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 N° 073 // June 7, 2022

• Topic of the week: An analysis of rising swap spreads

- Euro swap spreads are up sharply since the beginning of the year.
- Conventional swap spread drivers including tighter monetary policy and risk aversion explain part of the spread blowout.
- We explore alternative reasons factors behind the increase in swap spreads, including paying hedging flows from banks.
- New interest rate hedging needs may be traceable to increased demand for fixed-rate mortgages in the past decade in southern European countries .

• Market review: the moment of truth for the ECB

- US job creation remains solid;
- Upbeat sentiment on stocks, despite hawkish central banks;
- Euro area inflation above 8% in May;
- Bund yields on an upward trend.

• Chart of the week



Janet Yellen apologized for underestimating inflationary pressures. A courageous act while we must acknowledge that she is not the only one who was wrong. Far from it. The graph opposite shows market expectations which remained extremely stable at around 2%. The market didn't see anything coming either.

It is nevertheless interesting to note that the market persists to a large extent in its views with inflation expectations that quickly converge towards 3%. The Fed's target is indeed lower, but such a trajectory, if it materializes, would not require a large-scale monetary tightening. On this point we can be doubtful, the jury is still out.

• Figure of the week

90%

Source : Ostrum AM

The objective of reducing Russian gas imports from the EU.



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• Topic of the week

An analysis of rising swap spreads

Euro swap spreads widened aggressively since the beginning of the year on the back of tighter financial conditions, risk aversion driven by the war in Ukraine and paying hedging flows from banks.

Interpreting swap spreads

Swap spreads represent a key indicator in financial markets. The swap spread is frequently associated with risk aversion, market liquidity and interest rate hedging demand.

A simple definition of swap spreads

A swap spread is the difference between the fixed component of a swap and the yield on a sovereign bond with a similar maturity. In the euro area, the latter would be the German Bund, the government bond considered as *the* risk-free investment. In addition, swaps are hedging instruments. Interest rate swaps are derivative contracts to exchange fixed interest payments for floating rate payments. The party that receives fixed rate payments is therefore exposed to the risk of higher rates.

Swap spreads are essentially an indicator of the desire to hedge risk, the cost of that hedge, the overall liquidity conditions in the market and risk aversion.

- The desire to hedge the risk of higher interest rates raises paying demand, which pulls swap spreads wider. Corporate borrowers for instance may choose to issue fixed coupon bonds to match investor demand but can have an interest in swapping fixed for floating rates when the yield curve is upward sloping.
- The wider the spread, the larger the premium paid to receive floating rate payments. Hence the 'cost' argument.
- Swap spreads as a liquidity risk measure stems from the fact that the underlying risk-free government bond is the most liquid investment, especially in times of financial stress.
- A bid for safety amid volatile market conditions should be conducive to higher swap spreads. Such bid for safety signals bouts of risk aversion.

The changing interpretations of swap spreads and the conduct of monetary policy

In essence, the swap spread compares an unsecured interbank rate with a government bond yield. In money markets, the similar comparison would be between short-term interbank offered rates and equivalent-maturity repo rates (collateralized lending rates). Collateral indeed comes generally in the form of government bonds or close substitutes.

In the years prior to the Great Financial Crisis, liquidity provisioning to the real economy relied mostly on banks' willingness and ability to extend loans, i.e., on the banking multiplier. Central bank money was indeed scarce. Central banks only added liquidity at the margin with limited amounts of bank refinancing operations and, in bad times, thanks to its lender of last resort status. The blowout in swap spreads, particularly on short-term maturities, is indeed a distinctive feature of the 2008 US financial crisis and the ensuing sovereign (2009-2011) and banking crisis in the euro area (2011-2013). Swap spreads were considered a live measure of systemic financial risk as the distrust between banks pushed the risk premia on interbank loans through the roof. The shift to repo lending from unsecured interbank lending, which by design contributes to widen swap spreads, gathered pace in the years following the crisis. Bank regulation indeed pushed for more secured funding.

In the following decade, the pendulum has swung towards an almost fully centralized liquidity provisioning mechanism in which central banks play a much larger and complex role. Since the advent of the ample reserve monetary system, excess liquidity in money markets has been the norm. The ECB has repeatedly purchased large amounts of assets in the open market (quantitative easing), broadened the range of collateral accepted at - now unlimited - refinancing operations and made loans to banks at much longer maturities than normal (TLTRO). In short, the liquidity measure embedded in the swap spread has grown increasingly dependent on monetary policy tools used by central banks. Quantitative easing may have widened swap spreads by causing scarcity of government bonds. On the contrary, targeted measures for bank funding (TLTRO) may have helped to narrow spreads.

A morphing systemic risk?

It is worth noting that counterparty risk (inherent to the banking system) has been reduced by the ever-greater involvement of the ECB in the money markets. The ECB is in fact *the* counterparty for most banks in the ample reserve system (for funding and depositing). Bank counterparty risk thus no longer seems relevant to explain the level of swap spreads. If anything, central clearing for interest rate swap transactions should, at least in theory, deal with the known forms of systemic banking risk. Clearing houses indeed

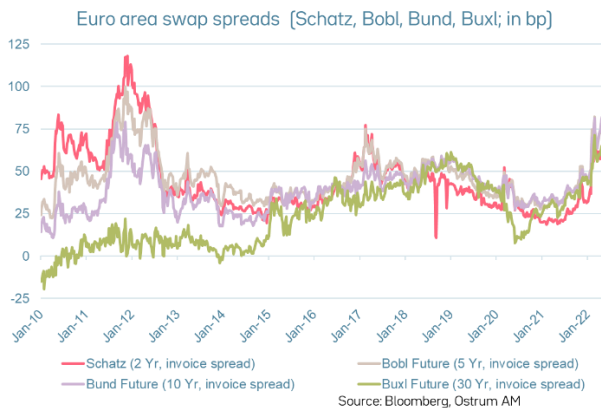
require collateral posting from counterparties to ensure trades can be settled even if one borrowing institution fails.

Having said that, large swap spreads could still be indicative of a broader kind of systemic risk stemming from non-bank institutions such as large corporations, financial institutions (including asset managers, hedge funds, non-bank lenders, private-equity firms...) or, say, sovereign borrowers suddenly deprived of financial market access. Or, more simply, that clearing houses themselves could be perceived to be systemic. Time will tell.

Dissecting the sharp swap spread widening in 2022

The reasons behind wider spreads: bank systemic risk again?

In euro financial markets, swap spreads have increased considerably so far in 2022. The swap spread – represented in the chart below by the invoice spreads on the active German bond futures – currently trades at 72 bp for the Bund contract. The 10-year spread, which averages just under 40 bp since 2010, even reached a record high at 83 bp in early May. Swap spreads have increased across all maturities in 2022.



The 10-year swap spread levels are comparable to previous episodes of extreme financial stress including the European banking crisis around 2011. That said, the current Schatz invoice spread measure (61 pb) is about half its banking crisis high (120 pb). The swap spread term structure, which is upward sloping, is not signaling immediate risk through the banking system. Bank reserves are no longer scarce and, in general, euro area banks are in much better shape, better capitalized and much more liquid (LCR liquidity buffers total € 3.5 Tr) than ten years ago. Aggregate provisions for loan losses for the 24 largest euro area banks nevertheless rose to € 9 Bn in the first quarter of 2022. The outbreak of the Ukraine war forced divestments from Russia and a

reassessment of credit risk. Whilst banking risks are always to be monitored, the current situation is unlikely to be the main driver of the swap spreads.

Swap spreads responding to ECB tools

Swap spreads began to widen in the summer of 2021. At the time, it was increasingly clear that the inflation spurt was not transitory and would require action from global central banks. The ECB was a late comer to the tightening party, but accommodation has started being removed. Quantitative easing will be wound down by the end of June and interest rates will begin rising in July. Markets tend to focus on second derivatives and the expected inflexion point in aggregate excess liquidity has been priced in. Furthermore, TLTRO pricing will soon become less favorable to banks. The bonus rate that lowered interest payments by 50 bp for the past two years will come to an end in June 2022. The three-year TLTRO loans arranged in June 2020 worth € 1.3 Tr will also have to be repaid a year from now. Banks have already been active in seeking refinancing in the market. Covered bond issuance have increased and full-year total issuance may fetch € 160-180 Bn in 2022. Covered bonds, are considered proxy-swap securities and increased issuance may have contributed to wider spreads. In addition, past quantitative easing and policy rate guidance had put a lid on interest rate volatility. As the ECB winds down QE, swap spreads increased in keeping with rising volatility.

The changing directionality of swap spreads: positive directionality in 2022

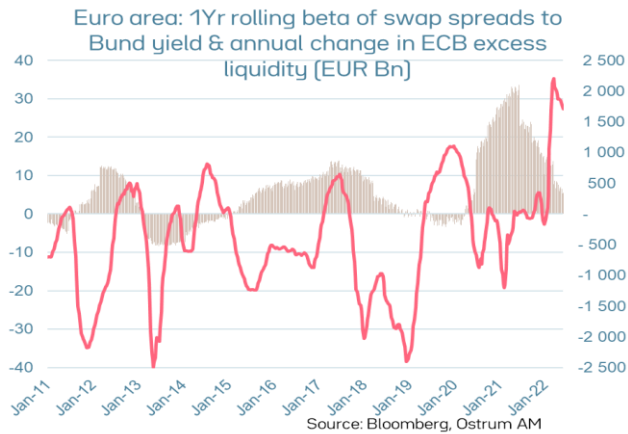
Swap spreads may rise or fall in response to changes in underlying bond yields.

Swap spreads exhibited a negative directionality to bond yields during most of the QE period. Quantitative easing is intended to encourage portfolio shifts away from risk-free bonds into spread products (covered bonds, corporate credit, high yield...). The portfolio channel, by which QE affect economic and financial conditions, should indeed narrow swap spreads.

However, in 2022, euro swap spreads rose in conjunction with the rise in long-term bond yields. Positive correlation seems to be the exception rather than the rule, but it is not unusual. Between January and September 2019, the pushing out of ECB quantitative easing showed positive directionality. If QE liquidity injections lift asset valuations (and shrink spreads), then the converse must be true when monetary policy takes a more restrictive turn. The slowdown in excess liquidity growth raises risk premia, so that swap spreads increase in response to higher yields.

In the chart below, we show a weekly beta estimate of swap spreads on bond yields with a rolling window of one year in

relation to excess liquidity in the euro area. Current positive directionality appears extreme and consistent with a slowdown in excess liquidity. As stated above, contraction in excess liquidity from QE exit in 2019 had a similar impact.



German credit risk, peripheral bond flows & risk aversion

Euro swap spreads, i.e. Bund spreads, are also indicative of Germany's sovereign credit risk. Germany is obviously AAA-rated and a stable credit profile. Fiscal surplus and limited Bund supply have long been a factor keeping swap spreads elevated due to Bund scarcity made worse by ECB QE purchases. The tightening in Bund asset swap spreads (the flipside of the widening in swap spreads) is not traceable to an improvement in credit risk. If anything, the expected increase in military spending worth some € 100 Bn (still to be approved by Parliament) will require additional borrowing and could lead to tighter swap spreads.

It is however possible that the unwinding of long positioning on peripheral sovereign bonds has led to purchases of safer Bunds. The phasing-out of QE represents a greater risk on weaker sovereign credit including Italy than it does on German Bunds. Relative value certainly played a role in the swap spread increase.

Convexity hedging comes to Europe

The current uptrend in swap spreads thus seems unrelated to bank credit, and only partially traceable to ECB monetary policy or risk aversion leading to cutbacks in peripheral sovereign bond exposure.

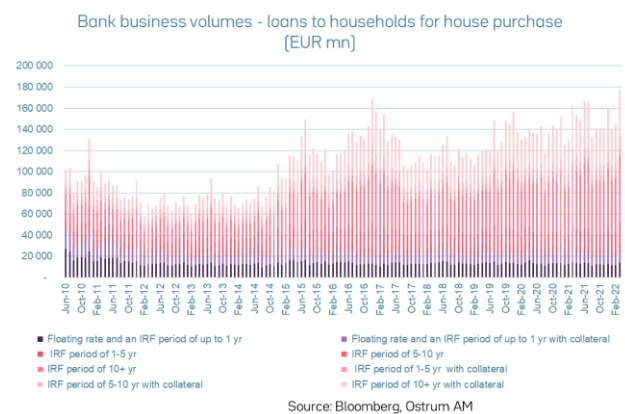
Hedging flows could be the new driver of swap spreads in the euro area. Indeed, the prolonged period of low and negative rates has profoundly changed the mortgage lending business in Europe. Euro area banks are exposed to rising long-term rates given their business of maturity

transformation (or long duration). An extension of mortgage duration (much of which is retained by banks) as interest rates increase force lenders to pay swap rates at times of market sell-offs.

Thus, banks' mortgage hedging may exert upward pressure on swap rates. The rate sensitivity issue is well known in US mortgage markets. Government-sponsored enterprises frequently pay swap rates in a rising rate environment to hedge out risk from lower prepayments (i.e. duration extension). The so-called convexity risk is the by-product of higher interest rates and longer duration.

Prior to the European sovereign and banking crisis of 2011-2013, floating-rate mortgages had been the norm in some euro area countries including Spain, Ireland, Portugal and Italy. In contrast, the Netherlands, Belgium, France and Germany always had a very small share of variable-rate loans. The share of floating-rate mortgages in peripheral economies has now declined considerably from 80% to roughly of third of total new lending. Portugal is one exception as floating-rate loans still account for about two-thirds of the total (still down from 80%+).

In aggregate, new floating-rate mortgage business in the euro area represented just 13% of origination in March 2022 compared to 33% in the year to June 2011. The shift is significant given the steady increase in mortgage lending in the past decade. Amounts issued of floating rate debt has been steady around 20 Bn a month for some time now. Meanwhile, the initial rate fixation period has also been extended. Indeed, 60% of all mortgages issued in March 2022 in the euro area have an initial rate fixation period for more than 10 years (the bulk being fixed-rate debt). The 60% share compares to 33% on average in the 12 months to June 2011.



The shift towards fixed-rate mortgages is a fundamental reason behind the rise in swap spreads amid upward pressure on long-term bond yields. Southern European banks have had to adapt to increasing demand for fixed-rate

mortgages (or longer period of fixed interest rates) from households. Bank hedging/paying flows on long-term swap rates have played a key role in the widening in long-term swap spreads.

Short-term outlook for swap spreads

Euro swap spreads are elevated historically above 70 bp on 10-year maturities. On our estimate, fair value on bund swap spreads may hover about 60-65 bp at present and should eventually revert to the norm of 40-50 bp over the longer run.

Such narrowing in swap spreads require several factors to play out. Risk aversion should gradually recede. The war in Ukraine and poor growth in China are currently the two main obstacles to a sustained move lower in investor risk aversion. The outcome of the war is very hard to predict at this juncture. A war of attrition would lengthen the normalization process and keep interest rate volatility at high levels. Tentative signs of improvement out of China however entail a glimmer of hope. Meanwhile, the ECB will begin to tighten monetary policy shortly, which will dent excess liquidity. Bank liquidity and solvency is not an issue for the time being. As and rate expectations and bond yields rise, paying hedging demand from mortgage lenders will keep upward pressure on swap rates. ECB rates are thus set to rise from July but the ECB will pay attention to monetary policy transmission in the euro area in a bid to limit risks to

peripheral bond spreads. Dovish ECB talk despite hawkish action could indeed limit the bid for Bund safety (and reduce widening pressure on swap spreads). On balance, it is fair to say that there is value in carry trades on swap spread. Receiving swap rates whilst shorting Bund futures make sense in our opinion.

Conclusion

The sharp increase in euro swap spreads is one distinctive development in financial markets in 2022. Risk aversion linked to the war in Ukraine and monetary tightening caused upward pressure on swap spreads. Risk premia are being restored.

However, these familiar factors fail to fully explain the extent of the shift in euro swap spreads. Changes in the structure of the mortgage markets with increasing share of fixed-rate mortgage loans resulted in increased hedging needs in the banking sector, especially in Southern Europe.

Axel Botte

- **Market review**

The moment of truth for the ECB

Improving sentiment on equities though central banks reiterate hawkish message

Pessimism in the first half of May seems to be dissipating in global markets. The announced easing of lockdown measures in Shanghai suggests a pickup in activity in China and global trade. The announcement of an increase in oil production from OPEC+ is also welcome. These favorable signals seem to have taken over the ever more restrictive rhetoric from the Fed's central bankers. Other central banks such as the BoC or the RBNZ have also insisted on the need for additional monetary tightening. Bond yields are tending upwards in the euro zone (Bund about 1.30%) as ECB chief Economist Philip Lane throws in the towel to join the camp of the hawks. A rate hike in July will no doubt be announced at the ECB meeting on 9 June. The rebound in equities also accelerated as the dollar weakened. The greenback is a barometer of risk aversion but it looks like the dollar's upside potential has now been consumed. The rebound in stock market indices is accompanied by a narrowing in corporate bond spreads. However, European credit performance lags behind its US counterpart. Sovereign bonds are an exception given the risks associated with the upcoming rise in interest rates. Christine Lagarde's communication will be key for the evolution of spreads over the coming weeks.

US activity growth continues to surprise with its resilience. Job creation reached 390k in May so that the unemployment rate stayed at 3.6%. Job openings signal continues to point to strong labor demand. The payroll is also up by nearly 9% over one year. Admittedly, a rebalancing is taking place with the rapid rise in mortgage rates which is now weighing on residential investment. Durable goods consumption linked to the real estate cycle should follow but also give way to increased spending on services. At the same time, business investment is upbeat. In addition, imports moderated in April after a sharp increase in March, so that the trade balance will likely contribute positively to growth in the second quarter. In this context, a pause in monetary tightening in September, hoped for by some market participants, would not be necessary. This is the message that the Fed's Lael Brainard reiterated. In the euro zone, the inflation picture (8.1% in May according to the flash HICP) undoubtedly calls for monetary tightening. Inflation continues to surprise on the upside in most countries and producer prices suggest no respite ahead. Oil stabilized after touching \$120 a barrel. European sanctions aim to reduce imports of Russian crude by 90% this year. OPEC+ announces a quota increase of 648k barrels as of July, but the production constraints affecting all members of the cartel except Saudi Arabia and

the Emirates may limit the actual increase to 200k barrels. This announcement is nevertheless welcome because it suggests a relaxation in the relations of the United States with the Saudi Kingdom.

The Bund soared 30bp last week to hover about 1.30%. A 50 bp increase in July is being mentioned by some members of the ECB Council. Yields across all maturities are shifting upwards. In the United States, the T-note follows the direction of the Bund rising by as much as 20bp. The US 10-year yield is now trading around 3%. The BoC's proactive hawkish rhetoric after the expected 50 bp rate increase suggests further 50 bp hikes of or even 75 bp. The RBNZ, at the forefront of the global monetary cycle, also raised its rate guidance. The Fed may still have to convince market participants that neutrality is not the end point of this monetary cycle. In the euro zone, peripheral debt is the most exposed to monetary tightening. The asymmetrical risks inherent in the euro zone are difficult to manage by the ECB, despite possible soothing language from Christine Lagarde. Flexibility will remain key to ECB policy. Italian 10-year spread rose back above 200bp, dragging Iberian bond markets in its wake. The most fragile ratings are always sold first. Thus, the French and Belgian sovereigns, on the other hand, escape the mistrust of investors, for now.

Credit markets have stabilized after a difficult month in May. The swap spread nevertheless remains quite elevated, above 70 bp for 10-year maturities, which seems to limit the performance of covered bonds. The European IG spreads, on the other hand, tightened by 7bp to 163bp against German Bunds. The risk-on market across most risky assets helped to narrow corporate bond spreads. The spread tightening is even sharper in high yield markets, where spreads declined by 36 bp over one week to 479 bp. These weekly changes have reduced the performance gap of European credit compared to the US high yield markets for the past month.

Despite the latest rally, equity markets are still looking for direction after a very difficult start to the year. Stocks with strong dividends outperformed significantly, positing positive total returns amid broad weakness. The major stock indices have become more sensitive to the announcements of large cap stocks such as Microsoft, whose corporate earnings are suffering from the strong US dollar, or Amazon and Tesla, which are now restricting their hiring plans. Rich valuations and high sensitivity to interest rates remain an obstacle to growth stock performance. In Europe, it is worth noting that banks are no longer benefiting from rising interest rates.

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Global strategist

● Main market indicators

G4 Government Bonds	07-Jun-22	1w k (bp)	1m (bp)	2022 (bp)
EUR Bunds 2y	0.68%	+18	+36	+130
EUR Bunds 10y	1.32%	+20	+19	+150
EUR Bunds 2s10s	63.5bp	+2	-17	+20
USD Treasuries 2y	2.73%	+17	0	+200
USD Treasuries 10y	3.03%	+19	-10	+152
USD Treasuries 2s10s	29.8bp	+1	-9	-48
GBP Gilt 10y	2.25%	+15	+26	+128
JPY JGB 10y	0.25%	+0	-3	+3
€ Sovereign Spreads (10y)	07-Jun-22	1w k (bp)	1m (bp)	2022 (bp)
France	51.9bp	+0	+0	+14
Italy	208.1bp	+9	+9	+73
Spain	115.73bp	+6	+6	+41
Inflation Break-evens (10y)	07-Jun-22	1w k (bp)	1m (bp)	2022 (bp)
EUR 10y Inflation Swap	2.61%	-8	-47	+51
USD 10y Inflation Swap	3.08%	+11	-4	+30
GBP 10y Inflation Swap	4.24%	-27	-23	+6
EUR Credit Indices	07-Jun-22	1w k (bp)	1m (bp)	2022 (bp)
EUR Corporate Credit OAS	161bp	-2	+0	+66
EUR Agencies OAS	66bp	+3	-1	+17
EUR Securitized - Covered OAS	73bp	+2	-6	+27
EUR Pan-European High Yield OAS	467bp	-20	-21	+149
EUR/USD CDS Indices 5y	07-Jun-22	1w k (bp)	1m (bp)	2022 (bp)
iTraxx IG	89bp	+1	-9	+41
iTraxx Crossover	444bp	+5	-25	+201
CDX IG	82bp	+2	-7	+32
CDX High Yield	477bp	+16	-16	+184
Emerging Markets	07-Jun-22	1w k (bp)	1m (bp)	2022 (bp)
JPM EMBI Global Div. Spread	444bp	-11	-1	+75
Currencies	07-Jun-22	1w k (%)	1m (%)	2022 (%)
EUR/USD	\$1.069	-0.419	1.212	-6.0
GBP/USD	\$1.248	-0.992	1.176	-7.8
USD/JPY	JPY 133	-3.052	-1.831	-13.3
Commodity Futures	07-Jun-22	-1w k (\$)	-1m (\$)	2022 (%)
Crude Brent	\$120.1	\$4.5	\$9.3	59.51
Gold	\$1 844.5	\$7.1	-\$9.7	0.84
Equity Market Indices	07-Jun-22	-1w k (%)	-1m (%)	2022 (%)
S&P 500	4 121	-0.89	-0.05	-13.5
EuroStoxx 50	3 815	0.69	5.13	-11.2
CAC 40	6 517	0.74	4.13	-8.9
Nikkei 225	27 944	2.43	3.48	-2.9
Shanghai Composite	3 242	2.94	8.00	-10.9
VIX - Implied Volatility Index	25.07	-4.28	-16.96	45.6

Source: Bloomberg, Ostrum AM

Additional notes

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