make Euribor fixings more sensitive to credit risk



Source: Refinitiv, ING

The end of abundant liquidity

Most of the decisions pertaining to the withdrawal of central bank liquidity were taken in 2022, but the effects should only become evident in 2023. Even with central banks in various stages of the QT process, it is clear that their preference would be for a faster withdrawal of liquidity than that produced by a simple reduction of their bond portfolios.

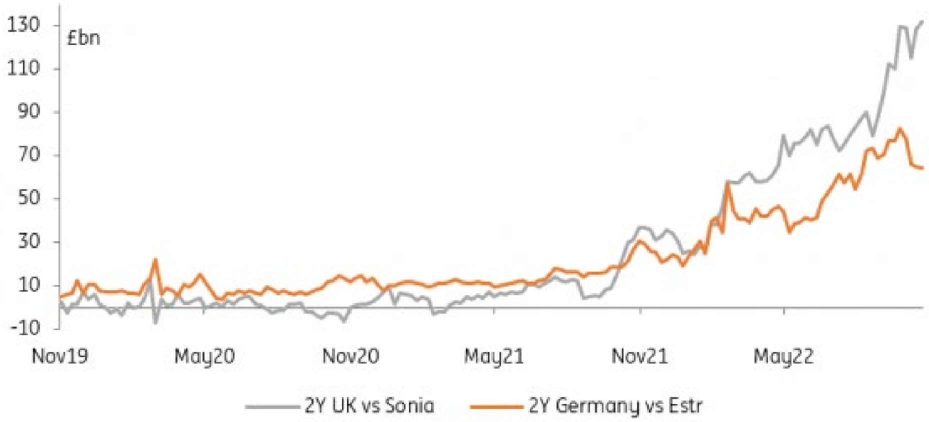
In cases where some of that liquidity stems from other policies than QE, for instance, in the case of the ECB's Targeted Longer-Term Refinancing Operation loans to banks, faster liquidity withdrawal is simply a matter of creating incentives for early repayments. The ECB has taken steps to that end at its October meeting and we're expecting around half of the €2.1tn TLTRO balances to be repaid by March 2023.

> *"You'd be hard-pressed to show the effect of shrinking liquidity in money markets in 2022. This will change"*

The Bank of England has an arduous task at hand. The basic principle is to introduce new facilities to absorb liquidity from banks. This, in effect, is what the Fed's reverse repo facility is doing in exchange for collateral. The BoE has taken no such steps yet but the repo rates and short gilt yields' reluctance to fully reflect rate hikes might trigger calls for faster liquidity absorption.

Truth be told, you'd be hard-pressed to show the effect of shrinking liquidity in money markets in 2022. This will change in 2023. Regardless of the currency zone, the liquidity situation can still be described as plentiful. This, in turn, has resulted in suppressed money market rates. In the case of government bonds and repo, these have diverged further, to the downside, from policy rates. In the case of supposedly credit-sensitive money market rates, they have failed to reflect growing systemic risk and the looming recessions.

UK and German bond scarcity is stretching valuations against swaps



Source: Refinitiv, ING

Collateral shortage becoming a monetary policy issue

The other side of the abundant liquidity problem is the shortage of high-quality collateral evident across developed markets, but most prominently making the headlines in the eurozone and UK due to ever-widening swap spreads. On one level, collateral shortage and abundant liquidity are two sides of the same coin: too much money chasing too few assets. On another, regulations and falling unsecured interbank volumes mean the availability of collateral is becoming a problem of money market functioning, which is likely to persist even after liquidity is withdrawn.

> *"Both excess liquidity and collateral shortages can be solved with the same tools"*

The good news is that both excess liquidity and collateral shortages can be solved with the same tools, as the Fed's experience has shown. The BoE and ECB both have securities lending facilities, but their use is more anecdotal, and insufficient to keep repo rates close to the policy rates. There have been calls for more ambitious facilities to be put in place. The BoE can point to the existing standing and special repo facilities although the lending rate would have to be raised and gilts would have to be borrowed from the Asset Purchase Facility (QE) portfolio.

As is the case in the UK, the ECB can also point to efforts by some institutions, more notably the German Treasury, to release more bonds on repo. More is likely to come, including to finance energy-related spending. Combined with QT, and TLTRO repayments, they will chip away at the collateral scarcity in the eurozone, but we expect the effect to be backloaded to the second half of 2023.

Swap spreads and supply: Bond issuance pressure

2023 brings a big ask for private investors: to increase their exposure to government bonds due to plentiful supply and quantitative tightening. Higher yields will help to drum up demand but expect cheapening relative to swaps

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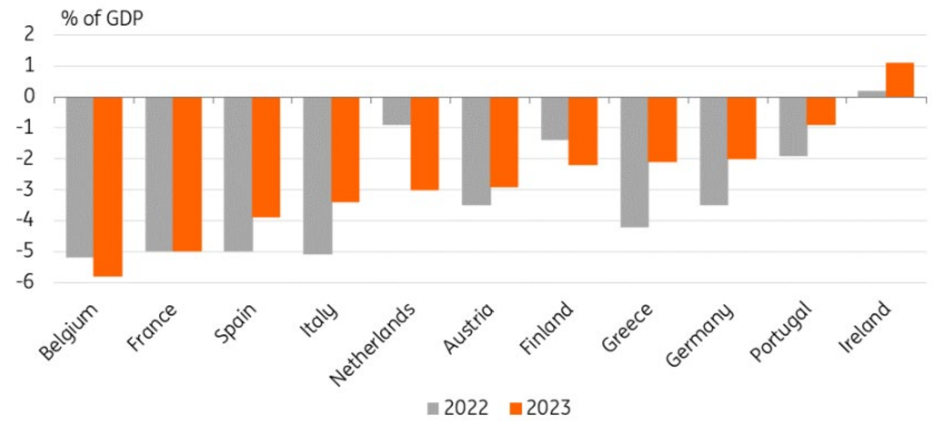
EUR gross issuance is on the rise again amid uncertain outlook

There is a great sense of uncertainty surrounding the eurozone countries' funding outlooks for next year. Many government support measures to shield households from surging energy bills are only now taking shape; how much support is eventually needed will depend on the development of energy prices. Furthermore, when governments submitted their budget plans to the European Commission, most were pencilling in a reduction of general government deficits. Of course, elevated inflation will continue to support the revenue side, but the growth assumptions in most plans, while lower compared to 2022, still look relatively optimistic for 2023.

Issuers, of course, also have the option of tapping into funding instruments other than bonds. The issuance of bills could gain importance still. These are often increased first in case of unforeseen additional funding needs. At the same time, the desire to hold precautionary liquidity buffers may be dampened by the ECB ending the remuneration on government deposits, so that running down these still sizeable cash holdings may contribute to keeping a lid on other funding. Currently, these deposits stand at around €500bn, though they also include non-central government and EU holdings.

General government deficits seen to improve



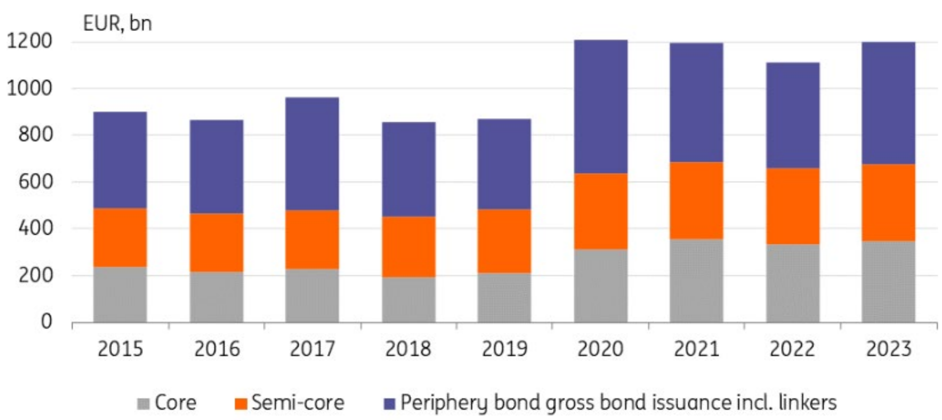
Source: European Commission, ING

EUR net supply to private investors also determined by the ECB

Taking into account preliminary plans and rising bond redemptions for 2023, we see gross European government bond issuance in the vicinity of €1.2tn, thus still below 2021 and the 2020 peak. Compared to this year, it would be an increase of at least €85bn, though with risks that it could turn out even higher. In net terms, the increase should be less daunting, as we still see net issuance remaining below €400bn after €385bn this year.

For European government bonds in aggregate, the relatively stable net issuance implies that the ECB should be the main swing factor in determining what private investors will eventually have to absorb. ECB public sector net purchases in the sub-group of countries we observe here were still at €187bn in 2022, but in 2023, the ECB could now well reduce its holdings by €120bn if reinvestments under the Asset Purchase Programme are phased out next year. Net issuance to private investors would thus rise from around €200bn to above €500bn. Note that on a country level, the ECB's flexible Pandemic Emergency Purchase Programme reinvestments could dampen the net impact for the periphery, while aggravating it for core issuers.

EGB gross issuance increases towards prior peaks



Source: Debt agencies, ING

EUR collateral scarcity eased by sizeable rise in German net supply

Among core issuers in the eurozone, Germany is one example of how alternative funding sources have been employed when tackling the pandemic and now, the energy crisis. The debt agency is relying increasingly on repo markets as a flexible funding tool and has only recently increased its own bond holdings by €54bn for use as collateral. The gradual sale of these own holdings also adds to funding, previously around €20bn per year. This helps to keep gross German government bond issuance relatively stable.

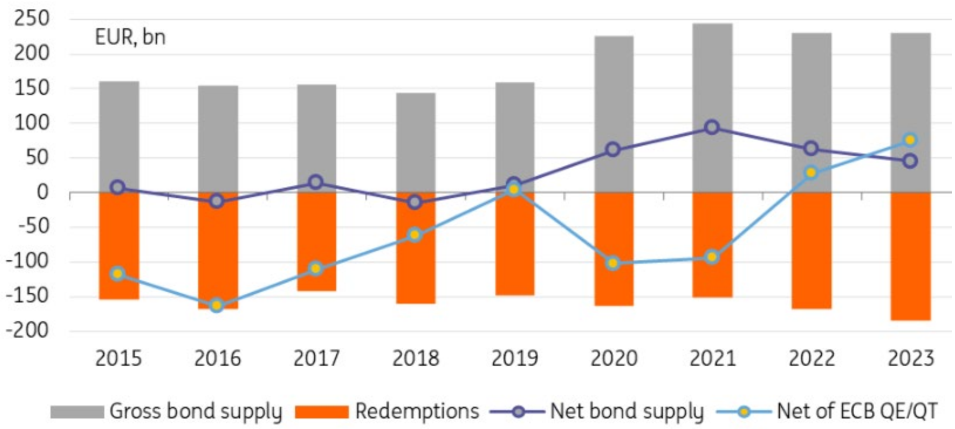
Press reports have suggested that net issuance next year will come in at €45bn, well above the previously flagged €17bn. This, however, is below the €61bn foreseen for this year, which should keep gross issuance at around €230bn in 2023 despite higher bond redemptions.

"German net issuance to private investors could double to €75bn in 2023"

German issuance receives more scrutiny as German Bund supply goes to the heart of current collateral scarcity issues plaguing the market. How much is available to private investors is of course very relevant so it is more important to look at the net change of issuance, including the impact of the ECB. The ECB still bought a net €46bn of German public sector securities under the Public Sector Purchase Programme and PEPP in 2022. With the ECB slated to begin only partially reinvesting redemptions of its PSPP portfolio possibly in the first half of 2023, we estimate that this could contribute around €30bn to the net supply available to private investors. Keep in mind that when looking at Germany specifically, ongoing reinvestments under the PEPP could also be increasingly redirected away from Germany towards countries in the periphery.

Adjusting the flagged €45bn of German net issuance for the impact of the ECB, we could see the effective net issuance to private investors more than double from around €30bn in 2022 to €75bn in 2023 – importantly not yet accounting for shifting PEPP reinvestments next year. Note this estimate requires assumptions about the actual share of Bunds in the ECB's German public sector holdings.

Significantly positive German net issuance to private investors



Source: DFA, ING

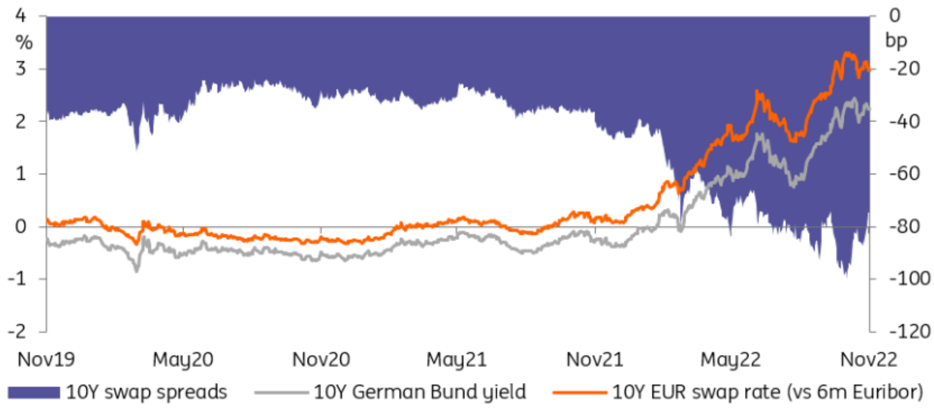
"The balance is finally shifting towards tighter Bund swap spreads"

Collateral scarcity has been an important factor that has kept Bund yields at much lower levels than swap rates. Expensive repo rates for German Bund collateral in money markets propagate out the yield curve, meaning that spreads to swaps of more than 80bp have been the norm. But now the German debt agency is itself seen as more active in the repo market and effective net issuance is about to pick up. At the same time, the quantity of excess reserves in the system chasing the same collateral pool is about to decline. One remaining uncertainty concerns the development of government deposits at the ECB, which could still be redirected into the market for collateral once they are no longer remunerated by the central bank after April next year.

Of course, the supply of collateral is but one factor. Risk aversion is a typical driver of wider asset swap (ASW) spreads. While we have seen some positive developments over recent weeks, the lingering concerns surrounding systemic risks and unstable geopolitics will mean an ongoing healthy appetite for safe assets. At the same time, the hawkish stance of the ECB means that demand for duration risk will remain subdued, at least so long as there are no concrete signs of a policy pivot. ASWs have tended to evolve in a very direct fashion with outright yields.

Looking ahead, we do see the balance of factors further tilting towards tighter Bund ASWs. We have pencilled in a target of 75bp for the 10yr spread.

QT and more German debt supply will chip away at bond scarcity and at wide swap spreads



Source: Refinitiv, ING

US issuance to remains heavy in 2023, and the recession won't help

The US redemptions schedule shows a $2.6tn funding need in Treasuries and $160bn in TIPS for the calendar year 2023. For the fiscal year ending September 2022, there was a fiscal deficit of $1.4tn. For 2023, the fiscal deficit is projected at 4.6% of GDP, yielding a cash need of some $1.2tn. Adding this to the redemption amount sums to an all-in financing need of some $4tn for calendar year 2023 (noting that the official numbers are fiscal year ones).

> *"For 2023, the fiscal deficit is projected at 4.6% of GDP, yielding a cash need of some $1.2tn"*

This results in a rounded $1tn gross issuance requirement per quarter to finance long-term debt (excluding bills rollover). This is a heavy schedule, but not unusual relative to the large funding needs required since the pandemic, and its aftermath. It's enough though to rationalise a continued yield discount in longer-tenor US Treasuries relative to the SOFR swap curve. And further ammunition for this comes from the Fed's balance sheet roll-off, as this adds to the volume of Treasuries circulating in the marketplace.

US swap spreads impacted by supply, corporate issuance and Fed cuts

The shape of the US swap spread curve is heavily inverted, and this should remain so through 2023. The nuance is 2yr SOFR trading above 2yr Treasuries (+10bp), and then SOFR rates trading through Treasury yields further out the curve, with the 5yr at -20bp, the 10yr at -25bp and the 30yr at -75bp. The structure of the SOFR curve is in part responsible here, but that's not the dominant reason, as we see a similar progression of swap spreads when we use the Libor curve (which gets killed in mid-2023).

"The weight of US Treasury issuance added to the balance sheet roll-off should maintain a Treasury yield discount to the SOFR curve"

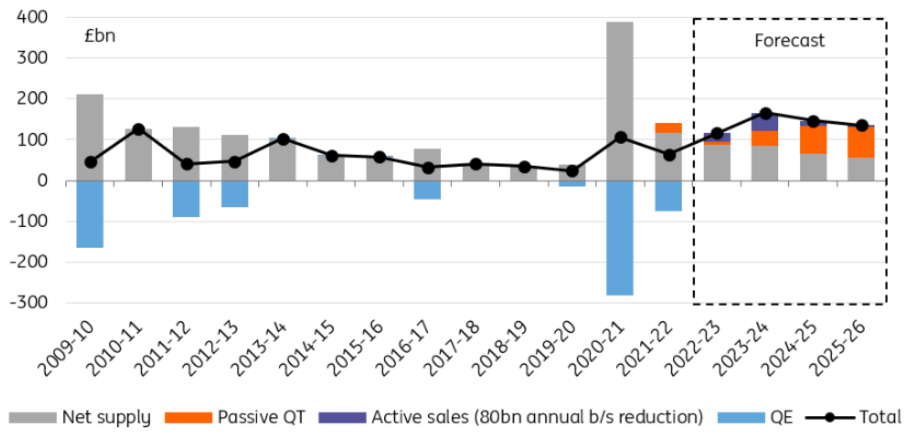
The weight of US Treasury issuance added to the balance sheet roll-off should maintain a Treasury yield discount to the SOFR curve for most maturities, and indeed there is a prospect for some widening here. At the front end, and let's say the 2yr explicitly, there is likely to be some volatility. Currently, the 2yr Treasury yield is below the 2yr SOFR rate, as the Fed peaks in the first quarter, the 2yr Treasury yield is more likely to gap lower in anticipation of future cuts, widening the gap between 2yr Treasuries and 2yr SOFR, perhaps by some 10bp.

That spread should narrow back though as the Fed actually begins to cut. Either way, expect more volatility in the 2yr swap spread, at least compared with longer tenor swap spreads that are liable to drift wider as a theme for 2023. That said, ultra-long tenors are very susceptible to big flows, and can cause quite dramatic moves in swap spreads. This is typically driven by receiver interest in 30yr swaps, driving swaps spreads wider.

"Corporate issuance is also relevant for mid-tenors, as this can correlate with fixed rate receiving"

Corporate issuance is also relevant for mid-tenors, as this can correlate with fixed rate receiving as they swap to floating while interest rates fall. Issuance should be subdued in the early part of the year as rates are high and spreads are wide. Later in the year, even if spreads remain relatively wide, all-in rates should be dragged lower as the Fed cuts. That should encourage issuance, and fixed rate receiving, pressuring swap spreads deeper negative (SOFR rates further below Treasury yields).

Private investors are asked to increase their gilt exposure significantly in 2023



Source: Refinitiv, ING

UK supply: the debt tsunami is still to come

Budget matters have jumped to the top of the list of worries for rates investors in 2022 - and in a spectacular fashion in the case of the UK. Developed economies are grappling with a toxic mix of rising debt, soaring interest rates, and pressure to shield consumers from a spike in energy costs. All have a detrimental effect on fiscal balances, and so on debt sustainability. In the previous decade, quantitative easing shielded markets from the jump in bond supply to be absorbed by private investors. This time is different. The Bank of England is not only sending borrowing costs skywards, it is also competing with the Debt Management Office (DMO) for demand for bonds, by running quantitative tightening (QT) in parallel.

> *"The BoE is also competing with the DMO for demand for bonds"*

The result should be an unprecedented cash draw on investors, to the tune of £165bn in FY 2023-24, compared to a previous peak of £105bn in FY 2020-21. Legitimate questions can be asked about their willingness to take on more interest risk. But we think a better question is at what price, rather than whether they will be willing to buy. Higher interest rates are a powerful incentive for would-be buyers, provided the perceived risk doesn't increase. Recent budget consolidation decisions and, for foreign investors, a more stable currency are helpful. The more risk-averse investors will probably wait until the peak of this tightening cycle.

Cross currency swaps: USD premium to remain intact

Even as the US dollar comes off its highs post the Fed funds rate peak, the dollar cross-currency basis should maintain a decent premium versus the euro and the yen. But the dollar premium should still edge lower in 2023, and all-in spreads (incl. the basis) should be falling in the second half. Sterling paves a different path, on tight spreads to dollar rates

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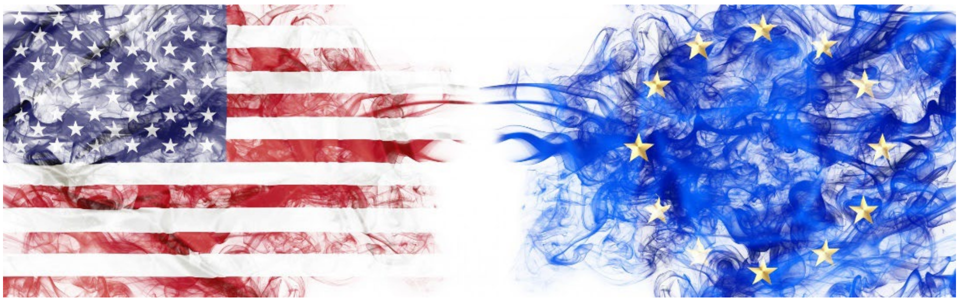


All-in spread into USD to come off highs by the second half

A USD premium on the cross-currency basis remains thematic versus the likes of the euro, Japanese yen and British pound. This is equivalent to a basis discount on the latter three currencies, with the most extreme version attached to the Japanese yen. For 2023, we doubt there will be a huge amount of change here. Effectively that means rate differentials that manifest in a pickup into dollar rates continue to be amplified by the basis to give a larger all-in spread.

"We see from the US side a tightening in liquidity"

When we look at drivers, we identify from the US side a tightening in liquidity dominating for most of 2023. This will be tempered by our call for rate cuts in the second half of the year, but balance sheet roll-off can technically continue in tandem, at least for a period. This may appear contradictory, but the balance sheet roll-off towards a better liquidity equilibrium can be viewed as a separate exercise to interest rate cuts to cushion the economy.

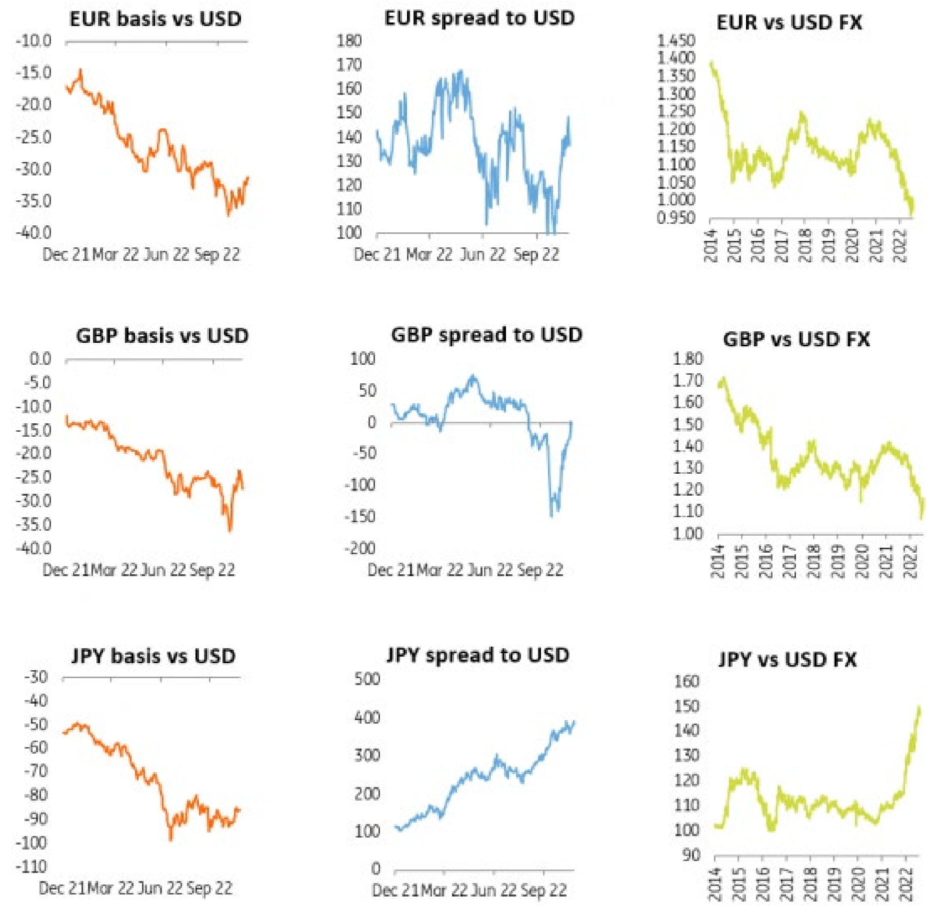
"The eurozone and Japan lag this process"

Both the eurozone and Japan lag this process, although the UK is primed to be more in line. That, in part, helps explain why the UK basis and all-in spread remain relatively tight to the US. In contrast, the euro and yen spreads remain relatively wide for the first half of 2023, but are likely to tighten in the second half. This tightening could come from a combination of the narrowing in absolute spreads and a de-compression of respective basis discounts.

"All-in spreads to tighten"

For example, the all-in spread between the SOFR 5yr and the TONAR 5yr is in the area of 4.5% in the first half of 2023, but this narrows to 3% in the second half, including some 20bp in basis decompression. For the euro, the equivalents are 175bp in the first half versus 100bp in the second half, with a more moderate basis compression of some 5-10bp. For the UK, there is a more balanced spreads scenario in play, but one that maintains a basis discount in sterling versus the US dollar on the cross-currency swap.

Dashboard of Cross Currency components for EUR, GBP and JPY (vs USD)



Source: Macrobond, ISDA and ING estimates

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