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IDEA

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Global Macro Strategist | Global

Trends Have Been Friends

Rates and currency markets have trended in the same direction all year, with rates and the US dollar moving higher. Equity markets have largely trended lower, while commodities trended higher in 1H, then lower so far in 2H. We identify four main drivers and speculate on the timing of the reversal.

Global Macro Strategy

We discuss four drivers of macro market trends and when they might come to an end. We also discuss the implications of volatility and margin calls on UK gilts. Finally, we address why we think another Plaza Accord isn't in the making.

Interest Rate Strategy

We maintain 1s10s flatteners, short the June FOMC contract, and maintain EDZ3Z4 flatteners. We keep our EUR 10y10y swap paying position (target now 2.75%), long EUR 5y5y inflation swap, and Nov 139/137/136 Bund broken put fly. On the curve, we closed our EUR 2s5s10s swap fly. We keep our EUR 30s50s swap (target now -49bp). On EGBs, we keep our short 5y Spain and 30y Italy vs France. We keep our long Bund ASW. We suggest sticking with JGB 10s20s steepeners (DV01 2 vs 1) as well as TONA 5s20s steepeners. BoE's temporary purchases are likely to support UK duration and especially long gilts. With heightened volatility, our highest conviction UK idea is the long position in 5y RPI swaps.

Currency & Foreign Exchange

Stay long USD vs EUR, GBP, JPY, and CAD. We're skeptical a coordinated USD-weakening intervention would happen, but even if it did, we're skeptical it would work. We take stock of how FX-hedged yields look like now for different assets for different investors. We now see GBP/USD falling to parity by year end.

Inflation-Linked Bonds

We continue to recommend long 1y1y via zero-coupon inflation swaps or Jul23 vs. Jul24 breakevens. We provide an update on the 1y1y position, and analyze TIPS liquidity. We close our long position in OATei24 BE and initiate a long in 2y3y HICPx swap. Policy intervention from additional countries is likely to weigh on the sub 1y fixings, while the theme of inflation stickiness will likely be priced in the 2-5 sector.

Short-Duration Strategy

We review this week's move lower in SOFR and market short-term expectations for rates. In a special section, we examine UST liquidity and find minimal impact to funding markets.

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Global Macro Strategy

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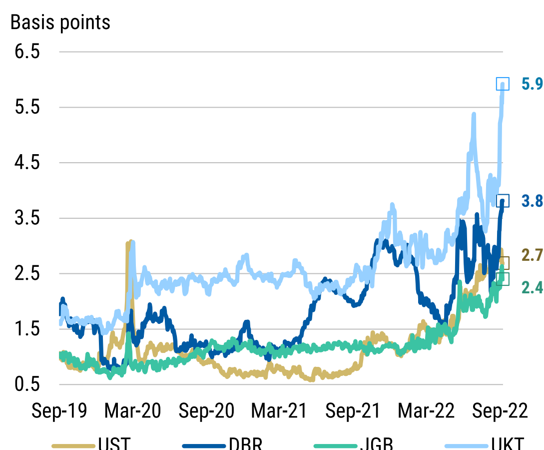
Keep Your Trends Close, And Your Reversals Closer

Trends have been friends to many macro investors in 2022. Interest rates – both policy rates and those on government bonds – have been trending higher all year alongside the price of US dollars. Equity prices have trended lower all year. Commodity prices trended higher in 1H22, then began trending lower in 2H22.

Government bond liquidity has trended worse over the year, and culminated in a widespread market breakdown in the UK the past week (see Exhibit 1). With inflation continuing to surprise higher in Europe and the US, central banks have little economic data to encourage a less hawkish approach to setting monetary policy.

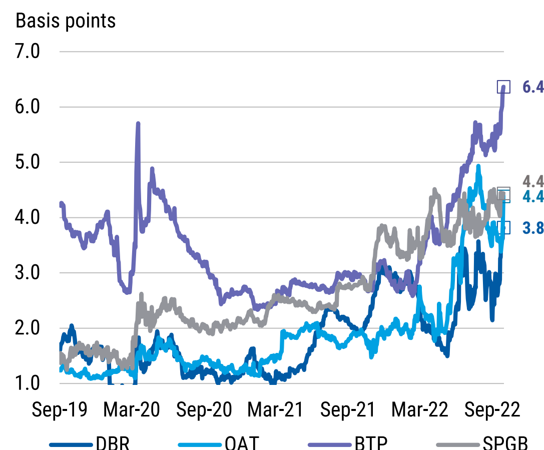
In Europe, our economists now forecast the ECB to hike 75bp in October and 50bp in December. That would leave the new peak rate at 2.5% in March 2023. With discussion about ECB QT ramping up, we suspect the trend toward worse liquidity in EGBs will continue (see Exhibit 2 and ECB QT and Lessons from the 2013 Taper Tantrum).

Exhibit 1: Government bond liquidity indexes: UST, DBR, JGB, UKT*



Source: Morgan Stanley Research, Bloomberg
* Note: average yield error of >1y maturity sector vs. spline

Exhibit 2: Government bond liquidity indexes: DBR, OAT, BTP, SPGB*



Source: Morgan Stanley Research, Bloomberg
* Note: average yield error of >1y maturity sector vs. spline

In macro markets, any given year usually sees 3 to 4 big trends from which investors could profit. But those trends usually don't last the entire year, don't occur in near-perfect unison, and aren't driven by the same set of factors. The market trends in 2022 have broken the mold thus far.

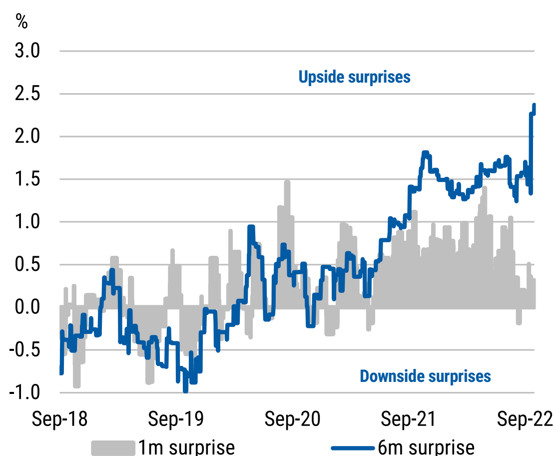
What explains these unusually persistent, coordinated trends? Four factors, we think:

1. Global consumer price inflation
2. Global central bank reactions to inflation
3. The energy crisis and coming winter in Europe
4. The housing downturn and strict Covid management in China

Inflation and its persistence has been a dominant factor in macro markets all year. Incessant upside surprises in both DM and EM measures of consumer price inflation have rattled central bankers and investors alike.

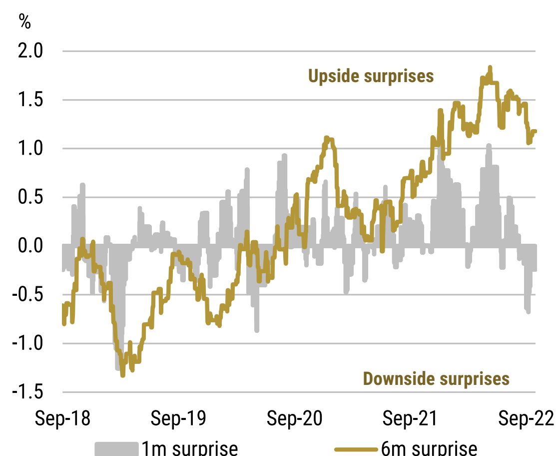
More recently, inflation in EM has been surprising to the downside, on balance, but not so in DM. Inflation surprises reached a new rolling 6-month high this past week thanks to data in the US and Europe (see Exhibit 3 and Exhibit 4).

Exhibit 3: Developed market inflation surprise balances: 1m and 6m windows



Source: Morgan Stanley Research, Bloomberg

Exhibit 4: Emerging market inflation surprise balances: 1m and 6m windows

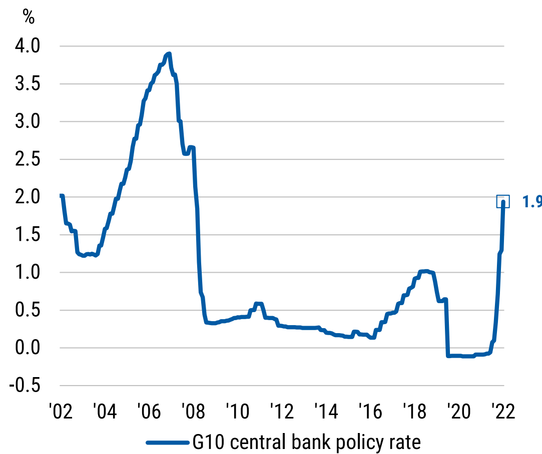


Source: Morgan Stanley Research, Bloomberg

Global central banks have reacted to the higher-than-expected inflation by raising policy rates much more than expected. In the G10, the GDP-weighted policy rate stands at 1.9% through 3Q22 (see Exhibit 5). That compares to what our economists had forecast as recently as May of this year: a policy rate that reached 1.8% at the end of 2023.

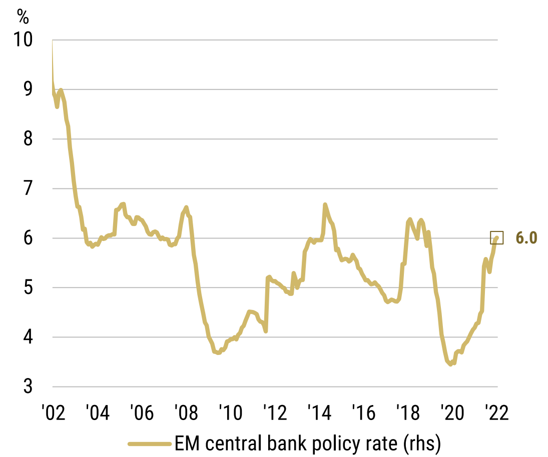
Where inflation has surprised less around the world, in EM, our economists' forecasts for policy proved more accurate. They forecast a peak EM policy rate just below 6.0% in 2022 versus the 6.0% rate that stands today (see Exhibit 6).

Exhibit 5: G10 central bank policy rate, GDP-weighted*



Source: Morgan Stanley Research, National Central Banks, IMF, Bloomberg
* Composite policy rates are weighted by the IMF's GDP based on PPP share of world total

Exhibit 6: EM central bank policy rate, GDP-weighted*



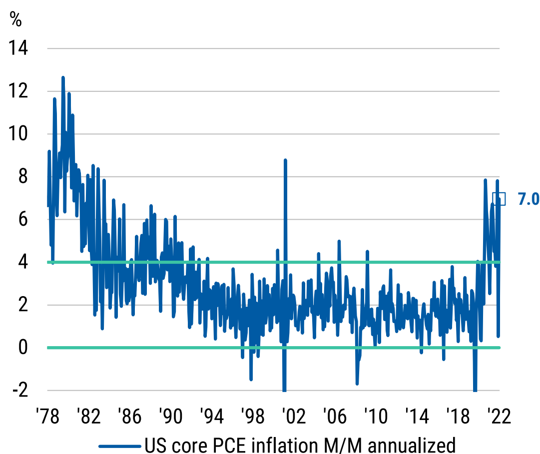
Source: Morgan Stanley Research estimates, National Central Banks, IMF, BIS, Bloomberg
* Composite policy rates are weighted by the IMF's GDP based on PPP share of world total
Note: EM central bank composite includes ARS, BRL, CLP, CNY, COP, CZK, HUF, HKD, INR, IDR, MYR, MXN, PEN, PHP, PLN, RUB, ZAR, KRW, TWD, THB, TRY, UAH

The energy crisis in Europe (sparked by the war in Ukraine) and weakness in China's economy (exacerbated by a strict Covid management approach) have also been thematic for most of the year. Certainly, these factors have played important roles in driving consumer price inflation higher.

They say the trend is your friend. They also say keep your friends close, and your enemies closer. And the enemy of a trend is a reversal. While the four factors above have allowed for strong macro markets trends, they won't last forever. So we need to think about when they may end.

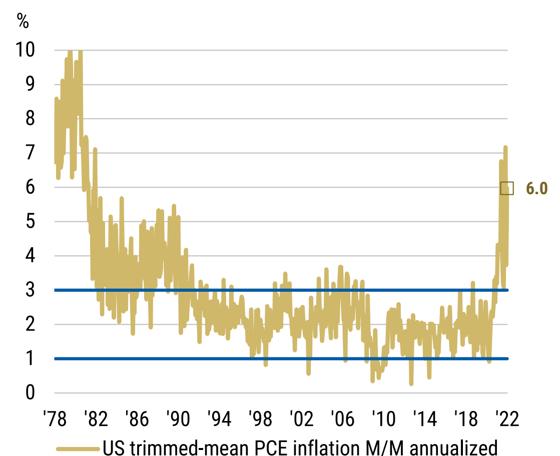
Our economists see many Y/Y inflation rates peaking in 4Q22 (see Inflation-Linked Market Strategy: Forecasts & Fixings). Of course, in recent months, very strong M/M prints on the core and trimmed-mean measures of inflation have made calling the peak in Y/Y challenging, especially in Europe and the US (see Exhibit 7 and Exhibit 8).

Exhibit 7: US core PCE inflation, M/M annualized



Source: Morgan Stanley Research, BEA

Exhibit 8: US trimmed-mean PCE inflation, M/M annualized



Source: Morgan Stanley Research, FRB Dallas

In addition, our economists see central bank policy rates peaking near the turn of the year. Naturally, this forecast closely aligns with their views on inflation. While they don't see a near-term reversal in central bank policy rates, the end of hiking cycles alone would represent quite a change in trend.

What about the energy crisis and war in Europe, and the housing downturn and strict Covid management approach in China? We look to the G20 Leader's Summit in Indonesia on November 15-16 as the start of a possible turning point in the war.

We also think uncertainty about the winter in Europe – the weather and its effect on demand for energy, and the impact of energy prices on consumption and production – might climax as we approach January, the coldest month in Europe on average.

As for China, our economists expect the economy to muddle through with incremental easing for now. But as the year comes to an end, our economists expect policymakers to take important steps that would allow reopening from spring 2023. There are good reasons why Beijing could prepare to move beyond Covid.

In summary, all four factors that have driven macro markets to trend this year may come to an end in 4Q22. The timing would also align with a seasonal lull in the willingness to take risk – meaning lower trading volumes, which are conducive to trend-ending, blow-off tops and bottoms.

Our advice? Keep your trends close, and your reversals closer. Look for a top in the US dollar and a top in government bond yields – inflection points from which the first tradable trends of 2023 may emerge.

Implications of Volatility and Margin Calls for Gilts

On September 20, we discussed volatility, UK fiscal spending, and the critical condition of UK real money investors, especially pension schemes (see Real money investors and volatility – it is critical). By September 28, the condition was so critical that the BoE had to initiate emergency bond purchases to reduce risks to financial stability. So let's dissect the different catalysts that led to this challenging environment, not just for the UK, but for the entire financial system in general.

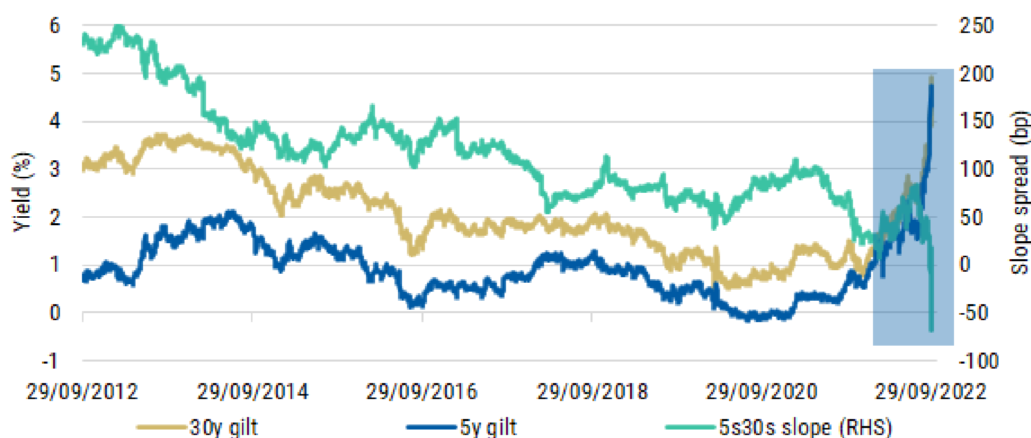
The catalysts so far: First, on September 22 the BoE reaffirms its intention to conduct QT, and then the Chancellor announces tax cuts on Friday, September 23, leading to some pressure in the gilt market. The pressure escalates by the hour and on that same Friday, 5s30s in gilts bear flattens by 30bp within a matter of hours.

Another 25bp of flattening in 5s30s takes place on September 26, which can still be attributed partly to fundamentals of a potential early hike. However, on September 27, this escalates, with curves going into bear-steepening mode and on September 28, ultra-long linkers are offered, indicating that the market is no longer functioning and the BoE has to step in.

The BoE's purchases will last until October 14, aiming to provide smooth market functioning and to avoid disorderly price action at the long-end of the UK curve with long bonds being a key asset of UK pension schemes and real money investors. This has helped the 5s30s flattening on the gilt curve which is a theme that we flagged 10 days ago due to curve and issuance dynamics (massive issuance of short gilts).

While fundamentals and BoE action have supported the theme, the market liquidation on September 27 would have made it difficult for investors to actually maintain the position. In other words, even if someone had the right trade, it would be difficult to maintain it within an environment of high volatility and margin calls.

Exhibit 9: 85bp flattening in 5s30s within 10 days



Source: Morgan Stanley Research

The repo market: The repo market is still under stress and this has become evident by the magnitude of gilts trading special. In theory, the spread between the Standing Repo Facility (SRF) and Sonia should be at -0.69% (or alternatively -0.75% for SRF - Bank Rate), but we have seen several front-end gilts trading very expensive, at levels richer than the spread. This is a strong indication of short gilt scarcity and, in other words, collateral scarcity. Gilts are a valuable asset as collateral and their richness in repo indicates this scarcity.

It is not exactly a repeat of March 19, 2020: In March 2020, the BoE offered a clear commitment to buy a specific amount of gilts every day. In March and April 2020 the market experienced negative net DV01, which supported UK duration in outright and cross-market terms.

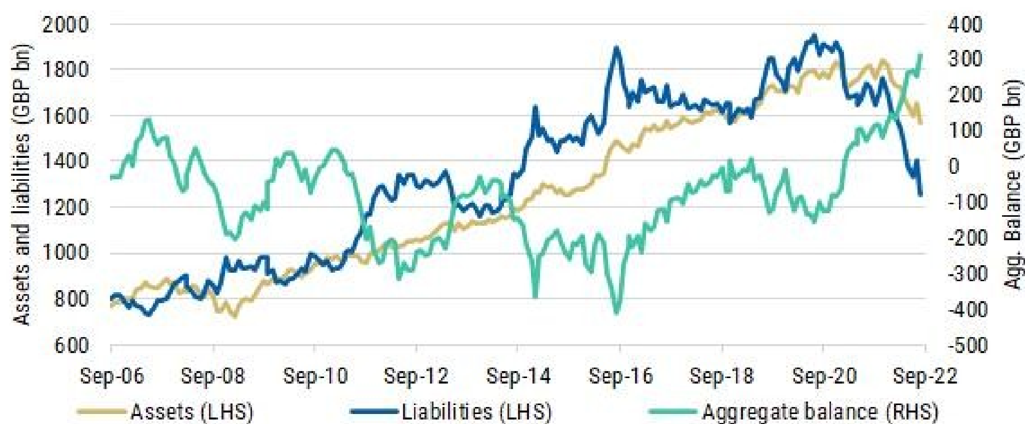
The BoE's announcement on temporary purchases mentions that it will be up to £5 billion daily for 13 days (10 more to go). But the BoE has so far purchased less than £4bn in the first three sessions so clearly **it is a matter of stability rather than absorbing DV01 from the market**. There has been strong curve flattening but the latter would have caused an even more dramatic price action, which the BoE has so far avoided.

Pension schemes and LDI activity: By now, most investors across the globe must have heard about liability-driven investment (LDI), which has become very relevant after the recent market moves.

According to the Pension Protection Fund (PPF) DB pension assets account for about £1.55 trillion as of August 31. From that, we estimate around 75% to be invested in bonds so the pension industry should hold about £1.16 trillion in bonds. From this quantity, we estimate that a quarter is invested in conventional gilts, a quarter in corporate bonds and half in UK linkers. Typically, schemes tend to be long equities and underhedged in FI duration.

In theory, the recent rise across yields has been very beneficial for such schemes as, on an accounting basis (s179), these schemes are well funded (Exhibit 10). Among their liabilities, some may be present and some are future. Those future liabilities are discounted at higher rates due to those accounting standards, with the majority of schemes having a gilt benchmark.

Exhibit 10: On a s179 basis, UK DB schemes are well funded



Source: PPF, Morgan Stanley Research

But a scheme needs to survive **in practice.** This includes having enough cash-generative assets and being able to meet margin calls, and all this is different from the accounting definition of a well-funded scheme. **Probably the biggest challenge of 1H22 for the UK bond market has been the persistence of margin calls, with the LDI community not buying duration as actively as in previous years.** We previously discussed the topic in Real money investors and volatility – it is getting critical.

Pension schemes will be active in a combination of the following:

- Buying gilts on repo
- Buying gilts on TRS
- Receiving Sonia swaps
- Buying inflation swap
- Using gilts as collateral and buying other assets

The common denominator of all those activities is that they are long UK duration, long inflation risk and long leverage. The latter means implicitly that they are **short volatility**. And this is the main source of the problem.

The margin call: One component is variation margin necessary to meet daily moves (which recently rose), the other is having cash aside to meet stress scenarios. For the latter we have seen figures across pension scheme provisions ranging from 100-150bp, which have recently been hit, and hence schemes need to set cash aside in the event of further volatility. The BoE's temporary asset purchases are important in the sense that they provide some time for pension funds to meet any margin calls.

Key upcoming catalysts: There are 10 temporary gilt purchase sessions ahead of us until October 14. We suspect that these sessions will be used by investors who need to sell. Once this is out of the picture, we believe that tactical shorts may re-emerge. So we suspect that as the end of those purchases approaches, tactical investors **will increase exposure in short long-end positions.**

Catherine Mann speaks on October 3 at a panel while Dave Ramsden speaks on fintech on October 7. The Chancellor is expected to speak on Monday 4.30pm (BST) and PM Liz Truss on Wednesday early in the morning.

Any indication of less fiscal spending should support UK duration and **especially the front-end**. Moreover, we need to re-iterate **the link between front-end gilt issuance and gas prices** that has been established by the government's promise on the £2500 energy bill freeze.

Another Plaza Accord In The Making?

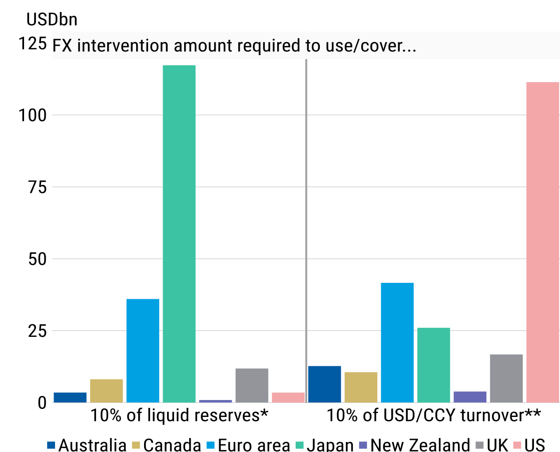
Investors are increasingly asking about the prospect for "Plaza Accord II", or a coordinated global effort to weaken the USD in response to its pernicious strength. Is this likely? And if it happened, would it work? We think the answer to both questions is no. See more here: USD | Are we meeting at the Plaza?

Why it's not likely: First and most importantly, a weaker USD runs counter to what the Fed and Treasury are trying to achieve: lower inflation. A weaker USD is, on net, inflationary in the US and deflationary abroad; foreign currency appreciation supports higher external demand. While US inflation is elevated, it seems difficult to countenance why the US would proactively participate in an inflationary USD policy, and without US participation, we see little chance of success.

Second, DM policymakers have generally questioned the efficacy and appropriateness of currency management, particularly in the US as is evident in the US Treasury's *Macroeconomic and Foreign Exchange Policies of Major Trading Partners of the United States* report.

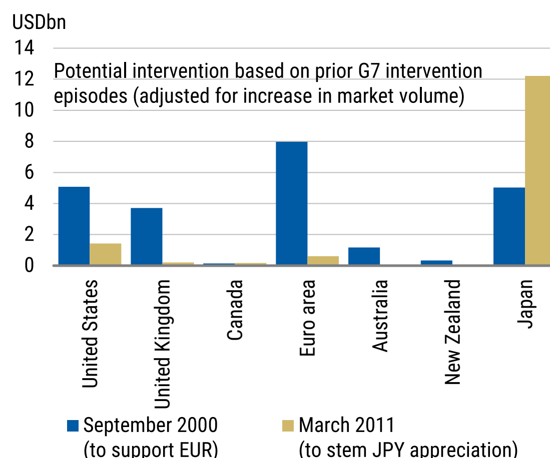
Why it's not likely to work: We think policymakers are aware of a hard truth: they don't have enough FX reserves to make a sustained difference. Back in 1985-87, the last time we had a coordinated intervention to weaken USD (known as the Plaza Accord), daily FX turnover was near US$200 billion per day (on a net-gross basis) but, as of the last reported BIS figure in 2019, daily turnover is over 40 times higher, at US$8.3 trillion per day.

Exhibit 11: With the exception of Japan, no other country in the G7 would be able to cover 10% of the daily spot USD/CCY trading volume with 10% of their reserves



Source: Macrobond, BIS, Morgan Stanley Research; Note: *Liquid reserves include securities and currency deposits. **We use daily USD/CCY spot turnover. For the US, only USD/G7 turnover is considered.

Exhibit 12: How much each G7 country could intervene, based on prior coordinated intervention episodes



Source: Central bank/government websites, IMF, Macrobond, Morgan Stanley Research; Note: Published spot intervention volumes are used when available. Otherwise, interventions are proxied through IMF data or monthly changes in FX reserves. Volumes are adjusted for the increase in total FX spot trading volume since each episode

What does "firepower" look like? In Exhibit 11 and Exhibit 12, we compare current stocks of liquid FX reserves (securities and deposits) to current FX turnover and compare past interventions to what might be required today using adjusted FX volume data.

With the exception of Japan, no other country in the G7 would be able to cover 10% of the daily spot USD/CCY trading volume with 10% of their reserves. This points to the unsustainability of any prolonged FX intervention campaign. Using previous interventions in September 2000 and March 2011, we estimate that an equivalent of $23.4bn and $14.6bn in sales would be required to match the volume-adjusted effects of these prior interventions.

Monetary policy changes are generally far more able to influence FX values than intervention alone: What if the Fed were to cut rates to help weaken USD? In this scenario, we think the alternative narrative could create further problems. Rate cuts from the Fed amid near double-digit inflation are likely to raise questions about its inflation-fighting credibility, and markets could price in an even higher terminal rate in response.

Meanwhile, even more aggressive tightening abroad designed to support their currencies, mirroring the Fed's moves, may reduce expectations for global growth further, fueling more USD safe-haven demand. Such a coordinated action would raise investor uncertainty about the path of inflation and the global policy framework, bolstering volatility. The risk would then be that the Fed would subsequently need to hike even more to offset credibility concerns.

In sum, we think that the combination of limited US appetite, limited resources, and limited effectiveness renders a coordinated intervention difficult and unlikely. What seems more likely is the Fed acknowledging the global effect of a strong dollar and elevated interest rates *after* it has confidence that it has control of inflation.

As our US economics colleagues highlight, there is little pressure from the domestic economy for policymakers to respond to the strong USD. A clear peak in US inflation data as well as clear signs from the labor market that aggregate demand is pulling back would be two important steps.

Lael Brainard, the current Vice-Chair, acknowledged when she was a Board Governor in 2015 the risks to US growth from weaker global growth on the back of the 2014/15 dollar move. Such statements could be reintroduced to give markets confidence that the Fed acknowledges the risks to growth from the current interest rate cycle. For the Treasury to act, the threshold remains unclear, given the obstacles discussed in our more detailed report, where we look at an abbreviated history of the post-Bretton Woods attempts at currency coordination.

Our Current Stance On Markets

In global rates markets, we maintain EDZ3EDZ4 flatteners, 6m2s30s bear steepeners, 1s10s flatteners, and short FFN3. We maintain long July '24 TIPS BE vs. short July '23 TIPS BE and long 1y1y ZCIS.

In the euro area, we close our EUR 2s5s10s swap fly and OATei24 BE. We enter long 2y3y EUR HICPx swap. We maintain our EUR 10y10y swap paying trade, our long EUR 5y5y inflation swap, and our EUR 30s50s swap receiving trade. We continue to recommend November 139/137/136 Bund broken put fly and long RX Invoice spread. We maintain short SPGB Jan 27 vs. FTFR Feb 27, long June 23 FRA/€STR positions, and short 30y BTP vs. OAT.

In the UK, we continue to recommend UKT 0S 33 versus 4Q 32 and 4H 34, long 5y UK RPI swap, and long UKT 1E 39 vs. UKT 0H 61.

In Japan, we maintain TONA OIS 5s20s steepener, JGB 10s20s steepener (DV01 2:1), and TONA/SOFR basis 2s10s20s fly.

In dollar bloc, we maintain long BAZ2 - BAZ3 steepeners.

In foreign exchange markets, we maintain short GBP/USD (target 1.00, stop 1.18), short EUR/USD (target 0.93, stop 1.05), and long USD/CAD (target 1.40, stop 1.31). In FX options, we maintain long USD/JPY 3m seagulls (long 142.50/150 call spread, sell 138.5 put), long EUR/GBP 6m 0.90/0.95 call spread, and long CHF/JPY 3m Seagull (Buy 3m ATMF/155 Call Spread, Sell 144 Put).

Interest Rate Strategy

United States

Price action for US Treasuries was largely determined by events overseas – potential margin calls for UK pension funds drove a significant cheapening of gilts, and the possibility of liquidation of other assets by UK pension funds, including US fixed income, led to a lower beta rise in Treasury yields.

In addition, a rising dollar and news of currency intervention from Japan, India, and Korea ignited the possibility of Treasury sales. In a self-fulfilling loop, more dollar strength raises the risk of short-term Treasury sales from central banks to defend their currencies, which translates to higher front-end yields, which favors an even higher dollar, and then even higher Treasury yields.

With this strong data backdrop, de-anchoring inflation expectations, and the scope for more hard data surprises, we continue to suggest playing for an even higher terminal rate in US rates and maintain our short the June FOMC contract (FFN3). At the same time, we continue to suggest the combination of 1s10s flatteners alongside 6m2s30s bear steepeners acting a cheap hedge.

Euro area

The 10y Bund yield has risen above the 2.25% level we had flagged as the likely peak in Bund yields in 4Q22 (see European Rates: Peak in Core Yields in Early 4Q22, published on 28 June) before stabilising around its fair value. We believe that going into October we could see some sort of repetition of the sharp selling seen in June, which could push the 10y Bund temporarily to 2.50% by mid-October. We keep our EUR 10y10y swap paying position (target revised to 2.75%) and our Nov 139/137/136 Bund broken put fly. On the curve, the continued rise in swaption volatility fuelled further cheapening of the 5y and 50y buckets. We closed our EUR 2s5s10s swap fly. We keep our EUR 30s50s swap as the fair value moved lower (target revised to -49bp). On EGBs, 5y OATs are cheaper again versus Germany, and this should support our long 5y OAT versus Bono. We keep our short 30y Italy for the time being, but consider that the potential for a significant spread widening is limited. On German ASW, we expect a further widening in the near-term supported by higher risky-asset volatility and weaker credit and non-core EGBs.

United Kingdom

So far, the BoE has tried to support smooth market functioning, and we have a curve of two halves: the sub-20y area fluctuates on any news while 20y+ tenors reflect a premium as they offer the opportunity to be bought by the BoE. And the flattening theme should continue next week. For the time being and until October 14, we expect long yields to stabilise modestly lower, albeit it is likely to be a bumpy ride. Meanwhile, irrespective of fiscal news, we think that long 5y RPI swaps is a trade with decent risk/reward. We envision this trade to perform on the

inflation stickiness or a UK-economy bearish scenario where the drop in sterling leads to more imported inflation.

Japan

We discuss how the market misunderstood the relationship between the BoJ and MoF. After the MoF's JPY buying intervention, many have told us that they expect unilateral intervention to have no more than a temporary impact and, as such, still believe that the BoJ will ultimately find itself forced to take some sort of action in the “normalization” or tightening direction.

This is why the market continues to price in some chance of BoJ tweaking in the near term. However, it is important to recognize that the BoJ and the MoF are working towards different policy objectives. The BoJ's objective is to achieve its 2% price stability target in a sustainable and stable manner, which will require more than just a rise in import prices. With the BoJ downplaying the cost-push-type inflation, our economists believe that there will be a high hurdle for the Kuroda-led BoJ mounting any sort of response to temporarily elevated headline inflation.

We also discuss how the recent global liquidity concern affects the JGB market. Given the risk of futures' dysfunctionality, we believe that long-end JGBs would continue to be traded volatile, particularly without domestic investors' participation. Absorbing high levels of super-long JGB issuance is liable to prove difficult without more active participation by domestic players, which is why we expect that the 20-year sector will continue to underperform on the curve owing to its lack of “mainstay” investors. Hence, we suggest sticking with JGB 10s20s steepeners (DV01 2 vs 1) as well as TONA 5s20s steepeners.

United States | Focused on the strong economic data

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	Duration	Curve	Inflation
VIEW	**NEUTRAL ON LONG END**	**FLATTENING BIAS**	**BULLISH SHORT TERM INFLATION**
	Bearish on short end		Higher real yield bias
Remarks	7Low interest rates sensitivity; high terminal rates	High terminal rate, rising global recession risks, and pension bid	Markets underestimate inflation persistence; cheap pricing
Trades	Short FFN3 contract	1s10s flatteners	Long 1y1y CPI swaps

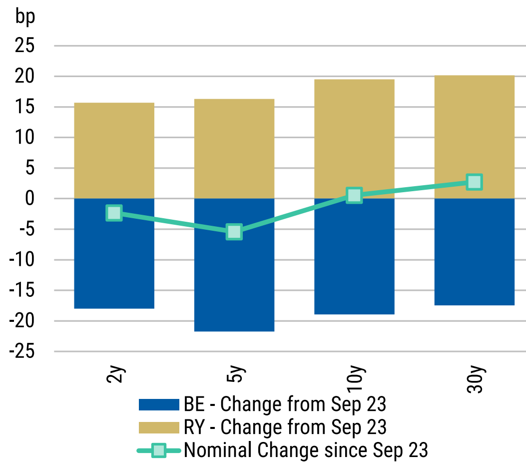
Volatility across the pond

Global rates markets saw a very volatile week, where yields experienced wild swings, but ultimately Treasury yields settled close to where they began the week. The price action for US Treasuries was largely determined by events overseas – potential margin calls for UK pension funds drove a significant cheapening of gilts, and the possible liquidation of other assets by UK pension funds, including US fixed income, led to a lower beta rise in Treasury yields – see details of UK rates dynamics here.

In addition, the rising dollar and news of currency intervention from Japan, India, and Korea ignited the possibility of Treasury sales, most visibly showing up in Treasuries cheapening sharply vs. OIS and Libor in the front-end (see Exhibit 14). Japanese intervention totalling to ~$20bn and a $38bn drawdown in foreign official holdings highlight the growing need for intervention against a rising dollar.

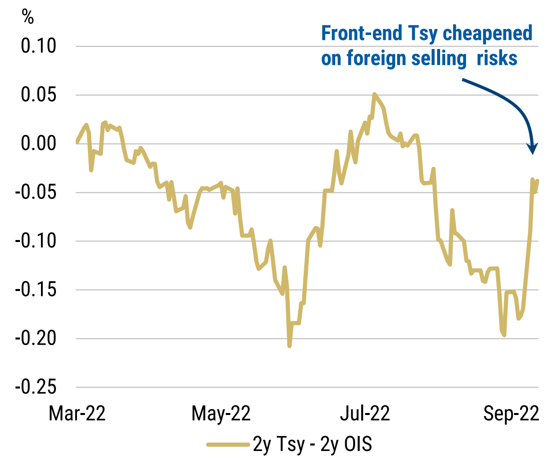
The opening of the Fx intervention channel adds some additional pressure for higher front-end yields and cheaper Treasuries. More dollar strength tends to raise the risk of short-term Treasury sales from central banks to defend their currencies, which translates to higher front-end yields, which favors an even higher dollar, and then even higher Treasury yields.

Exhibit 13: Moves in Treasury yields, real yields, and breakevens over the week



Source: Bloomberg, Morgan Stanley Research

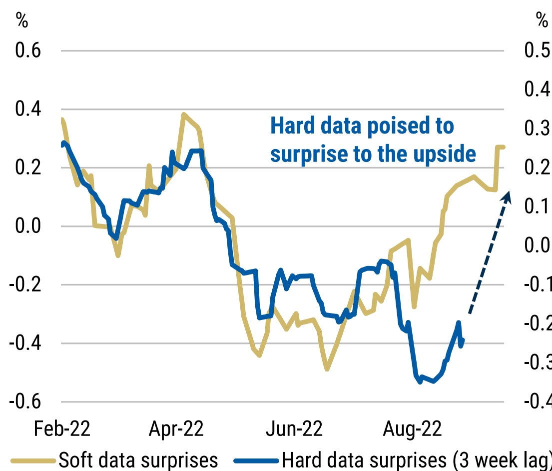
Exhibit 14: 2y Treasury vs. OIS in the last six months



Source: Bloomberg, Morgan Stanley Research

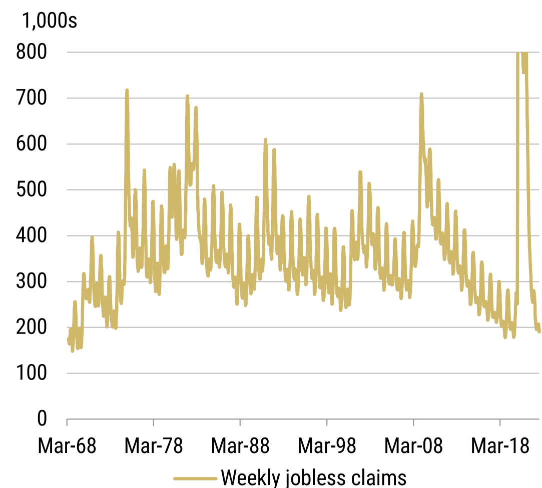
Finally, the constantly hawkish drumbeat from Fed officials, even amid jittery markets and tightening financial conditions, meant that TIPS significantly underperformed vs. Treasuries over the week (see Exhibit 13). 10y real yields are now close to 1.50% and the 5s30s real yield curve is fully inverted, suggesting tight policy has impacted real yields as well.

Exhibit 15: Hard data upside surprises, beating as was expected



Source: Bloomberg, Morgan Stanley Research

Exhibit 16: Weekly jobless claims very low on a non-seasonally adjusted basis



Source: Bloomberg, Morgan Stanley Research

Don't forget the stronger-than-expected economic data in the US: In the volatile rates market moves, with headlines from the UK dominating, one must not forget that the US economic data continued to surprise to the upside – something we have expected – and something that has more room to go (see Exhibit 15).

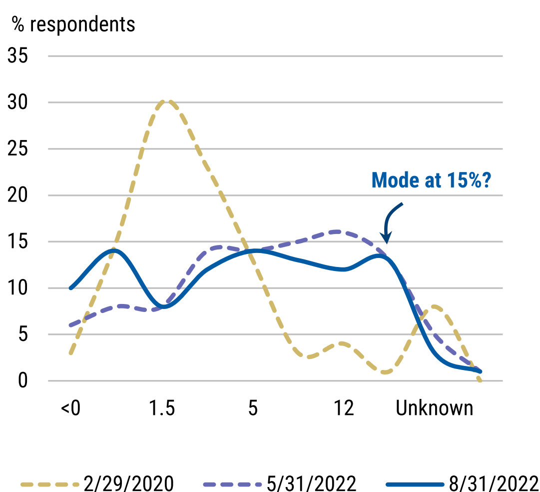
Picking out key hard data points, jobless claims surprised significantly to the downside, suggesting an ever-tightening job market (the opposite of what the Fed may want). At the same time, while GDI was revised closer to GDP, the details revealed personal consumption expenditures (PCE) in 2Q22 were higher than expected. And lastly, the

personal income and spending report for August was notably strong, with both PCE inflation and real spending beating consensus expectations.

The strong data fits in line with the trend, but also signifies that higher interest rates aren't significantly denting the demand side of the economy, highlighting the possibility of low interest rate sensitivity in the US economy.

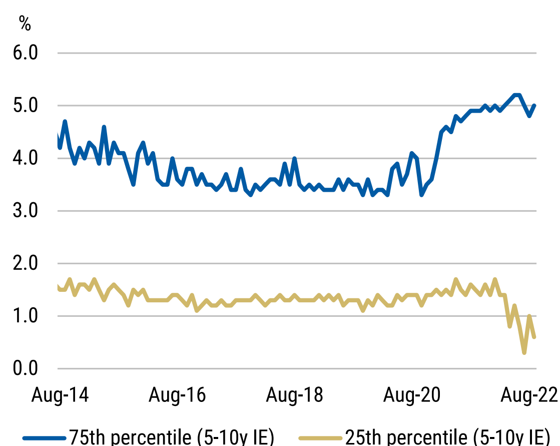
If the payrolls report for September, to be released next Friday, continues to surprise to the upside in line with jobless claims, we could see another leg higher in the front-end, with terminal rates heading closer to 4.75-5.00%, instead of holding around 4.50% currently.

Exhibit 17: Distribution of 5y5y survey responses



Source: Bloomberg, Morgan Stanley Research

Exhibit 18: 25th and 75th percentile in UMich 5-10y inflation expectations



Source: Bloomberg, Morgan Stanley Research

Finally, it is notable that consumers' responses in 1y ahead inflation expectations continue to de-anchor (see Exhibit 17). And both the 25th and 75th percentile of 5-10y inflation expectations are moving to extremes – another sign of a lack of a credible inflation anchor (see Exhibit 18).

With this strong data backdrop, de-anchoring inflation expectations, and the scope for more hard data surprises (see Exhibit 15), **we continue to suggest playing for an even higher terminal rate in US rates and maintain our short position on the June FOMC contract (FFN3).**

At the same time, we continue to suggest the combination of 1s10s flatteners alongside 6m2s30s bear steepeners acting a cheap hedge. The bear steepener we initiated two weeks ago has offered protection to the curve flattener as 6m30y payers are in the money while 6m2y payers short struck 30bp OTM are still not OTM. Going forward, if the yield curve continues to bear steepen, which is possible, given the view from our European rates strategists, we think the bear steepener will continue to offer protection to the flattener. We also maintain EDZ3Z4 flatteners.

Trade idea: Maintain short FFN3 at 95.32
Trade idea: Maintain 1s10s flatteners at -27bp
Trade idea: Maintain EDZ3Z4 flatteners at -57bp
Trade idea: Maintain zero cost 6m2s30s bear steepeners struck at -120bp

Euro area | Entering overshooting territory

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Exhibit 19: Summary of our EUR views

1-month horizon	Duration	Curve	Inflation	ASW	EGB spreads
Macro	Bearish	Flatter	Higher	Tighter	Wider
Net supply after QE	Negative	Steepeners 2s10s			
Valuation	Bund Oct FV at 2.05%	EUR 5s10s30s 5bp rich		Buxl ASW 5.5bp cheap	2y BTP 22bp cheap vs Bono
Seasonality	Bearish seasonal on 30 Sept - 80%	EUR 2s10s steepening first week of Oct - 87%		Bund ASW widening from 19 Sep	
Technical analysis	Weekly stochastics oversold				
Market positioning	Final investors slightly short	2s5s/2s10s flatteners	Long 2y to 5y maturities	Short ASW	Short OATs
Preferred trades	Structural short	Rec EUR 30s50s swap	Long EUR 5y5y inflation	Long Bund ASW	Short 5y Spain vs France
	Long Nov 139/137/136 Bund broken put fly	**Closed EUR 2s5s10s swap fly**			Short 30y BTP vs OAT
	Pay EUR 10y10y swap	Long June 23 FRA/€STR basis			
Our view	**Bearish**	**Cheaper EUR 5y swap**	**Higher**	**Wider**	**Wider non-core spreads**

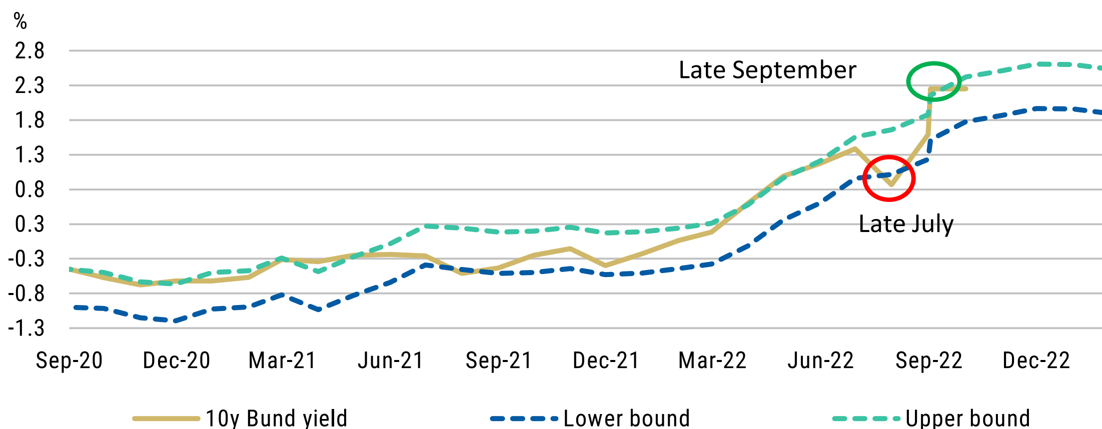
Source: Morgan Stanley Research

Duration

The 10y Bund yield has risen above the 2.25% level we had flagged as the likely peak in Bund yields in 4Q22 (see European Rates: Peak in Core Yields in Early 4Q22 published on 28 June). However, as stressed last week (see Global Macro Strategist: Wrong Way Risk) we believe that going into October we could see some sort of repetition of the sharp selling seen in June, which could push the 10y Bund temporarily to 2.50%. The reasons for this are as follows:

- **Valuation:** 10y Bund yields were temporarily around 55bp cheap versus our model fair value for September this week, i.e. above the upper bound of our theoretical corridor, which is the opposite of the early August valuation (see Exhibit 20) when yields were 50bp+ below our model fair value. However, moving to October, with today's rally there is no discount on the 10y Bund yield making the price action asymmetric again.

Exhibit 20: Observed Bund yield and theoretical corridor: above the upper bound - but a rising one - in October



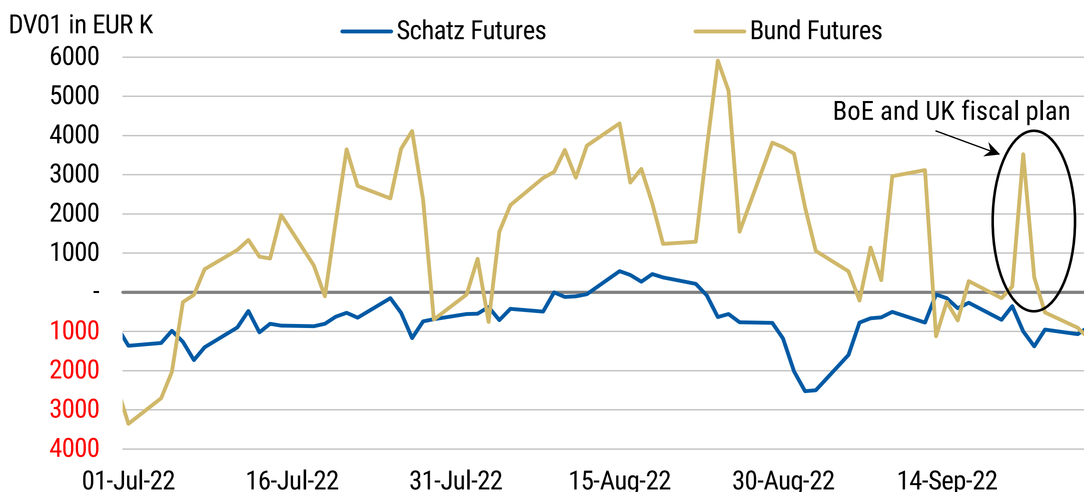
Source: Morgan Stanley Research Estimates * lower and upper bound is derived from the fair value minus or plus 1.5 standard deviations

- **QT risk premium:** in our second note on the ECB's QT, European Rates: ECB QT and Lessons from the 2013 Taper Tantrum, the study of 2013 showed that once a central bank mentions less QE support, bond investors will gradually price in that risk even if it is a remote one (there were seven months between the first mention of Fed tapering and the official Fed tapering announcement). The extent of the potential shock on gross supply minus gross QE, even under a 25% PSPP rolloff - the year-on-year increase would be 41%, after a 190% rise in 2022 versus 2021 - would warrant a rising QT risk premium on Bunds, in our view.

- Positioning: In terms of positioning, according to Eurex statistics, final investors (CTA, real money and hedge funds) added shorts on the Schatz and Buxl, while Bobl positioning turned net long on the 27th and net short on the Bund future on the 23rd (see Exhibit 21, as of 27 September 2022). The net short DV01 on the Buxl is close to a 6-month high at EUR 20.8mn whereas net positioning in DV01 remains negligible in other contracts compared to a six-month and year-to-date history.

On the Bund future, the net positioning which was back to flat on 20 September spiked to a EUR +3.5mn net long, when the 10y Bund was close to 2% the next day. However, those longs were cut during the following two days (as the BoE confirmed active gilt sales) and amid the UK economic plan announcement, which led to a significant sell-off in duration. On Tuesday, net positioning on the Bund future was back to EUR -1.17m DV01 which is far from the record short levels observed over the past years, reducing the risk of a pronounced short-squeeze in the very near term.

Exhibit 21: Final investors net positioning in the Bund turned short as duration experiences an extensive sell-off



Source: Morgan Stanley Research

- **Seasonality:** as Exhibit 22 illustrates, the next pattern is a bearish duration one and will start from today's close and last until 18 October (a similar pattern has been observed for Gilts and USTs during the 2007-2021 period). That bearish pattern has been observed 73% of the time for the 2007-2021 period and will be followed by a bullish one around mid-November. It is worth noting that all the Bund seasonal patterns occurred over the past year with the exception of the August one, but we warned in July that the probability of a rally in August during Bund bear markets had fallen to 50%, making a rally unlikely for August 2022.

Exhibit 22: Bund seasonal patterns: bearish period from Friday's closing

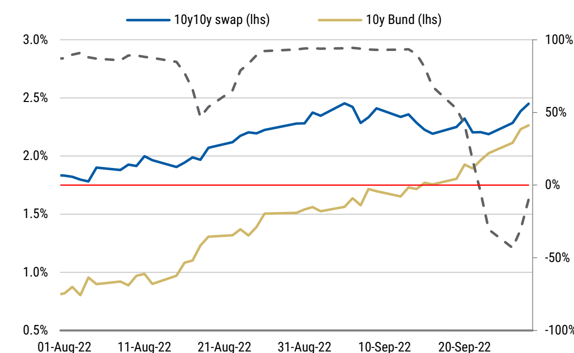
Bund 10y: Seasonal rally patterns								
Period	Length	Average move	Av. Rally	Obs. Prob	Max	Min	St.dev.	Av. move/St. Dev.
February from d8	13	-9.4	-12.2	87%	11.5	-25.1	9.9	1.0
June from d8	26	-13.2	-17.2	87%	24.9	-30.7	13.9	1.0
August	14	-9.6	-17.3	73%	22.2	-42.8	17.7	0.5
November from d9	11	-4.3	-10.9	80%	42.0	-42.1	18.4	0.2
Bund 10y: Seasonal sell-off patterns								
Period	Length	Average move	Av. Sell-off	Obs. Prob	Max	Min	St.dev.	Av. move/St. Dev.
June	6	6.1	12.3	67%	39.0	-15.5	12.8	0.5
September	13	6.9	14.0	80%	33.0	-42.1	18.1	0.4
October	12	5.4	10.5	73%	18.7	-11.5	9.9	0.5

Source: Morgan Stanley Research

Moving to forward rates, the marked inversion of the EUR 10s30s swap curve over the past six weeks and some correction on German ASW post the September ECB meeting fuelled a decoupling between the 10y Bund yield and some forward rates like the EUR 10y10y swap. As Exhibit 23 shows, the two series had a negative correlation in September, while the long-term correlation (QE1 to now) is positive and around +85%. The stabilisation at the short-end and the continuation of the sell-off has allowed the EUR 10y10y swap to catch up over the past days, but the latter is still 10bp below June highs while Bund yields are 25bp higher.

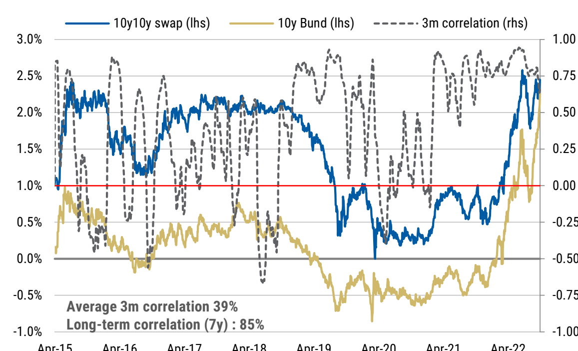
Under the scenario of 10y Bund yields temporarily overshooting towards 2.50%, wider Bund ASW and some stabilisation or disinversion of the EUR 10s20s slope, we believe that the 2.75/2.80% area is a more credible target than our 3% target forecasted months ago when the EUR 10s30s swap slope was much less inverted.

Exhibit 23: EUR 10y10y swap decoupled from Bund yields



Source: Morgan Stanley Research

Exhibit 24: A long-term positive correlation between the two series



Source: Morgan Stanley Research

Trade idea: we maintain our EUR 10y10y swap paying trade, target revised to 2.75%.
Trade idea: we keep our long EUR 5y5y inflation swap.
Trade idea: we closed our EUR 2s5s10s swap.
Trade idea: we keep our EUR 30s50s swap receiving trade with a new target of -49bp.

Focus on OATs

The French government unveiled its 2023 budget on Monday, which relies on the assumption of 1% GDP growth in 2023 and assumes a stable public deficit at 5%. The debt to GDP ratio will decline for the third year in a row reaching 111.2% versus 111.5% in 2022, with total spending declining by 0.8% in real terms. Accordingly, while the gross OAT supply net of buybacks will increase from EUR 260bn (the same number for three years) to EUR 270bn in 2023, the net supply will be actually lower by 10%. As Exhibit 25 shows, under full reinvestment the gross OAT supply minus gross QE would increase by EUR 40bn while the DV01 going to the market would be a few percentages above the previous 2019 record.

Exhibit 25: OAT supply statistics

Date	Gross Issuance	Redemptions	Net Issuance	Total QE	Gross supply - Gross QE	DV01 to the market - 100% reinv.	25% roll off	50% roll off
2007	108	127	-19	0	108	112	112	112
2008	131	139	-8	0	131	114	114	114
2009	178	138	41	0	178	162	162	162
2010	211	133	78	0	211	217	217	217
2011	205	147	58	0	205	162	162	162
2012	201	157	44	0	201	163	163	163
2013	192	157	35	0	192	165	165	165
2014	201	144	57	0	201	179	179	179
2015	220	155	65	82	138	125	125	125
2016	212	169	44	132	80	92	92	92
2017	213	142	71	124	89	105	105	105
2018	214	160	54	63	151	159	159	159
2019	241	148	93	38	203	231	231	231
2020	289	164	125	210	80	92	92	92
2021	285	152	133	211	74	92	92	92
2022	**280**	**145**	**135**	**112**	168	194	194	194
2023	**290**	**168**	**122**	**82**	208	239	254	268

Source: Morgan Stanley Research * the gross issuance includes buybacks we assumed EUR 20bn in 2023

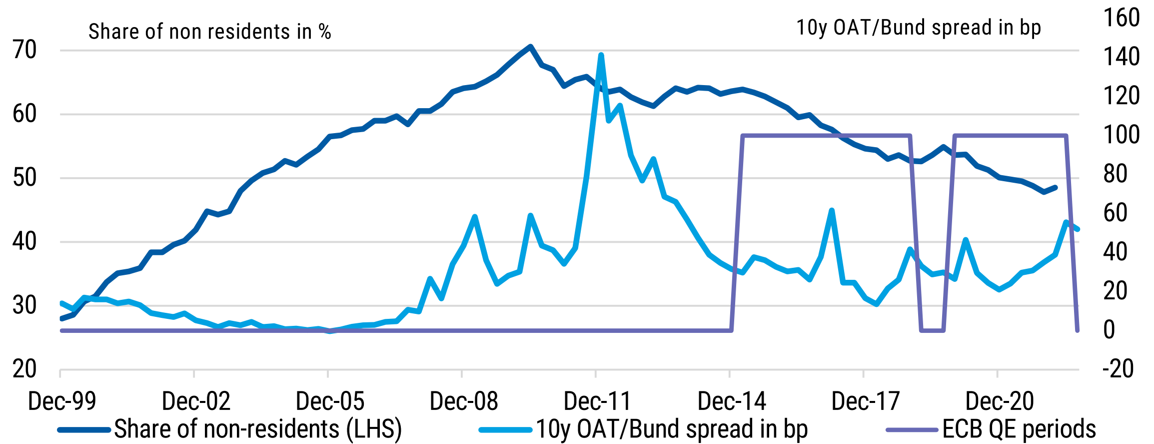
As far as the OAT/Bund spread is concerned, our central scenario since March 2022 has been that of a trading range of the 10y bucket around 50bp, which led us to book profits on our OAT/Bund widening trade - a trade initiated in November to play the end of the PEPP. As Exhibit 26 shows, the end of the PEPP and APP and the resumption of the core duration bear market in August did not bring into question our scenario of a very stable spread. The rationale behind the spread stability was threefold:

- the end of PEPP would lead to a reallocation out of non-core into liquid core/semi-core debt i.e., OATs.

- OATs went back to attractive levels for Japanese investors at least until June (10y OATs 1y fx hedged into yen were providing a very high yield pick-up vs JGBs and USTs).

- the share of non-residents holding the French sovereign debt went back to very low levels i.e., late 2003 levels (see Exhibit 26).

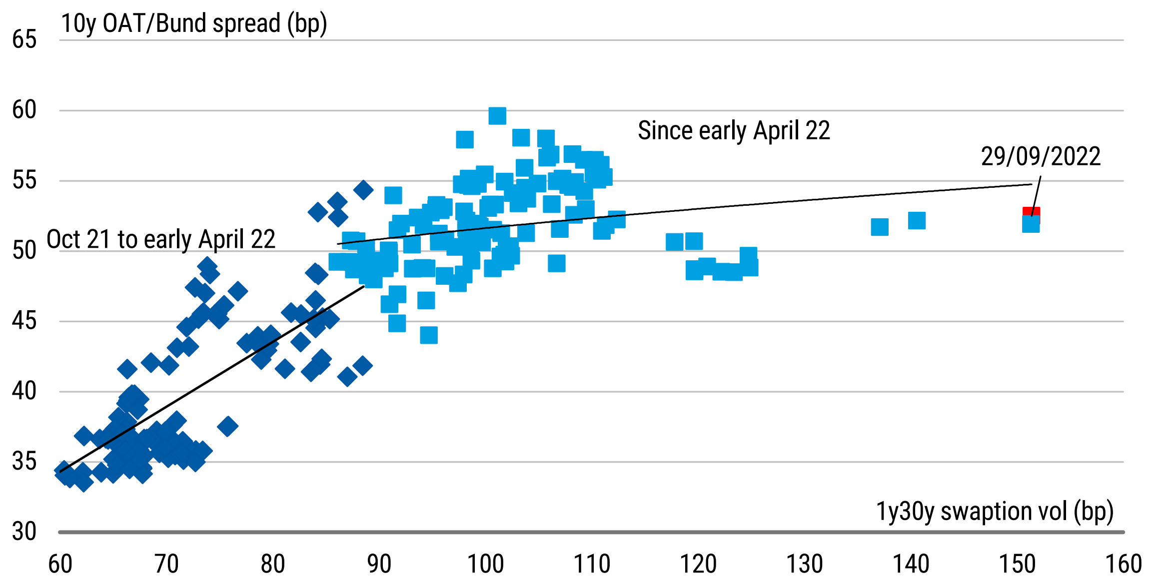
Exhibit 26: Share of non-residents rose back in early 2022, stabilisation of the 10y OAT/Bund post PEPP



Source: Banque de France, Morgan Stanley Research

The break in the correlation between the 10y OAT/Bund spread and interest rates swaption volatility is also quite impressive and strengthens our constructive view on OATs. Exhibit 27 shows the 10y spread and the EUR 1y30y swaption volatility. The initial phase of the duration bear market and higher swaption volatility was consistent with an underperformance of OATs vs Bunds. However, since early April 2022, there has been a break in the correlation, with a very stable spread in low the 50s, while EUR 1y30y swaption volatility rose from 90bp to almost 150bp this week.

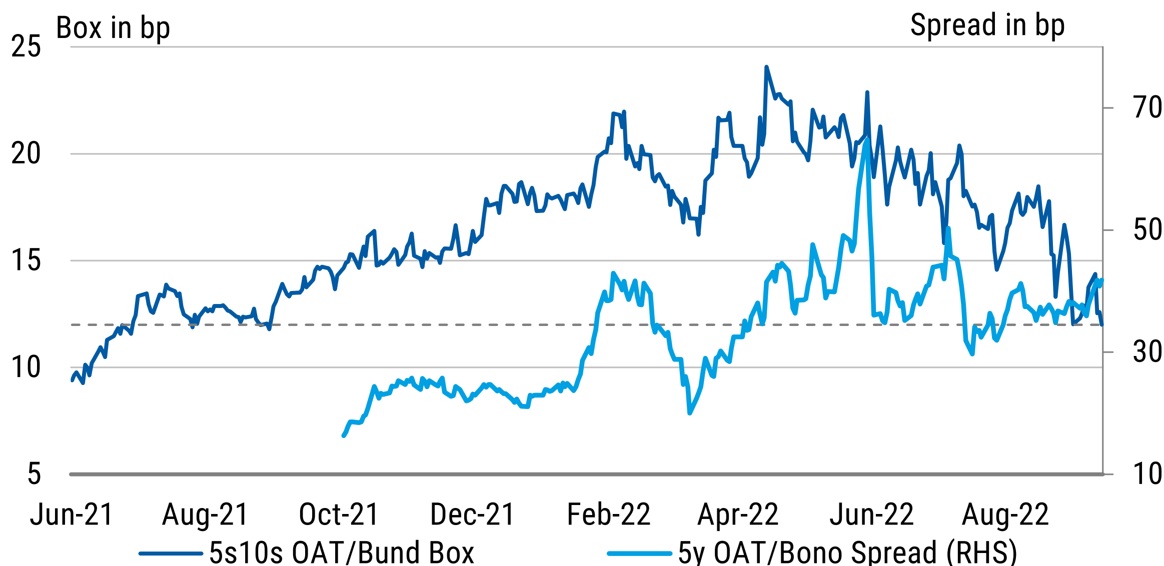
Exhibit 27: 10y OAT/Bund spread & EUR 1y30y swaption vol: a break in correlation since April 2022



Source: Morgan Stanley Research

In mid-August (see Global Macro Strategist: Challenging Stagflation) we turned bearish again on non-core EGBs and recommended selling 5y Bono vs OATs. As Exhibit 28 shows, while 5y Spain cheapened relative to OATs, 5y OATs have dramatically underperformed within the 5s10s OAT/Bund box with the latter back to last summer's lows due to widening pressures on the 5y OAT/Bund spread. We do not see any rationale for the current cheapening of the 5y OAT bucket within the box and would expect a reversal of the recent move which would support our long 5y OAT vs 5y Bono trade and allow the spread to widen towards the high 40s.

Exhibit 28: 5s10s OAT/Bund box back to summer 2021 lows



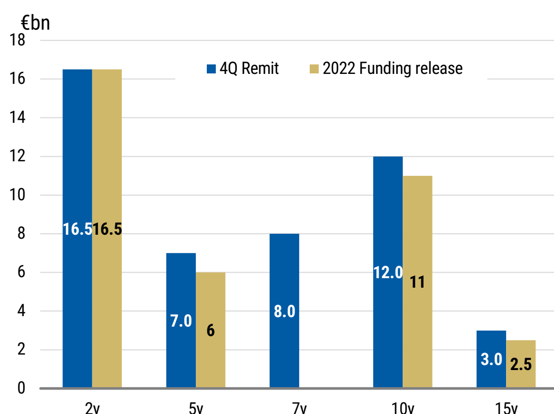
Source: Morgan Stanley Research

Trade idea: we keep our long OAT Feb 27 vs Bono Jan 27 widening trade initiated at 33bp in August, with a new target of high 40s.

German 4Q Funding and ASW Implications:

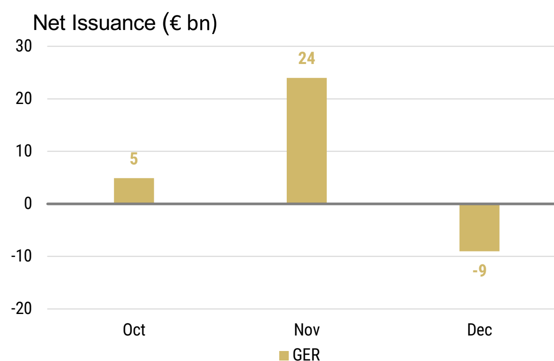
On Wednesday September 28, the German Finance Agency announced its issuance plans for 4Q22. Total borrowing needs were revised up by a total of €22.5bn to €106.5bn, which will be sourced as follows: €12bn in money markets and €10.5bn in coupon issuance.

Exhibit 29: 4Q22 Remit vs 2022 issuance plans



Source: German Finance Agency, Morgan Stanley Research

Exhibit 30: Change in Net Supply dynamics

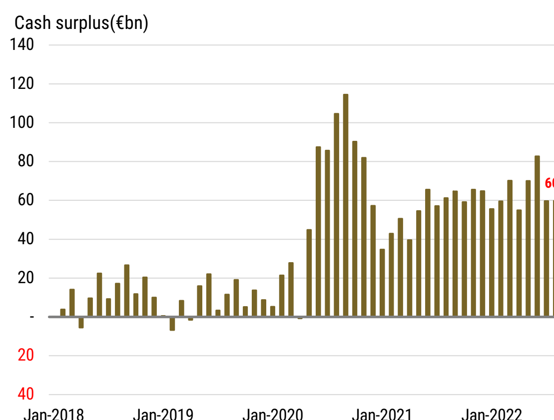


Source: German Finance Agency, Morgan Stanley Research estimates

Regarding coupon issuance, most of the differences vs the Finance Agency's previous projections are to be found in the belly sector of the curve (see Exhibit 29), which will need to absorb €10bn out of the €10.5bn increase in total coupon issuance. The Treasury introduced a new 7y line, which will be offered starting from October 18 (€4bn) and subsequently tapped on November 15 by a further €4bn, thus reaching the status of benchmark eligible before YE.

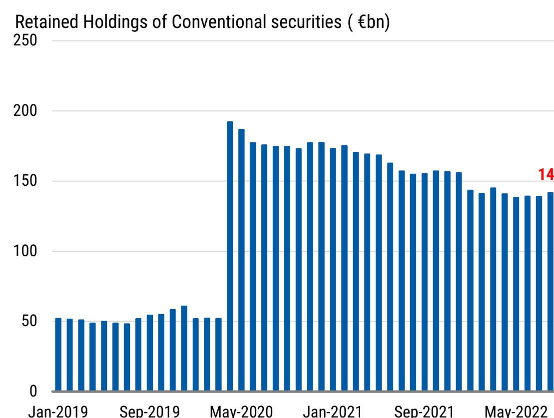
The timing of new 7y may lead to the 30y syndication being brought forward, maybe as early as the week starting Oct 3. We think the overall syndicated size of the new 30y could be €5bn, in line with previous instances. Given the revisions to 4Q funding, in Exhibit 30 we show our forecasts for German net supply for the remainder of the year.

Exhibit 31: German Treasury Cash Surplus (cash deposits - liquidity borrowings)



Source: German Finance Agency, Morgan Stanley Research

Exhibit 32: German Finance Agency: Own Holdings of conventional securities



Source: German Finance Agency, Morgan Stanley Research

The issuance increase was mostly motivated by the need to provide more support to firms, due to the increase in energy prices. Nevertheless, financing needs for the year were mostly unchanged and even lowered by €1bn for a total of €139bn.

On an yearly figure, given the €139bn in financing needs plus a €322bn in coupon redemptions and €72bn in bills, Germany needs to fund ~€539bn, out of which €432bn are served via auctions. The funding gap of ~€107bn is sourced via: **(i)** syndicated offerings, **(ii)** drawing down from the cash surplus and **(iii)** sales of own holdings in the secondary market.

As of now, we estimate that Germany has completed ~€337.25bn in issuance (inclusive of Bubills and syndications, which account for €161bn and €13bn respectively). The remaining coupon issuance for the year (€47.5bn) along with bills (€59bn) and the 30y syndication (~€5bn) should bring total funding to €448.75bn.

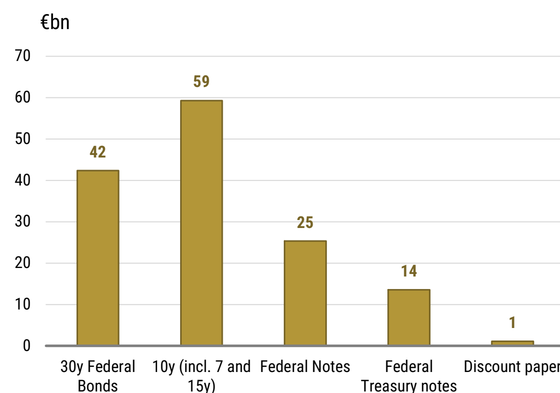
We think that the remaining difference of €90.25bn could be financed by fully utilizing the cash surplus of €60bn (see Exhibit 31) and ~€30bn via selling of own holdings (see Exhibit 32).

Data as of end of August 2022 (see Exhibit 33) shows that the DFA so far has sold retained holdings in the amount of ~€14.5bn, hence if our thesis is correct, a further €15bn (not knowing the data release for the month of September) should be expected through to the end of the year. The current composition of the ~€141bn of retained holdings is displayed in Exhibit 34.

Exhibit 33: Variation in own holdings (2022 until August vs 2021)

Source: German Finance Agency, Morgan Stanley Research

Exhibit 34: Retained own holdings composition



Source: German Finance Agency, Morgan Stanley Research

Regarding the announcement of the €200bn in borrowings in order to finance energy cap measures up until March 2024 (details here), we think that is still unclear what the direct impact on Bund issuance will be as of now, but is likely that any impact will be reflected in 2023 funding needs and thus we will continue to monitor the news-flow and we will look for details in the 2023 funding plan (due to be released in December 2022).

As of now, given **(i)** the willingness to maintain the debt brake (set at 0.35% of GDP) for 2023, and **(ii)** in order to preserve the reputation of the Bund in capital markets (and to avoid any reaction similar to that observed recently in the UK market), we think that most of the financing will come via The Economic Stabilization Fund (WSF) which was launched by the Federal Government in March 2020 (further details here).

The fund originally had a total amount of €600bn. As part of the extension of the WSF, the total volume as of 1 January 2022 has been adjusted to €250bn. The Fund comprises the following instruments:

- A guarantee framework in the amount of €100bn to help businesses refinance on the banking and capital markets (bridging liquidity bottlenecks);
- A loan authorization of €50bn to strengthen companies' capital (recapitalization);
- A further loan authorization of €100bn to refinance KfW's special programmes.

The WSF was established as a "special fund" with its own credit authorization, and as such the WSF will not maintain any direct financial relations with the federal budget and will not participate in the federal treasury cycle. As such, **any expenditure encountered via the WSF is not contributing to the overall Government deficit, allowing Germany to meet its 0.35% debt brake target in 2023**.

Exhibit 35: Bund ASW seasonality

Bund ASW widening								
Period	Length	Average move	Average widening	Obs. Prob	Max	Min	St.dev.	Av. move/St. Dev.
January from d14	16	1.6	3.6	71%	8.1	-10.7	4.6	0.3
March from d13	7	2.3	4.3	80%	9.7	-10.2	5.2	0.4
June from d9	18	4.2	5.5	87%	17.4	-7.3	5.9	0.7
September from d13	**17**	**2.7**	**3.8**	**87%**	**11.4**	**-7.9**	**4.6**	**0.6**
Bund ASW tightening								
Period	**Length**	**Average move**	**Average tightening**	**Obs. Prob**	**Max**	**Min**	**St.dev.**	**Av. move/St. Dev.**
April	17	-1.8	-4.9	73%	11.8	-14.4	7.2	0.2
August from d5	14	-3.3	-4.1	87%	2.6	-11.1	3.9	0.9
December from d15	12	-3.4	-4.2	86%	1.4	-18.1	5.1	0.7

Source: Bloomberg Morgan Stanley Research

All in all, we continue to maintain our long in Bund ASW. We think that the tightening observed on the German complex following the announcement of the German price cap, anticipating more issuance inflows, was unwarranted as most of the practicalities regarding the funding of this programme are still unknown and the material impact on Bund issuance might end up underwhelming the market, in our view.

We think that most of the risks regarding our widening call, in the near term, are around the selling of own holdings until YE, which would act as extra inflow of DV01. Nevertheless, we think that the main drivers impacting ASW will still occur via sustained rates volatility and a continuation of the cheapening trend witnessed in peripheral debt. As such, being long Bund ASW would still act as a good "risk-off" hedge in the current environment, in our opinion.

Lastly, in the current environment of weak price action on credit and risky assets, seasonality (see Exhibit 35) is still favouring a long ASW call, as the end of the widening pattern this year will come on the October 12 closing.

Trade idea: Maintain long Bund ASW, targeting a move towards 103/105 bp

United Kingdom | The calm before October 14; stay long 5y RPI swap

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Exhibit 36: Summary of UK rates views

1-month horizon	Duration	Curve	ASW	Inflation
Macro	Neutral	Flatter		Bullish
Net supply Valuation Seasonality Technical analysis Market positioning Preferred trades	Neutral Gilt 90bp cheap vs Oct FV Bearish seasonal on 30 Sept - 80% Weekly stochastics crossed up CTAs short Long UKT 0S 33 vs UKT4Q 32 and UKT 4H 34	Neutral GBP 2s5s10s swap fly 5bp cheap GBP 10s30s swap 15bp too flat		Long 5y UK RPI swap
Our view	**Neutral**	**Flatter curve**	**Neutral on spreads**	

Source: Morgan Stanley Research

Modest support for duration, expect further flattening

The UK rates market is currently highly flow-driven, with valuations and fundamentals playing second fiddle. So far, the BoE has tried to support smooth market functioning, and we have a curve of two halves: the sub-20y area fluctuates on any news, while 20y+ tenors reflect a premium as they offer the opportunity to be bought by the BoE. And the flattening theme should continue next week. As we approach October 14, it is likely that the short base in the gilt market will increase. But for the time being, we suspect that most investors will not want to position against the BoE. Lower yields also support the value of BoE's APF portfolio. Exhibit 37 shows how much difference a few days can make. QT is planned to kick off at the end of October, but we believe this is strictly contingent on market conditions being smooth, and there is a lot of volatility that can happen between October 17 and October 31.

From a historical standpoint, UK duration is clearly cheap (compared to USTs and Bunds); however, history is no guide to the future. We suspect that unless there is a clear fiscal U-turn by the government, gilts will have to remain at structurally higher yields, even above UST yields. But, for the time being and until October 14, we expect long yields to stabilise modestly lower, albeit it is likely to be a bumpy ride. Meanwhile, irrespective of fiscal news, we think that long 5y RPI swaps is a trade with decent risk/reward. We envision this trade to perform on the inflation stickiness story, but it could also perform in a UK-economy bearish scenario where the drop in sterling leads to more imported inflation.

Exhibit 37: Losses on the APF portfolio if completely sold

	APF (nominal)	APF(proceeds)	Avg price paid by APF (cents)	Realised gain (bn) 27 Sep 2022	Realised gain (bn) 30 Sep 2022
UKT0.125 23	0.0	0.0			
UKT0.75 23	14.0	14.2	101.8	-0.61	-0.56
UKT2.25 23	19.7	21.1	107.2	-1.80	-1.73
UKT0.125 24	2.9	2.9	100.1	-0.17	-0.15
UKT1 24	19.6	20.4	104.0	-1.76	-1.63
UKT2.75 24	23.5	26.3	111.8	-3.54	-3.39
UKT0.25 25	6.0	6.0	99.6	-0.59	-0.55
UKT5 25	19.0	23.2	122.2	-4.06	-3.91
UKT0.625 25	28.8	29.6	102.7	-3.63	-3.39
UKT2 25	26.2	28.3	108.0	-3.95	-3.72
UKT0.125 26	21.9	21.8	99.5	-2.95	-2.76
UKT1.5 26	28.8	30.9	107.3	-5.21	-4.93
UKT0.375 26	10.1	10.0	98.9	-1.50	-1.40
UKT1.25 27	27.1	28.7	105.8	-5.48	-5.14
UKT4.25 27	17.6	19.6	111.1	-2.11	-1.85
UKT0.125 28	16.7	16.5	98.5	-3.32	-3.06
UKT1.625 28	25.2	28.1	111.6	-6.73	-6.29
UKT6 28	8.9	11.9	133.6	-2.23	-2.05
UKT0.5 29	1.7	1.7	98.6	-0.37	-0.34
UKT0.875 29	28.6	30.4	106.1	-8.03	-7.44
UKT0.375 30	23.7	23.6	99.5	-6.48	-5.93
UKT4.75 30	24.9	32.5	130.4	-6.82	-6.09
UKT0.25 31	13.6	12.9	94.6	-3.51	-3.17
UKT1 32	0.0	0.0			
UKT4.25 32	21.1	24.8	117.6	-3.86	-3.15
UKT0.875 33	0.8	0.8	104.3	-0.28	-0.25
UKT4.5 34	22.9	31.4	137.2	-8.72	-7.77
UKT0.625 35	14.1	13.5	95.8	-4.86	-4.38
UKT4.25 36	14.9	19.8	132.6	-5.58	-4.71
UKT1.75 37	11.5	13.1	113.8	-5.32	-4.68
UKT4.75 38	11.5	14.7	127.9	-3.13	-2.27
UKT1.125 39	1.1	1.1	102.5	-0.48	-0.41
UKT4.25 39	11.3	14.6	128.9	-4.09	-3.14
UKT4.25 40	11.3	15.0	133.3	-4.52	-3.40
UKT1.25 41	10.0	10.8	107.6	-5.25	-4.46
UKT4.5 42	9.6	12.9	133.8	-3.70	-2.55
UKT3.25 44	8.4	11.1	132.4	-4.61	-3.54
UKT3.5 45	9.4	13.5	144.2	-6.01	-4.74
UKT0.875 46	6.1	5.7	93.4	-3.04	-2.42
UKT4.25 46	8.1	11.0	136.2	-3.70	-2.46
UKT1.5 47	6.8	7.3	107.6	-3.87	-3.06
UKT1.75 49	18.5	23.1	125.1	-13.30	-10.95
UKT4.25 49	7.9	11.1	140.1	-4.00	-2.60
UKT0.625 50	21.5	19.3	89.9	-11.80	-9.46
UKT1.25 51	4.7	4.8	101.5	-2.75	-2.17
UKT3.75 52	12.2	17.6	144.4	-7.67	-5.44
UKT1.5 53	0.9	1.0	115.5	-0.60	-0.49
UKT1.625 54	10.8	13.6	125.8	-8.45	-6.96
UKT4.25 55	10.4	13.6	130.7	-4.23	-1.91
UKT1.75 57	11.9	15.2	128.1	-9.47	-7.57
UKT4 60	12.1	18.0	149.0	-7.63	-4.69
UKT0.5 61	6.0	5.4	90.3	-3.88	-3.07
UKT2.5 65	5.2	8.7	168.4	-5.62	-4.51
UKT3.5 68	5.0	9.3	187.6	-5.46	-4.13
UKT1.625 71	11.4	15.5	136.5	-10.70	-8.49
UKT1.125 73	0.0	0.0			
Total				**-241.47**	**-199.35**

Source: Morgan Stanley Research

Trade idea: Maintain buy 5y RPI swap, entry 4.26%, target 5.75%, stop 3.8%

Japan | Volatile long-end JGBs

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BoJ's intentions and the market's misunderstanding

As discussed in "FAQ About Japan MoF's JPY-Buying Intervention", the combination of another dovish BoJ monetary policy statement and MoF JPY-buying intervention appears to have created considerable confusion among some overseas investors, who seemingly see a contradiction between the central bank's (JPY-negative) reiteration of its intention to persist with monetary easing and the government's subsequent decision to shore up the currency.

Many have told us that they expect unilateral intervention to have no more than a temporary impact and, as such, still believe that the BoJ will ultimately find itself forced to take some sort of action in the "normalization" or tightening direction.

In "BoJ As Always", we argued that the so-called "BoJ trade" was likely to be dialed back to at least some degree despite renewed BoJ dovishness and rising overseas interest rates. However, subsequent futures-versus-CTD underperformance and continued weakness in the belly zone of the OIS market suggest that some players remained positioned for near-term policy adjustments even in the wake of the BoJ's latest statement and post-meeting remarks (only Japanese language is available) by Governor Haruhiko Kuroda (see Exhibit 38).

It is, however, important to recognize that the BoJ and the MoF are working towards different policy objectives over differing time frames. Kuroda took questions from reporters after his September 26 speech in Osaka and responded as follows when asked whether he saw any contradiction between the MoF's JPY-buying intervention and the central bank's insistence on sticking with accommodative policy settings (comments paraphrased in lieu of an "official" translation; same hereafter).

> ***Fiscal policy and monetary policy differ in terms of their objectives and effects,*** *which is why an appropriately chosen policy mix can yield better results than isolated action.* ***The same is also true of monetary policy and foreign exchange policy.*** *I believe it was indeed appropriate for the government to intervene given that such rapid and one-sided exchange rate movements are liable to prove harmful to the Japanese economy.*

After stressing that monetary policy and foreign exchange policy have different objectives, Kuroda responded as follows when asked whether there had been any sort of "coordination" between the central bank and the government.

> *While fiscal and monetary policymakers do of course communicate with one another,* ***there is no "coordination" in the sense of one side asking or ordering the other side to take some particular sort of action.*** *The same is also true when it comes to FX market intervention, with the BoJ ultimately having no say as to what the MoF decides to do.*

Kuroda also echoed his September 22 post-meeting press conference in stressing that the BoJ is working to achieve its +2% inflation "price stability goal" on a sustainable and stable basis.

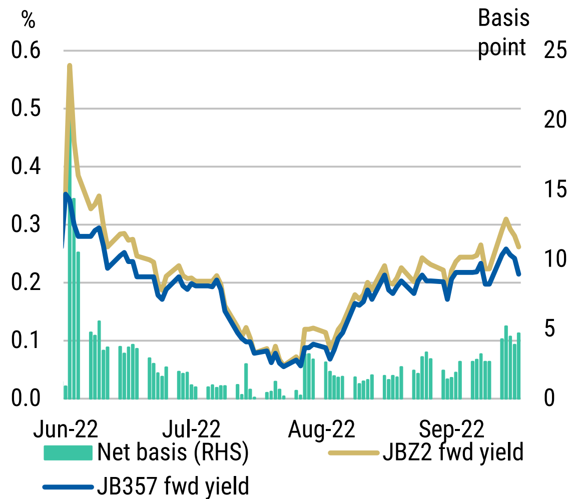
> ***Our objective is price stability, which will require more than just rises in import costs.*** *Achieving price stability on a sustainable and stable basis will require us to help shift prices into a gradual upward trajectory* ***supported by improvements in corporate earnings and increases in wage levels.***

Kuroda took pains to stress that the BoJ has no intention of responding to cost-push inflation pressures, expressing strong confidence that inflation will drop back below +2% (YoY) during FY2023.

> *Inflation looks* ***certain to*** *return to sub-2% levels in 2023 as previous boosts disappear or diminish, which is why we do not currently expect to achieve the +2% target (including sufficient wage growth) before the end of next year and, as such, still intend to persist with our quantitative and qualitative easing framework.*

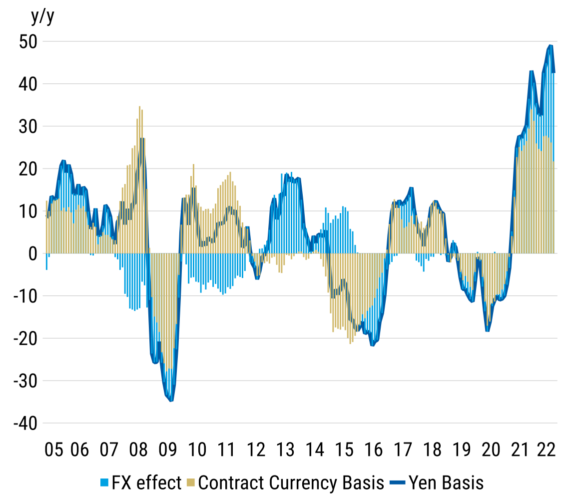
Import costs do indeed already appear to have nearly peaked. That said, JPY weakness appears to be taking over from global commodity prices as the main driver of import costs, with roughly half of the year-on-year change in import prices now attributable to currency depreciation (see Exhibit 39).

Exhibit 38: Futures yield vs forward CTD yields



Source: Morgan Stanley Research, Bloomberg

Exhibit 39: Decomposition of the rise in import prices

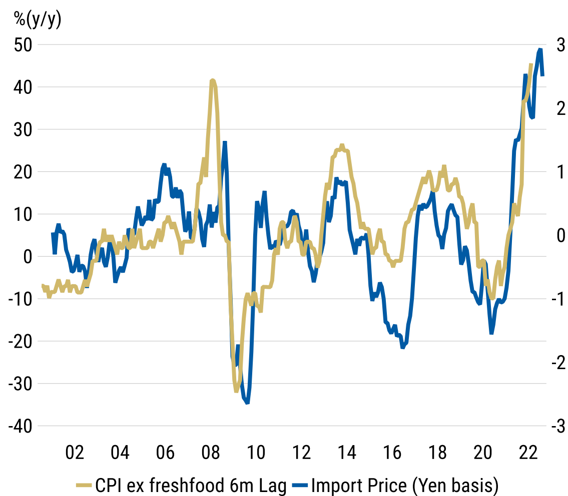


Source: BoJ, Morgan Stanley Research

That contribution cannot be sustained indefinitely, however, and further declines in commodity prices may see year-on-year import cost inflation start to slow rapidly through next year even if the JPY keeps weakening to some modest degree.

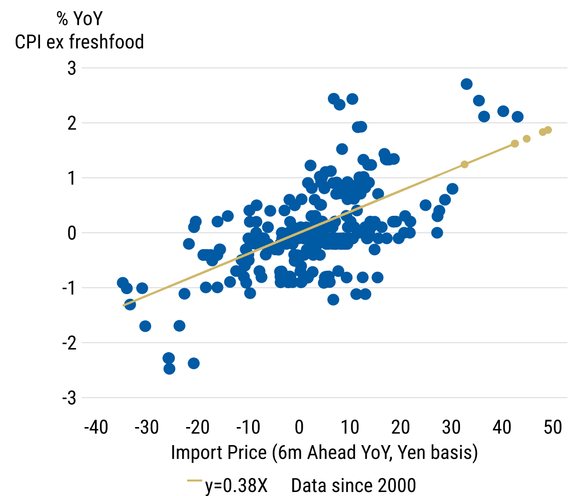
An increase in import costs tends to impact on the core CPI (all items less fresh foods) with a roughly six-month lag (see Exhibit 40), but our calculations indicate that a roughly 10% YoY rise in import prices will only add around 0.38% to the core CPI six months down the road (see Exhibit 41).

Exhibit 40: CPI ex fresh food YoY vs the increase in import prices (YoY)



Source: BoJ, Morgan Stanley Research

Exhibit 41: Regression result of CPI ex fresh food YoY vs the increase in import prices (YoY)



Source: BoJ Morgan Stanley Research

Our economists do still expect core CPI inflation to climb past +3% in the near term, but it remains difficult to envisage a Europe-like inflation overshoot unless the JPY keeps weakening and commodity prices move sharply higher once again.

Moreover, Prime Minister Fumio Kishida today indicated that a "comprehensive package" of measures to address cost-of-living pressures (including JPY weakness) will be fleshed out by the end of October. Upward pressure on the headline CPI may diminish if and when the government announces further subsidies along with other measures aimed at keeping electricity and gasoline prices in check.

Our economists thus believe that there will be a high hurdle for the Kuroda-led BoJ mounting any sort of response to temporarily elevated headline inflation.

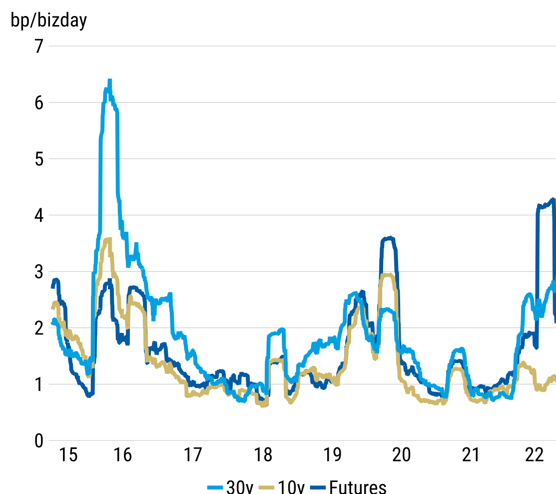
Liquidity concerns driving up volatility in the super-long sector

As discussed above, the JPY rates market has turned increasingly volatile of late except for 10-year owing to the combination of (1) overseas investors continuing to position for BoJ policy adjustments and (2) global concerns over liquidity (see Exhibit 42).

Overseas interest rates have of course surged higher this week, reflecting concerns that: (a) the BoJ and/or BoE could start selling off US Treasuries in order to shore up their currencies; (b) UK gilt issuance might need to rise sharply to fund the Truss government's considerable fiscal package; and (c) cash bonds might need to be sold off in order for UK LDI (liability-driven investment) players to meet margin calls. JPY rates have also risen as a result, with market dysfunctionality looking increasingly problematic and broad-based because of the growing difficulty of using JGB futures for hedging purposes.

The BoJ's quarterly-survey-based Bond Market Functioning DI points to a significant decrease in concerns from May to August (see Exhibit 43), with impaired JGB futures hedging ineffectiveness likely the main reason. As discussed in "FAQs On JGB Market Functioning", while yields for the cheapest-to-deliver (CTD) sector are now being capped at +0.25% as part of the BoJ's daily fixed-rate operations, JGB futures are able to move much more freely in the absence of direct BoJ intervention.

Exhibit 42: JGB yield volatility (60 days rolling)



Source: Morgan Stanley Research, Bloomberg

Exhibit 43: BoJ Market Functioning DI

Source: Morgan Stanley Research, Bloomberg

The net upshot is that futures will tend to cheapen sharply to the CTD sector when yields for the latter approach the +0.25% "ceiling", with concerns of mark-to-market losses particularly likely to inhibit arbitraging when futures are still some distance from delivery. We have, in fact, already seen the futures versus CTD cross basis widen quite considerably once again, albeit while as yet remaining short of the levels that were reached back in June (see Exhibit 38).

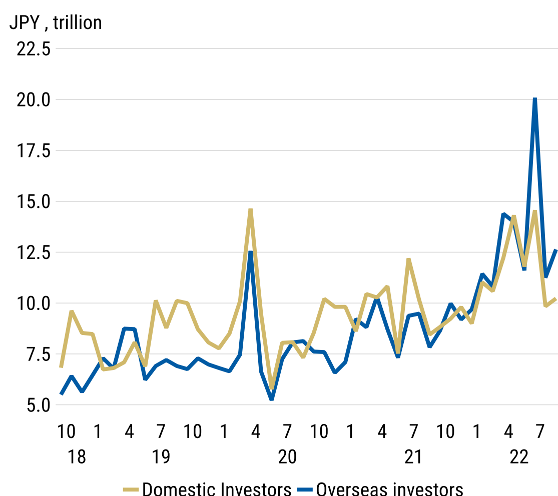
CTD versus futures divergence is liable to damage confidence in futures and thereby make it harder to price less-liquid off-the-run JGBs and swaps (which ordinarily reference futures for pricing purposes). This impact is then liable to be amplified as the lack of effective hedging tools ends up channeling customer flows into the broker market.

Whereas the 10y sector continues to be supported by the BoJ, **longer maturities will require careful inventory management due to both their greater duration risk and a comparative lack of BoJ absorption. This likely goes a long way towards explaining why we are now witnessing a widening of bid-offer spreads and generally increased volatility.**

It is also possible that this situation has been exacerbated by a wait-and-see mindset among domestic investors in the secondary market (see Exhibit 44), with the continuing lack of willing dip-buyers effectively serving to increase the presence (and market impact) of overseas players.

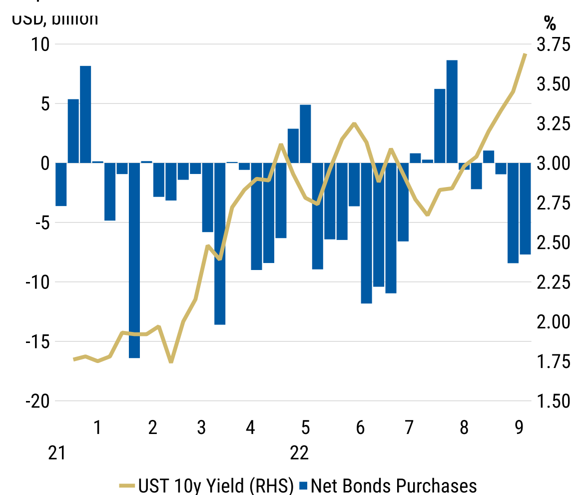
MoF International Transactions in Securities data indicate that domestic investors have once again started to cut losses on their foreign bond positions as overseas interest rates have surged higher, which is of course suggestive of significantly diminished risk tolerance levels (see Exhibit 45).

Exhibit 44: JGB trading volume by domestic investors and overseas investors



Source: JSDA, Morgan Stanley Research

Exhibit 45: Weekly net purchase of foreign bonds by Japanese investors



Source: Japan MoF, Morgan Stanley Research

Moreover, those looking to buy JGBs in size will probably seek to do so at auction rather than risk having their own flows impact secondary market pricing. **Absorbing high levels of super-long JGB issuance is liable to prove difficult without more active participation by domestic players, which is why we expect that the 20-year sector will continue to underperform on the curve due to its lack of "mainstay" investors.**

BoJ announced that it will increase the size of JGB purchases for the October-December period, but what is surprising is that it increased the JGB purchase size even beyond 10-year tenor, albeit modestly. While the announcement effect could lead to a decent rally in long-end JGBs in the Friday evening session, we believe that small increases in JGB purchases would not be enough to prevent a steepening move.

We continue to suggest sticking with steepener positions. The aforementioned absence of domestic buyers is making it difficult to judge the "fairness" of super-long JGB pricing, and we think overseas central banks look virtually certain to remain in tightening mode as they continue their fight against "sticky" inflation.

Concerns do appear to have been alleviated, at least to some degree, by the BoE's launch of an emergency long-term bond-buying program for financial stability (as precipitated by the Truss government's considerable tax cuts), but the situation obviously remains highly fluid.

We basically expect the super-long sector to keep underperforming as overseas interest rates face yet further upward pressure, and thus suggest sticking with previously recommended JGB 10s20s steepeners (DV01 2 vs 1) as well as TONA 5s20s steepeners.

Trade idea: Maintain JGB 10s20s steepener (DV01 2 vs 1)
Trade idea: Maintain TONA OIS 5s20s steepener

Currency & Foreign Exchange

G10

G10 | How do FX-hedged yields compare now?G10 | Do Central Bank Hikes Strengthen Currencies?

OIS-FX patterns have changed dramatically since March 2022. Policy expectations have become more important. Correlations are stronger in absolute terms. In a reversal, the USD has become positively related to Fed policy expectations. The EUR's trading pattern has also flipped – the EUR now weakens on days when the ECB is viewed as hiking into stagflation. GBP has consistently declined on days when the BoE is expected to be more hawkish – in contrast to when it consistently gained on days when BoE policy expectations rose. Therefore, an increasingly hawkish path of BoE policy would be likely to further weigh on GBP. EUR is likely to weaken further if the ECB becomes increasingly hawkish while inflation expectations rise, or if inflation expectations decline while the ECB is seen as less hawkish than expected.

G10 | How do FX-hedged yields compare now?

With rate hike expectations continuing to rise globally, we take stock of how FX-hedged yields look across different equity and fixed income assets for different investors. In short, hedging costs for USD assets have risen, which makes USD assets arguably less attractive, especially for EUR- and JPY-based investors. Conversely, USD-based investors enjoy a substantial yield pick-up from investing in non-USD assets and hedging the FX exposure.

United States

USD | Are we meeting at the Plaza?

Continued USD strength and the unexpected intervention action by the Japanese Ministry of Finance have raised questions about a possible coordinated attempt to weaken the USD. Is this likely? And if it happens, would it work? We think the answer to both is no.

We think a coordinated intervention is unlikely because a weaker USD would run counter to what the Fed and Treasury are hoping to achieve: lower US inflation. Moreover, DM policymakers have generally questioned the efficacy and appropriateness of currency management.

But let's say they do intervene. Would it work? Ultimately we're skeptical here because we think policymakers are aware of a hard truth: they don't have enough FX reserves to meaningfully influence exchange rates given the size of the FX market.

With the exception of Japan, no other country in the G7 would be able to cover 10% of the *daily* spot USD/CCY trading volume using 10% of their (liquid) reserves. Past coordinated G7 interventions were also conducted in relatively small

amounts, suggesting the success of such interventions lies in the signalling effect of the announcement rather than in the actual amount.

Monetary policy is, in our view, the most effective mechanism to influence exchange rates, but given high inflation, a stronger not weaker currency is likely preferred.

Europe

GBP | Parity in sight

We think that GBP/USD could overshoot our previous 1.02 target to reach parity (or perhaps even beyond). We maintain our trade recommendations on short GBP/USD targeting 1.00 and long EUR/GBP targeting 0.95 via options.

The USD is likely to keep rising until two key conditions are met: 1) Expectations for Fed hiking peak; and 2) Global growth expectations bottom. So far the FX moves year to date have been primarily driven by USD.

But recent price action suggests that GBP is coming under idiosyncratic pressure. GBP is uniquely vulnerable to three simultaneous challenges: a high sensitivity to risk assets (which should weaken as the Fed tightens financial conditions), exposure to European stagflation and the energy shock, and external imbalances. No other G10 currency is exposed to all three shocks simultaneously.

We aren't convinced that either intervention or an emergency rate hike would fully blunt GBP/USD's decline, in isolation. GBP is the 'release valve' to equilibrate the imbalance between rising UK capital demand (borrowing) and narrowing UK capital supply (savings). Tighter monetary policy which raises concerns about growth and fiscal sustainability, either directly or indirectly, is unlikely to see GBP strength in response.

G10 FX Trades

Exhibit 46: G10 FX trade ideas

Spot trades	Spot	Target		Stop	
Maintain					
Short GBP/USD	1.106	1.000	9.6%	1.180	-6.7%
Long USD/CAD	1.372	1.400	2.0%	1.310	-4.5%
Short EUR/USD	0.976	0.930	4.7%	1.050	-7.6%
Options trades		Entry/cost/premium received			
Maintain					
Long USD/JPY 3m seagull (buy 142.5/150 call spread, sell 138.5 put) at zero cost (priced 23-Sep-22)					
Long CHF/JPY 3m seagull (buy 3m ATMF/155 call spread, sell 144 put) at a cost of 0.55% (priced 16-Sep-22)					
Long EUR/GBP 6m 0.90/0.95 call spread at a cost of 1.1% (priced 16-Sep-22)					

Source: Bloomberg, Morgan Stanley Research

G10 | Do Central Bank Hikes Strengthen Currencies?

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OIS-FX patterns have changed dramatically since March 2022. Policy expectations have become more important.

Correlations are stronger in absolute terms. In a reversal, the USD has become positively related to Fed policy expectations. The EUR's trading pattern has also flipped – the EUR now weakens on days when the ECB is viewed as hiking into stagflation. GBP has consistently declined on days when the BoE is expected to be more hawkish – in contrast to when it consistently gained on days when BoE policy expectations rose.

Therefore, an increasingly hawkish path of BoE policy would be likely to further weigh on GBP. EUR is likely to weaken further if the ECB becomes increasingly hawkish while inflation expectations rise, or if inflation expectations decline while the ECB is seen as less hawkish than expected.

Background

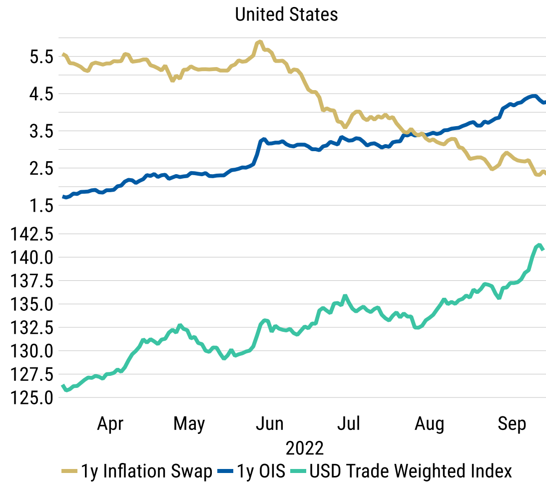
In recent months, near-term inflation expectations have fallen in the US as market pricing for the Fed has implied more and more hikes (Exhibit 47).

This combination (falling inflation expectations, a more hawkish central bank) has been highly USD-positive. The trading environment parallels regime 3 of our Real Yield USD Framework, the most USD-positive of the four regimes we analyze here.

However, rising expectations for ECB policy have not translated into a stronger EUR (Exhibit 48).

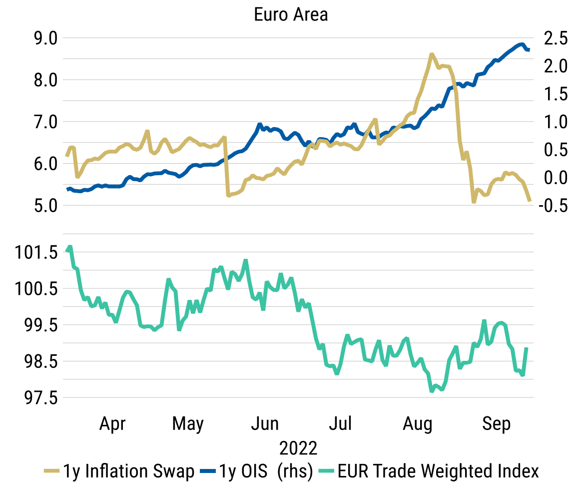
The reason a more hawkish ECB has not strengthened EUR is related to how inflation expectations have evolved in recent months.

Exhibit 47: USD has gained as inflation expectations have fallen while the Fed hikes



Source: Bloomberg, Macrobond, Morgan Stanley Research

Exhibit 48: High inflation and ECB hawkishness have weakened EUR



Source: Bloomberg, Macrobond, Morgan Stanley Research

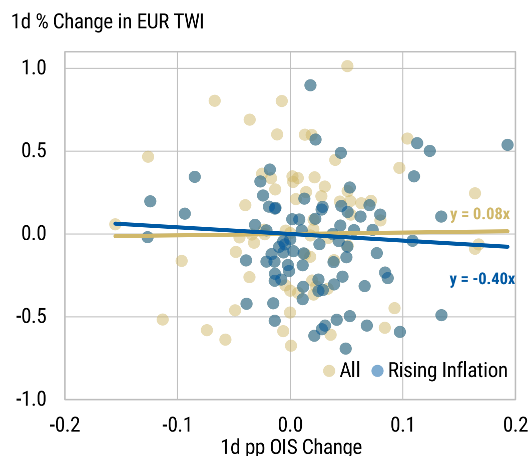
Over the past several months, market pricing has implied that Euro Area HICP ex-tobacco will be elevated at around 6% over the coming year (see EUSWI1 Curncy on Bloomberg).

On a daily basis, EUR has been relatively unresponsive to movements in 1y OIS. The yellow regression line in Exhibit 49 shows that EUR has shown little predictable relationship to ECB policy expectations.

However, the blue regression line shows the relationship on days when 1y HICP ex-tobacco swaps are rising. On those days, EUR shows a clear negative relationship to OIS-implied ECB policy expectations.

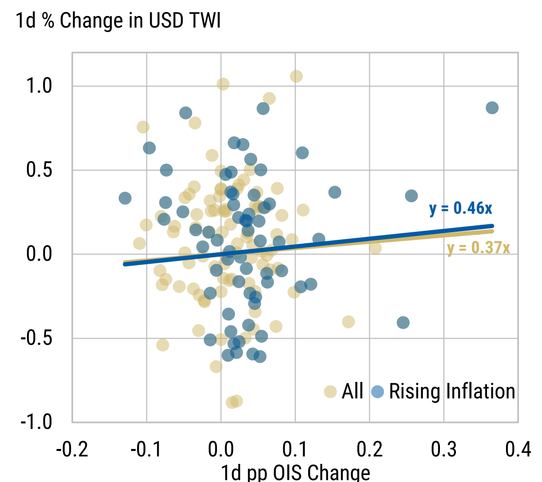
In other words, a more hawkish ECB translates into a weaker EUR when it is perceived as hiking into stagflation.

Exhibit 49: EUR declines when inflation expectations rise and the ECB hikes...



Source: Bloomberg, Macrobond, Morgan Stanley Research

Exhibit 50: ...in contrast to the US

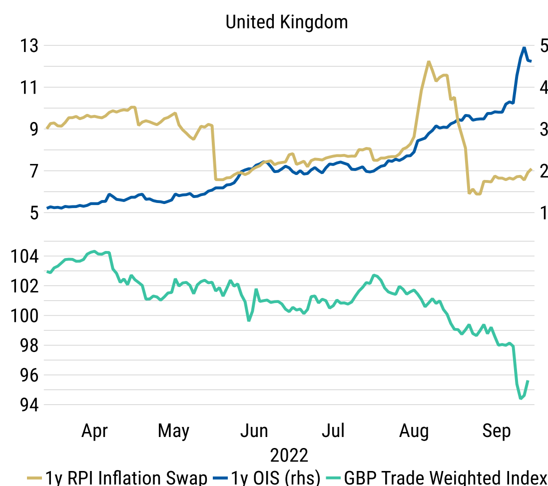


Source: Bloomberg, Macrobond, Morgan Stanley Research

The EUR's trading relationship to OIS contrasts with that of the USD, which has reliably gained when Fed policy expectations rise and falls when Fed policy expectations decline.

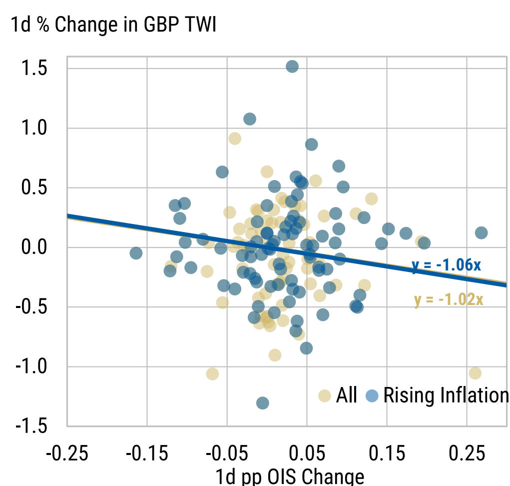
In light of significant recent GBP volatility, it is notable that over the past several months GBP has shown a reliably negative relationship to OIS. As the BoE has been expected to be more hawkish, GBP has fallen (and vice versa).

Exhibit 51: BoE hikes against a high-inflation background have weakened GBP...



Source: Bloomberg, Macrobond, Morgan Stanley Research

Exhibit 52: ...but GBP falls whether or not inflation is falling



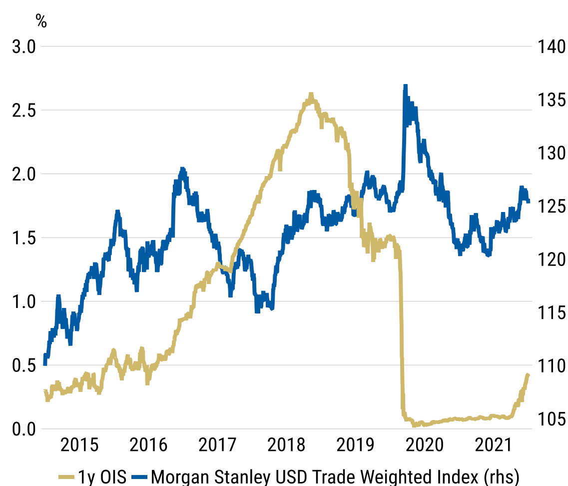
Source: Bloomberg, Macrobond, Morgan Stanley Research

This analysis highlights some key characteristics of the recent trading environment and differences between EUR and GBP drivers.

Prior to this year, USD showed a negative relationship to 1y OIS (Exhibit 53). For example, the USD declined sharply in 2017 while policy expectations rose. Conversely, USD gained in 2020 as policy expectations dropped with the onset of COVID.

By contrast, the Canadian dollar has demonstrated a loose relationship with BoC policy expectations – notably in late 2015 and early 2016, and during the risk-off episode during the onset of COVID.

Exhibit 53: USD moved inversely to Fed expectations for much of the time prior to 2022...



Source: Bloomberg, Macrobond, Morgan Stanley Research

Exhibit 54: ...whereas CAD has shown a weak relationship to near-term BoC policy expectations

Source: Bloomberg, Macrobond, Morgan Stanley Research

The regression coefficients from January 2015-February 2022 are presented in Exhibit 55. As discussed above, the Canadian dollar was positively related to near-term BoC policy expectations, while the US dollar was negatively related to near-term Fed policy expectations.

As one might expect, EUR and GBP generally showed an intuitive positive relationship to policy expectations. However, the correlation coefficients were small – generally below 0.1.

EUR showed a counterintuitive (i.e., negative) relationship with ECB expectations *on days when inflation expectations were falling*. When ECB policy expectations and Euro Area inflation expectations were *rising*, EUR gained (and vice versa). However, when ECB policy expectations were rising and Euro Area inflation expectations were *falling*, EUR declined (and vice versa).

OIS-FX patterns have changed dramatically since March 2022 (i.e., since the Russian invasion of Ukraine and associated price pressures).

First, **policy expectations have become more important.** Correlations are stronger in absolute terms.

Second, **the USD has become positively related to Fed policy expectations** - a reversal from earlier trading patterns. Prior to 2022, a hawkish Fed did not reliably strengthen USD, but it has in recent months.

Third, **the EUR's trading pattern has flipped**. EUR demonstrates the intuitive higher rates-stronger currency relationship when inflation is falling, but a more hawkish ECB weakens EUR when inflation is rising. In other words, the EUR has weakened on days when the ECB is viewed as hiking into stagflation.

Fourth, **GBP has consistently declined on days when the BoE is expected to be more hawkish** (and vice versa) - whether or not inflation is expected to rise or fall. That trading pattern is diametrically opposed to the situation prior to 2022, when rising BoE hiking expectations reliably meant GBP strengthened.

The recent contrast between the EUR and GBP trading pattern suggests that inflation expectations are key to the EUR's trading behavior. However, inflation expectations are secondary to BoE policy for GBP.

Exhibit 55: GBP rose in line with BoE policy expectations in the past...

OIS-FX Regression Coefficient
Jan 2015 - Feb 2022

	All	Rising Inflation	Falling Inflation	*Correlation*
USD	-0.47	-1.06	-0.11	0.00
SEK	0.57	0.25	0.81	0.01
AUD	0.72	-0.29	1.43	-0.01
EUR	0.93	2.68	-1.02	0.07
GBP	1.11	1.17	1.04	0.05
CAD	1.16	0.70	1.63	0.04

Source: Bloomberg, Macrobond, Morgan Stanley Research

Exhibit 56: ...but the relationship has now flipped

OIS-FX Regression Coefficient
March 2022 - Present

	All	Rising Inflation	Falling Inflation	*Correlation*
GBP	-1.02	-1.06	-0.81	-0.25
AUD	-0.23	-0.75	0.21	-0.10
EUR	0.08	-0.40	0.63	-0.07
CAD	0.35	0.67	-0.08	0.12
USD	0.37	0.46	0.24	0.00
SEK	0.42	0.84	0.10	0.11

Source: Bloomberg, Macrobond, Morgan Stanley Research

GBP's trading pattern suggests that whether inflation expectations are rising are falling, market participants are recently focused on the possibility that BoE hikes might cut off growth, weakening GBP.

Therefore, an increasingly hawkish path of BoE policy would be likely to further weigh on GBP.

By contrast, market participants appear to view a more hawkish ECB as EUR-positive ***if*** it translates into lower inflation.

By contrast, the key variable for the EUR is likely to be inflation expectations. EUR is likely to weaken further (as we expect) if the ECB becomes increasingly hawkish while inflation expectations rise (i.e., the ECB is hiking into stagflation), or if inflation expectations decline while the ECB is seen as less hawkish than expected.

Trade idea: Maintain short GBP/USD at 1.106 with a target of 1.0000 and stop of 1.1800

Trade idea: Maintain short EUR/USD at 0.976 with a target of 0.930 and a stop of 1.050

G10 | How do FX-hedged yields compare now?

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We've previously discussed how hedgers who are looking to sell USD/buy foreign currency may see hedging costs rise in the future. With rate hike expectations continuing to rise globally, we take stock of how FX-hedged yields look across different equity and fixed income assets for different investors.

In Exhibit 57 below, we provide a quick snapshot of how yields of different assets look after accounting for FX-hedging costs.

For example, 10-year bunds currently yield ~2.2%, but for a USD-based investor, hedging the FX exposure (by selling a 12-month EUR/USD FX forward) provides an additional yield pick-up of ~2.4%, which effectively doubles the amount of yield of investing in 10-year bunds (at 4.6%). Conversely, this works against the EUR investor who has to pay a hedging cost of ~2.4% when investing in US treasuries. This renders 10-year US treasuries less attractive (at 1.4%) on an FX-hedged basis than buying 10-year bunds (2.2%).

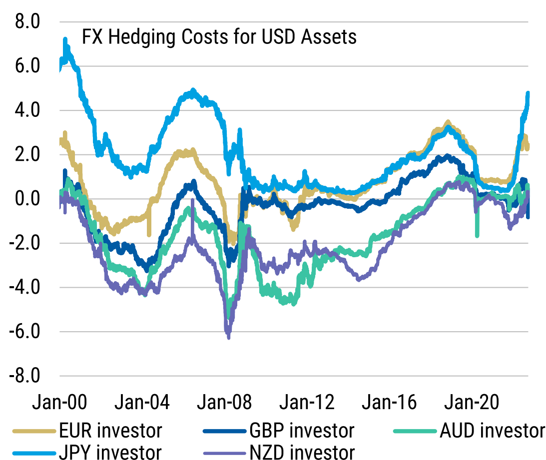
Exhibit 57: FX-hedged yields across asset classes for different investors

	Local	USD Investor				EUR Investor				GBP Investor				JPY Investor			
	Yld	FX-Hdgd Yld	1m Δ	5Y Avg	5Y Z-score	FX-Hdgd Yld	1m Δ	5Y Avg	5Y Z-score	FX-Hdgd Yld	1m Δ	5Y Avg	5Y Z-score	FX-Hdgd Yld	1m Δ	5Y Avg	5Y Z-score
DM EQUITIES					- 0 +				- 0 +				- 0 +				- 0 +
S&P 500	1.8%	1.8%	▲	1.7%		-0.6%	▲	-0.2%		2.4%	▲	1.0%		-2.9%	▼	-0.1%	
Eurostoxx	3.8%	6.3%	▲	5.1%		3.8%	▲	3.1%		6.8%	▲	4.3%		1.4%	▼	3.2%	
Japan	2.6%	7.3%	▲	4.1%		5.0%	▲	2.1%		8.1%	▲	3.3%		2.6%	▲	2.2%	
UK	4.1%	3.5%	▼	5.0%		1.2%	▼	3.0%		4.1%	▲	4.2%		-1.2%	▼	3.1%	
10Y GOVT BONDS					- 0 +				- 0 +				- 0 +				- 0 +
UST 10Y	3.8%	3.8%	▲	2.0%		1.4%	▲	0.0%		4.3%	▲	1.2%		-0.9%	▲	0.1%	
Gilt 10Y	4.1%	3.6%	▲	1.8%		1.2%	▲	-0.2%		4.1%	▲	1.0%		-1.1%	▲	-0.1%	
Bund 10Y	2.2%	4.6%	▲	2.1%		2.2%	▲	0.0%		5.2%	▲	1.3%		-0.2%	▲	0.1%	
BTP 10Y	4.6%	7.1%	▲	3.8%		4.6%	▲	1.8%		7.6%	▲	3.0%		2.2%	▲	1.9%	
JGB 10Y	0.2%	5.0%	▲	1.9%		2.7%	▲	0.0%		5.8%	▲	1.2%		0.2%	▲	0.0%	
ACGB 10Y	3.9%	4.4%	▲	2.2%		2.0%	▲	0.2%		4.9%	▲	1.4%		-0.4%	▼	0.3%	
30Y GOVT BONDS					- 0 +				- 0 +				- 0 +				- 0 +
UST 30Y	3.7%	3.7%	▲	2.4%		1.4%	▲	0.5%		4.3%	▲	1.6%		-1.0%	▼	0.5%	
Gilt 30Y	4.0%	3.4%	▲	2.3%		1.0%	▲	0.3%		4.0%	▲	1.5%		-1.3%	▼	0.4%	
Bund 30Y	2.2%	4.6%	▲	2.6%		2.2%	▲	0.5%		5.1%	▲	1.8%		-0.3%	▲	0.6%	
BTP 30Y	4.4%	6.9%	▲	4.7%		4.4%	▲	2.6%		7.4%	▲	3.9%		2.0%	▼	2.7%	
JGB 30Y	1.4%	6.1%	▲	2.6%		3.9%	▲	0.6%		6.9%	▲	1.8%		1.4%	▲	0.7%	
ACGB 30Y	4.1%	4.6%	▲	2.9%		2.2%	▲	0.9%		5.1%	▲	2.1%		-0.2%	▼	1.0%	
CREDIT					- 0 +				- 0 +				- 0 +				- 0 +
US IG	5.7%	5.7%	▲	3.1%		3.3%	▲	1.1%		6.2%	▲	2.3%		1.0%	▲	1.2%	
US HY	9.7%	9.7%	▲	5.9%		7.3%	▲	3.9%		10.3%	▲	5.1%		5.0%	▲	4.0%	
EU IG	4.3%	6.7%	▲	2.9%		4.3%	▲	0.9%		7.3%	▲	2.1%		1.9%	▲	1.0%	
EU HY	8.7%	11.2%	▲	6.2%		8.7%	▲	4.2%		11.7%	▲	5.4%		6.3%	▲	4.3%	

Source: Bloomberg, Morgan Stanley Research; Note: Hedging costs are computed based on 12m FX forwards

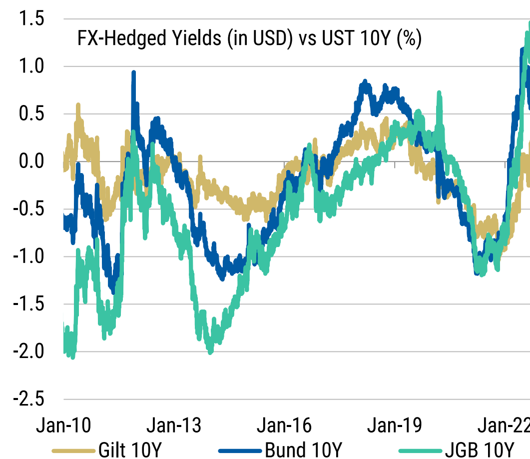
Hedging costs for USD assets have risen: This is particularly the case for EUR- and JPY-based investors as yield differentials between the US versus the euro area and Japan continued to widen (Exhibit 58). USD assets, after accounting for FX hedging costs, thus look less attractive to EUR and JPY investors relative to their respective domestic markets (Exhibit 59). GBP investors, on the other hand, have seen their USD hedging costs fall (and even turn negative) on the back of the substantial rise in UK front-end rates relative to the US.

Exhibit 58: Hedging costs for EUR and JPY investors for USD assets have risen substantially



Source: Bloomberg, Morgan Stanley Research; Note: Based on 12m forwards

Exhibit 59: For a USD-investor, FX-hedged yields of Bunds and JGBs look more attractive than USTs



Source: Bloomberg, Morgan Stanley Research

For a USD-based investor, European and Japanese assets look most attractive; less so the UK: USD-based investors essentially get paid to hedge their EUR or JPY exposure, providing them an additional yield pickup of 2.4% and 4.7%, respectively. This effectively doubles the yield of most assets, including equities. Buying Japanese equities and hedging the FX exposure provides a very significant 7.3% in FX-hedged yield (Exhibit 57). UK assets, on the other hand, look a lot less attractive now that the yield pickup from FX-hedging has diminished considerably.

This will likely have implications on asset allocation as investors contemplate the relative attractiveness of different assets and the merits of hedging the FX exposure (or not), especially as FX volatility continues to rise We look to explore this in further detail in the future.

USD | Are we meeting at the Plaza?

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King dollar's rule remains unchallenged, with the DXY reaching 20-year highs and some currencies, such as GBP, falling to all-time lows. USD strength even prompted a response from the Japanese government, which directly intervened in FX markets on September 22 for the first time since 1998. Despite this action, though, USD has retraced nearly all its subsequent losses against JPY, raising uncomfortable questions for investors and policy-makers alike: is the US dollar too strong? And if so, what can be done about it?

One idea increasingly discussed among investors is the prospect of a coordinated intervention to weaken USD, akin to the 1985 Plaza Accord when the US coordinated with other major economies to collectively weaken USD. Is this likely? And if it happened, would it work? We think the answer to both questions is no.

Why it's not likely: First and most importantly, a weaker USD runs counter to what the Fed and Treasury are trying to achieve: lower inflation. A weaker USD is, on net, inflationary in the US and deflationary abroad; foreign currency appreciation supports higher external demand. While US inflation is elevated, it seems difficult to countenance why the US would proactively participate in an inflationary USD policy, and without US participation, we see little chance of success.

Second, DM policymakers have generally questioned the efficacy and appropriateness of currency management, particularly in the US as is evident in the US Treasury's *Macroeconomic and Foreign Exchange Policies of Major Trading Partners of the United States* report.

What if it happens? But let's say USD strength is intolerable despite this and intervention does happen. It would likely be on the back of financial asset moves more volatile than we've seen thus far and if financial stability risks were to become more apparent. Would it work? Here we remain skeptical, but let's contemplate two scenarios.

First, imagine an "FX only" scenario where the G10 announces a coordinated intervention and offers a sizeable sum of USD into the market. We would expect a knee-jerk decline in USD on the headline, of course, but we think investors will quickly ask "what's changed?" and "for how long will they intervene?"

Is there enough firepower? We think policymakers are aware of a hard truth: they don't have enough FX reserves to make a sustained difference. Back in 1985-87, the last time we had a coordinated intervention to weaken USD (known as the Plaza Accord), daily FX turnover was near US$200 billion per day (on a net-gross basis) but, as of the last reported BIS figure in 2019, daily turnover is over 40 times higher, at US$8.3 trillion per day.

To examine this, we compare the stock of reserves available relative to FX turnover, the size of reserves, and past intervention sizes (adjusted for the increase in trading volumes).

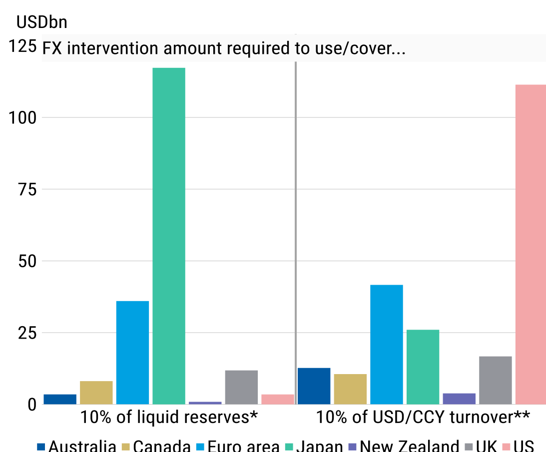
Exhibit 60 shows the amount of FX intervention each G7 country would have to conduct to: (a) use 10% of their liquid reserves (which we define as securities plus deposits); (b) cover 10% of the daily *spot* trading volume of their respective USD/CCY (for the US, we use the total USD/G7 trading volume).

With the exception of Japan, no other country in the G7 would be able to cover 10% of the daily spot USD/CCY trading volume with 10% of their reserves. This points to the unsustainability of any prolonged FX intervention campaign.

Exhibit 61 attempts to estimate how much each G7 country could spend based on prior coordinated interventions: In recent history, there have been two noteworthy intervention episodes: the September 2000 effort to strengthen EUR and the March 2011 effort to stem the appreciation of JPY following the earthquake and tsunami that hit Japan.

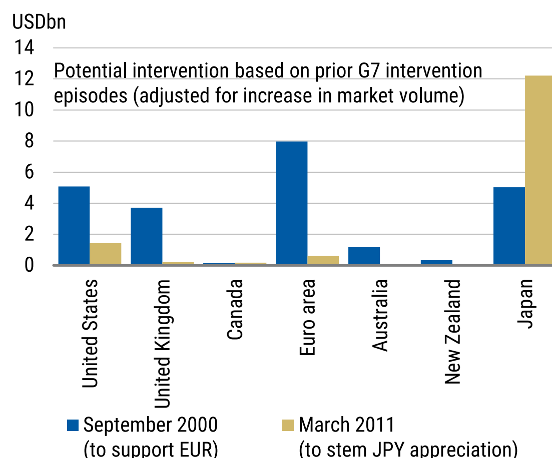
We approximate the size of prior FX interventions from publicly available intervention data, IMF proxy estimates, and changes in FX reserves before adjusting for the increase in USD spot trading volume since then. The results suggest a total US$14.6 billion of interventions to match those in March 2011, or US$23.4 billion to match the September 2000 interventions. This is much lower than the amounts shown in Exhibit 60, suggesting the success of such interventions lies in the signalling effect rather than in the actual amount.

Exhibit 60: With the exception of Japan, no other country in the G7 would be able to cover 10% of the daily spot USD/CCY trading volume with 10% of their reserves



Source: Macrobond, BIS, Morgan Stanley Research; Note: *Liquid reserves include securities and currency deposits. **We use daily USD/CCY spot turnover. For the US, only USD/G7 turnover is considered.

Exhibit 61: How much each G7 country could intervene, based on prior coordinated intervention episodes



Source: Central bank/government websites, IMF, Macrobond, Morgan Stanley Research; Note: Published spot intervention volumes are used when available. Otherwise, interventions are proxied through IMF data or monthly changes in FX reserves. Volumes are adjusted for the increase in total FX spot trading volume since each episode

Monetary policy changes are generally far more able to influence FX values than intervention alone: What if the Fed were to cut rates to help to weaken USD? In this scenario, we think the alternative narrative could create further problems. Rate cuts from the Fed amid near double-digit inflation are likely to raise questions about its inflation-fighting credibility and markets could price in an even higher terminal rate in response.

Meanwhile, even more aggressive tightening abroad designed to support their currencies, mirroring the Fed's moves, may reduce expectations for global growth further, fueling more USD safe-haven demand. Such a coordinated action would raise investor uncertainty about the path of inflation and the global policy framework, bolstering volatility. The risk would then be that the Fed would subsequently need to hike even more to offset credibility concerns.

In sum, we think that the combination of limited US appetite, limited resources, and limited effectiveness renders a coordinated intervention difficult and unlikely. What seems more likely is the Fed acknowledging the global effect of a strong dollar and elevated interest rates *after* it has confidence that it has control of inflation: As our US economics colleagues highlight, there is little pressure from the domestic economy for policy-makers to respond to the strong USD. A clear peak in US inflation data as well as clear signs from the labor market that aggregate demand is pulling back would be two important steps.

Lael Brainard, the current Vice-Chair, acknowledged when she was a Board Governor in 2015 the risks to US growth from weaker global growth on the back of the 2014/15 dollar move. Such statements could be reintroduced to give markets confidence that the Fed acknowledges the risks to growth from the current interest rate cycle. For the Treasury to act, the threshold remains unclear, given the obstacles discussed in our more detailed report, where we look at an abbreviated history of the post-Bretton Woods attempts at currency coordination.

Trade idea: Maintain short EUR/USD at 0.976 with a target of 0.930 and a stop of 1.050
Trade idea: Maintain short GBP/USD at 1.106 with a target of 1.000 and a stop of 1.180
Trade idea: Maintain long USD/CAD at 1.375 with a target of 1.400 and a stop of 1.300

GBP | Parity in sight

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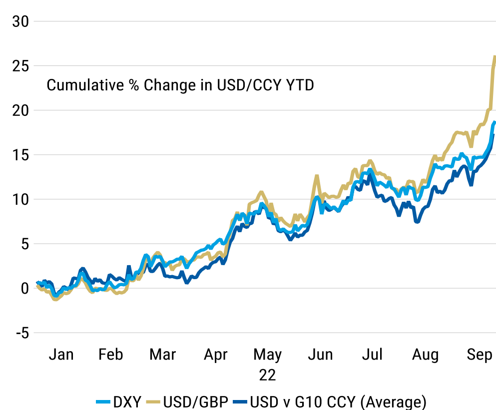
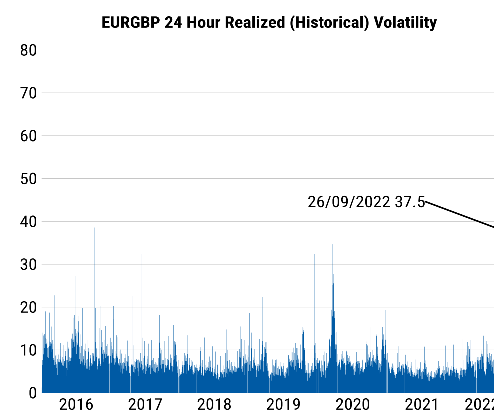
GBP volatility has increased: Volatility in sterling exchange rates has increased meaningfully in the past couple of days, with GBP/USD touching record post-Bretton Woods lows. So far this year the key driver of GBP weakness has been USD, with GBP moving alongside other pairs. This changed in the past few days, with GBP leading the charge lower (Exhibit 62). Realised overnight volatility in EUR/GBP has reached the highest levels since the 2016 Brexit vote (Exhibit 63).

Exhibit 62: GBP/USD is increasingly explained by GBP weakness, not USD strength



Source: Macrobond, Morgan Stanley Research

Exhibit 63: EUR/GBP volatility has reached the highest level since Brexit



Source: Bloomberg, Morgan Stanley Research

How low can GBP go? In our recent note we revised our forecast for GBP/USD lower to 1.02 by year-end alongside a broad revision for more USD strength. We argued that GBP could be the best short for investors in that GBP is uniquely exposed to three major shocks:

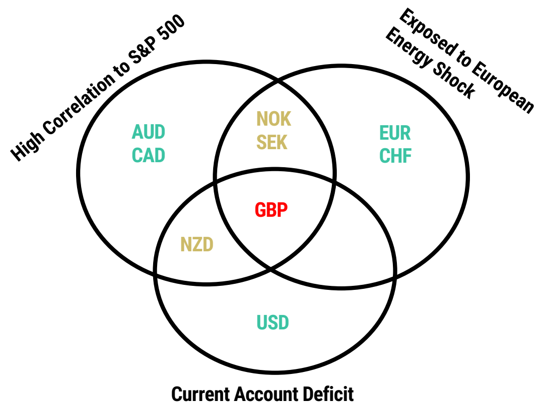
1. **Risk sensitivity:** In a world of tighter financial conditions, currencies that have a high positive beta to the equity market likely weaken the most.
2. **European stagflation and energy:** European currencies are more exposed to the energy price shock driven by the geopolitical tensions in eastern Europe.
3. **External vulnerabilities:** The UK runs a persistent current account deficit and GBP is thus vulnerable to increased foreign investor concerns about the UK's 'twin deficits'.

We think that this framework continues to hold and we revise our trade recommendation and now think that GBP/USD could overshoot our previous 1.02 year-end forecast to parity (1.00). This should keep our long EUR/GBP recommendation toward 0.95 intact as well.

Trade idea: Maintain short GBP/USD at 1.106 with a target of 1.0000 and stop of 1.1800
Trade idea: Maintain long EUR/GBP 6m 0.90/0.95 call spread at a cost of 2.1% (priced 16-Sep-22)

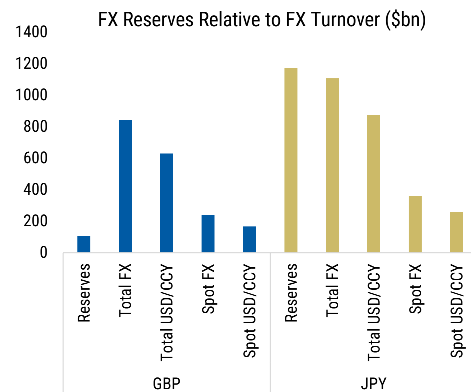
Is FX intervention on the cards? The uptick in FX volatility and last week's surprise FX intervention by the Japanese Ministry of Finance may have raised market expectations that the Bank of England and/or HM Treasury may intervene to arrest GBP's weakness. While it's difficult to assess the probability that an intervention will take place, we make two comments. First, the probability of intervention is likely positively correlated to both FX volatility and the weakness in GBP. That is, higher vol and/or a lower GBP raises that risk at the margin.

Exhibit 64: GBP is uniquely vulnerable to three different global/local shocks



Source: Morgan Stanley Research

Exhibit 65: The UK's FX reserves are far smaller than those of Japan...



Source: BIS, Bloomberg, Morgan Stanley Research

Second, though, is that we're not convinced that an intervention in the FX markets will ultimately succeed in correcting GBP weakness. Just as we argued with JPY, we think that as long as fundamentals continue to point to GBP weakness, an FX intervention may be of limited effect in correcting the currency path.

This is particularly true in the case of GBP because of its relatively low FX reserve levels. Exhibit 65 and Exhibit 66 compare the stock of deposits (most liquid) and securities (less liquid) held by the Japanese MoF and HM Treasury across a variety of different measures of FX turnover: total turnover in GBP and JPY across instruments, total turnover in spot only, turnover in USD/GBP and USD/JPY across all instruments, and spot turnover only in USD/GBP and USD/JPY.

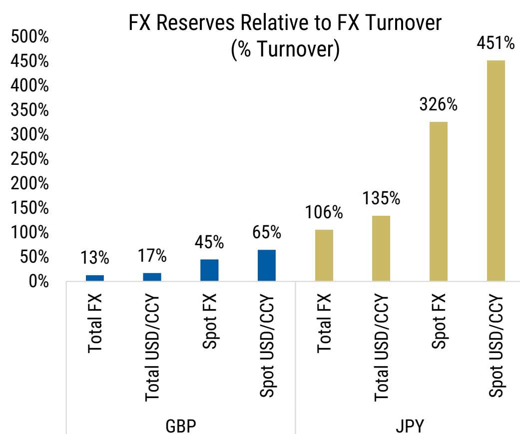
The FX market is a large one with US$6.5 trillion in total turnover per day. GBP and JPY have similar trading volumes of roughly US$1 trillion each. But unlike the Ministry of Finance, which has US$1.1 trillion in reserves, the UK only has about US$100 billion. As a result, we think that the Japanese level of reserves is viewed by investors as more credible in maintaining a sustained and meaningful FX intervention programme.

We don't think the recent BoE intervention changes the GBP story: While the announced gilt market operation has helped to soothe disorderly gilt market conditions and reduce financial stability risks, it is simply a temporary remedy to a symptom, not the underlying cause – the government's unfunded tax cuts plan. PM Truss looks committed to tax cuts introduced last Friday, and we don't see a u-turn there. We think the focus for FX investors will remain on the UK's fiscal credibility and the lack of clarity on this front will likely continue to weigh on the currency.

So what could support GBP? Would an emergency hike support it? We're not sold that an emergency rate hike inter-meeting could blunt the GBP decline, though we think that it would be more effective than FX intervention alone. This is because monetary policy is a more powerful, albeit blunter, tool.

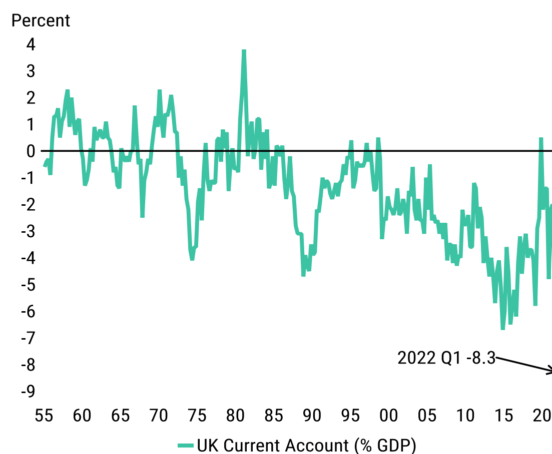
The challenge for GBP investors is that a BoE rate hike and/or a higher ultimate terminal rate both weaken the local growth outlook but may also exacerbate the fiscal outlook for the UK. This is because weaker growth tends to weaken tax receipts while expenses tend to rise (automatic stabilisers). Moreover, it's not clear how fiscal policy-makers may respond to the BoE's response, and if investors are concerned that fiscal policy-makers may continue to pursue expansionary policy, then it creates a vicious cycle of a weaker currency, more government spending and higher BoE rates.

Exhibit 66: ...particularly relative to FX turnover in spot markets



Source: BIS, Bloomberg, Morgan Stanley Research

Exhibit 67: The UK's current account deficit has reached a new record low



Source: Macrobond, Morgan Stanley Research

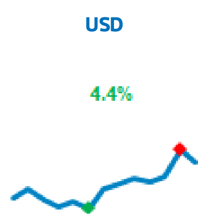
Ultimately, the exchange rate is equilibrating the savings-investment imbalance and is the 'release valve': The UK runs a current account deficit, which means it is consuming more than it produces or, put another way, capital demand is in excess of capital supply. The most recent fiscal expansion raised UK capital demand at a time when its demand-supply imbalance is already at challenging levels for investors.

Capital supply can be increased to meet rising capital demand via three sources: domestic savers, foreign savers or monetary financing (i.e., central bank asset purchases). The BoE is actively selling gilts so it appears to be an unlikely source. Meanwhile, domestic savings are likely to be crimped by the cost of living crisis. This is why foreign savings are so important for the UK – if foreign investors are concerned about the sustainability of the UK's fiscal outlook, they would require more risk premium to buy those bonds, raising borrowing costs, worsening the fiscal outlook and creating a vicious cycle.

If foreign investors and the BoE are both reluctant to step in, then domestic savings have to rise to equilibrate the balance of payments. This is achieved in one of two ways. One, domestic borrowing costs rise, which incentivises consumers to save more and spend less. Two, the currency weakens, which narrows the trade deficit, bringing production and consumption into closer balance.

This is why we view GBP as the 'release valve'. Interest rates locally may be rising but there's a fundamental limit to how high rates can go before local growth is deleteriously impacted, creating challenges instead of fixing them. A weaker currency releases the pressure.

G10 | Currency Summary

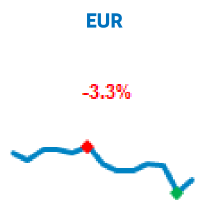


Our view: Bullish **Risk skew: Bullish**

Watch: ISM Manufacturing, ADP Employment, Jobless Claims, NFP

DXY **Support:** 111.75, 110.75, 109.50, 108.00, 107.00, **Resistance:** 112.75, 113.75, 115.25, 116.50, 118.00

We maintain our broadly bullish stance on the USD and continue to recommend USD longs versus EUR, GBP, JPY, and CAD. The two conditions needed to see the USD turn lower – a peak in Fed expectations and a nadir in global growth expectations – don't appear likely anytime soon. The upcoming employment report in the US may be an important FX catalyst given the importance of the labor market in driving US inflation. Positioning is a key risk we're watching, though we would use a squeeze out of USD longs to re-add to positions given the fundamental narrative.

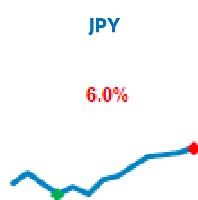


Our view: Bearish **Risk skew: Bearish**

Watch: PPI, Retail Sales

EUR/USD **Support:** 0.9675, 0.9550, 0.9500, 0.9325, 0.9175, **Resistance:** 0.9825, 0.9900, 1.0050, 1.0175/1.0200

EUR/USD should remain under pressure, both due to rising European risks and the strong USD. Risks of escalation in Eastern Europe should not be discounted and stagflationary concerns in Europe may increasingly contrast with robust US data. Indeed, regional German CPI figures once again exceeded market expectations. The results of the Italian elections we think were largely in line with market expectations.

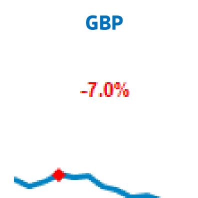


Our view: Bearish **Risk skew: Bearish**

Watch: BoJ Tankan, Tokyo CPI, Weekly Mof data, BoJ output gap

USD/JPY **Support:** 144.00, 141.75, 140.25/50, 139.00, **Resistance:** 145.00, 146.00, 147.25, 148.00, 151.00/50

We remain bearish on JPY. While we think the speed of a USD/JPY rally would likely slow down due to the fear of another Mof JPY buying intervention, we believe the potential for pricing higher US terminal rates in response to sticky inflation should widen policy divergence between the BoJ and the Fed, opening the door for USD/JPY to go toward 150.00.

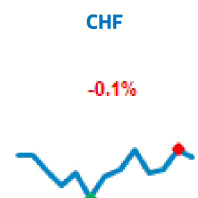


Our view: Bearish **Risk skew: Bearish**

Watch: No key risk events in the coming week

GBP/USD **Support:** 1.0900, 1.0800, 1.0650, 1.0525/50, 1.0325, **Resistance:** 1.1225, 1.1350, 1.1475, 1.1575

We see GBP/USD remaining under pressure and continue to like recommending short GBP/USD targeting 1.00 and long EUR/GBP targeting 0.95 via options. We don't think the recent developments (including BoE's gilt market intervention) have helped the GBP story and remain GBP bears. Fiscal credibility remains a key focus and concern for FX investors, in our view, and we think the lack of clarity on this front will continue to weigh on the currency. In addition, the currency is uniquely vulnerable to 3 simultaneous challenges: a high sensitivity to risk assets (which should weaken as the Fed tightens financial conditions), exposure to European stagflation and the energy shock, and external imbalances (with a widening current account deficit). We are also less convinced that more rate hikes will support GBP as it only exacerbates the growth slowdown and fiscal outlook.



Our view: Neutral **Risk skew: Bullish**

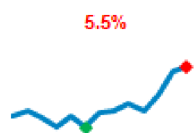
Watch: SNB Sight Deposits, Inflation, Unemployment Rate, FX Reserves

EUR/CHF **Support:** 0.9575, 0.9450, 0.9350, 0.9000, 0.8500/25, **Resistance:** 0.9725, 0.9800/25, 1.0050, 1.0150

We maintain our bullish CHF bias and our stay long CHF/JPY trade via options. EUR/CHF positioning remains very short, and some of these positions are currently being unwound as the ECB commentary is becoming incrementally hawkish while the SNB did not deliver a large enough rate hike at the September meeting. Still, we think economic fundamentals continue to point to a weaker EUR/CHF and think rallies in the cross should be sold. There was no mention of CHF being "highly valued" and President Jordan continued to flag that inflation remains above target. Sight deposits fell by the largest amount on record the week of September 19, while data on actual FX interventions from 2Q22 showed the SNB was a (marginal) buyer of CHF. We think the central bank will continue to favour a stronger currency as long as the stagflationary environment persists in Europe.

CAD

5.5%



Our view: Bearish **Risk skew: Bearish**

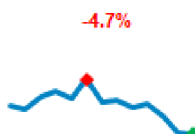
Watch: Employment

USD/CAD **Support:** 1.3600, 1.3475, 1.3375, 1.3200/50, 1.2900, **Resistance:** 1.3825/75, 1.4050, 1.4150/75, 1.4275

USD/CAD rose from around 1.36 to around 1.38 this week despite a relatively firm July GDP print as US price pressures remained firm and the broad USD gained. We expect further gains (targeting 1.40) as markets adjust to an increasingly challenging global growth outlook and a FOMC that is reluctant to slow the pace of near-term tightening. In contrast to the Fed, the BoC has signaled its policy's high sensitivity to the trajectory of inflation, and is prepared to slow the pace of hiking if signs of abating price pressures emerge. Given declining oil prices and recent deceleration in core Canadian inflation, we expect the BoC to sound increasingly cautious about the near-term policy path.

AUD

-4.7%



Our view: Bearish **Risk skew: Bearish**

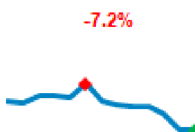
Watch: RBA Rates Decision, House Prices

AUD/USD **Support:** 0.6375, 0.6275, 0.6200, 0.6000, **Resistance:** 0.6525, 0.6675, 0.6775, 0.7000, 0.7125/50

Into the RBA meeting this week, we expect market focus on potential indications regarding when the pace of tightening will slow from 50bp/meeting to 25bp/meeting. Current pricing indicates a relatively low likelihood that such a decline occurs in October, a roughly 50% chance that the decline occurs at the November forecast update meeting, and an 80% chance that it occurs by the December policy meeting. The RBA Board considered a 25bp hike in September, and noted that "the case for a slower pace of increase in interest rates as becoming stronger as the level of the cash rate rises." Market pricing implies little chance of cuts in 2023 – in contrast to the RBNZ – implying that the current policy path is not expected to be significantly constrictive. In the coming weeks, market pricing is likely to adjust to price in more hikes by year-end as inflation remains supported (as our economist expects). Such an increase is likely to boost AUD/NZD, given the close relationship between AUD/NZD and 2y yield differentials.

NZD

-7.2%



Our view: Bearish **Risk skew: Bearish**

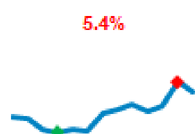
Watch: RBNZ Rates Decision

AUD/NZD **Support:** 1.1325, 1.1250, 1.1200, 1.1125, 1.1000, **Resistance:** 1.1450, 1.1500, 1.1575, 1.1650

Into the RBNZ meeting this week, we expect market focus on indications of whether the Committee is inclined to continue hiking past the 4.1% terminal rate it forecast in August. Governor Orr has indicated that the tightening cycle is "well advanced," suggesting that the committee may see economic headwinds to the New Zealand economy gathering. For example, 2Q retail sales declined sharply while house prices have also fallen. Orr has indicated that the post-4% path of policy will depend on the evolution of CPI. The RBNZ may offer few clues about the longer-term policy outlook, given that there have been no new CPI or PPI data releases since the August forecast update meeting. We continue to expect NZD (and AUD) to decline against USD as markets anticipating slower regional growth (for example, our economists do not believe recent policy efforts in China are sufficient to ensure a "firm economic recovery from 2Q23 onwards").

SEK

5.4%



Our view: Neutral **Risk skew: Bearish**

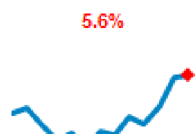
Watch: PMIs, GDP, Industrial Orders

EUR/SEK **Support:** 10.75/76, 10.60, 10.56, 10.50, 10.34, **Resistance:** 10.98, 11.03/04, 11.11/12, 11.20/21

We continue to see risks skewed to the downside for SEK, as global factors such as equity market weakness and the broad strengthening in the USD should continue to be the main drivers of SEK, more so than local factors (rising rate differentials). The Riksbank's minutes for the September meeting showed a growing split among Riksbank policy makers over their outlook for future hikes, with some arguing for more aggressive rate hikes to stem high inflation while others are concerned about the interest-rate sensitivity of Swedish households and think considerable uncertainty warrants a slower path of rate increases. Ultimately, we think hiking in a stagflationary environment is SEK-negative as more rate hikes will likely only weigh on growth further, especially given the high rate-sensitivity of the Swedish economy.

NOK

5.6%



Our view: Neutral **Risk skew: Bearish**

Watch: Budget Announcement, Manufacturing PMI, Industrial Production, GDP

NOK/SEK **Support:** 1.0150, 1.0100, 1.0000, 0.9925, **Resistance:** 1.0450, 1.0650, 1.0800, 1.0850, 1.0975

We continue to see a weaker NOK (and lower NOK/SEK) into the end of the year. Weakness in equity and oil markets have pushed EUR/NOK close to the highs from back in June. We expect more weakness to come, although acknowledge that the market is caught short NOK and quite long USD in the near term, while tactical risk indicators are at extreme levels. We don't expect local factors to have a big impact on the currency, with growth slowing in Norway too and the central bank easing the pace of tightening too. Global factors will matter more, and there our equity strategists expect more weakness to come (S&P bottoming between 3000-3400). Oil prices too are unlikely to be supported while the market prices in an increasing probability of a global recession, reducing any tailwinds to NOK from that front.

Charts show 3M performance against USD, as normally quoted and DXY for USD. Click on any currency for a reference webpage on Matrix.

Inflation-Linked Bonds

United States

Inflation pricing this week was driven by (1) a rally in UST following BOE activity, and (2) strong labor data leading to a sell-off in TIPS. The entire inflation complex – swaps, forwards, and breakevens – was down. Falling commodities prices further contributed to this trend.

In light of the past few days' elevated swaps vol, we refreshed our 1y1y position to analyze its performance. We decompose the trade into the m/m SA CPI path implied by fixings, and find that changes in the May23-Sep23 fixings largely explain the MTM.

The natural question is thus "Are these moves warranted?" To answer, we identify two factors that we believe have been driving the position over the past few months, namely: (1) increased confidence in the Fed's ability to tame inflation and (2) moves in commodities' prices. We then determine what these mean for our position.

Finally, we provide an update on TIPS liquidity amid liquidity concerns from the nominal market. We find that TIPS are likely experiencing elevated illiquidity, though not at levels comparable to 2020 peaks. We also find increased signs of participation by buy-and-hold investors.

Euro Area

We initiate a long 2y3y HICPx swap idea and close the OATei24 BE position as we believe risks of more policy intervention can push the sub-1y inflation fixings down. And this can also drag the 2y point lower.

United States | Real Yields, Real High

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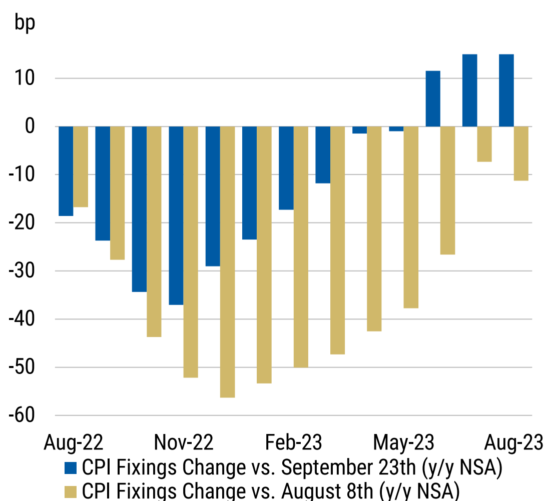
Part of this commentary was published previously in Inflation-Linked Market Strategist: Signs of Stress.

Events – this week was full of them. Non-US events, in particular, drove US inflation-linked markets, with the most notable being the BoE's surprise announcement of long-dated gilt purchases. This came following financial stability concerns from the LDI-following pension fund sector. Upon the 6am ET announcement, US treasuries rallied, compressing BEs. The move was led by the front end, with the 5s30s BE curve flattening 7bp (see Exhibit 69).

The focus shifted back to US data on Thursday, with a stronger-than-expected jobless claim pointing toward continued strength in the labor market. Breakevens tightened further following the release, under the "good news is bad news" logic of hot labor leading to further Fed tightening. As of this writing, BEs w/w were down across the curve, with the 5y point down ~27bp.

In the swaps space, sub-1y fixings were down, led by YE22/1H23 points (see Exhibit 68). Outright swaps also fell on the week, led by ~25bp drops in the 2y-5y points, as did swap forwards. In addition to reflecting the same inflation concerns as BE, these drops come amid continued energy commodities weakness, with WTI trading down 4.4% w/w.

Exhibit 68: Moves in fixings vs. 1w ago and pre-July CPI



Source: Morgan Stanley Research

Exhibit 69: Weekly change in UST, RY, and BE

Source: Bloomberg, Morgan Stanley Research

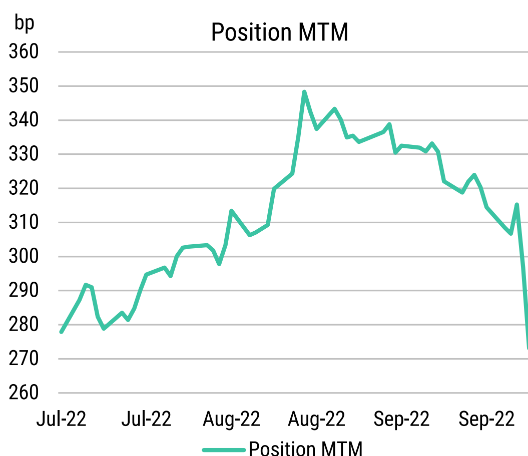
Marking Our Long 1y1y Swap to Market

In July, we entered a long US 1y1y CPI recommendation, expressed via zero-coupon inflation swaps. This position captured our sticky inflation thesis, by exposing investors to '23-'24 price changes. In light of the past few days' elevated swaps vol, we refreshed the position to analyze its performance.

Our trade was struck on July 15, 2022, as a long 1y1y position, which plays for the outperformance of inflation captured by the July 15, 2023, and July 15, 2024, CPI indexes. More specifically, the standard three-month indexation lag in inflation-linked markets implies the trade references the April 15, 2023, and April 15, 2024, period.

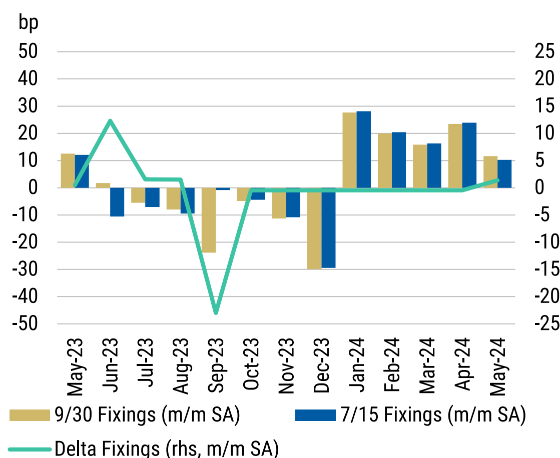
We mark to market by analyzing the change in the July 15, 2023, and July 15, 2024, CPI indexes. By the end of August, the position had appreciated by 80bp. Since then, it has been trending downwards – with the past few days' price action exacerbating the move (see Exhibit 70).

Exhibit 70: MTM of 1y1y position since July 15



Source: Morgan Stanley Research.
Note: Past performance is no guarantee of future results.

Exhibit 71: Change in Apr23-May24 m/m SA path vs. July 15



Source: Morgan Stanley Research

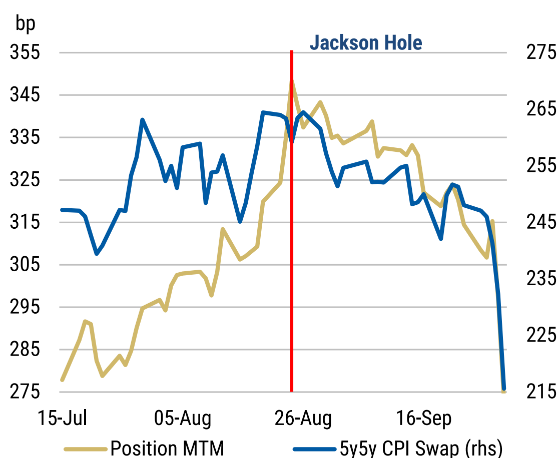
We decompose the trade into the m/m SA CPI path implied by the Apr23-May24 fixings (see Exhibit 71). Changes in the May23-Sep23 fixings, now <1y away, largely explain the MTM, with the biggest move being a 23bp m/m SA drop in the Sep23 point. The market is still pricing 0.2% m/m SA for fixings after Sep23, i.e., a reversion to the Fed's 2% target by 2024.

The natural question is thus "Are these moves warranted?" To answer, we identified two factors that we believe have been driving the position over the past few months, namely: (1) increased confidence in the Fed's ability to tame inflation and (2) moves in commodities prices.

To illustrate the first point, we plot our position's MTM vs. the 5y5y CPI swap (see Exhibit 72). We can see that pre-Jackson Hole, the Fed's credibility slightly deteriorated (blue line up), as elevated inflation was priced to persist (yellow line up). Post-August 26, however, the 5y5y has fallen – a sign that Powell's hawkish commitment to tackling inflation has been accepted and that sticky inflation is being priced out.

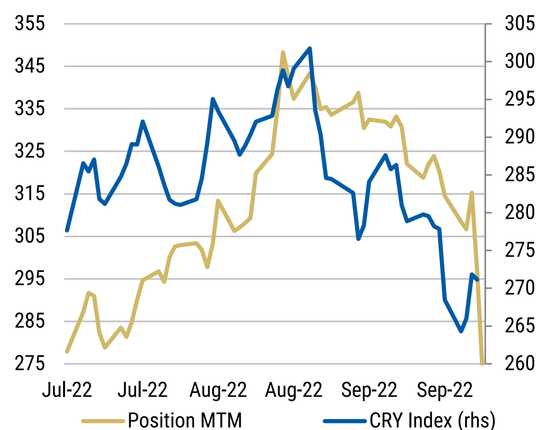
Thursday's real yield driven flattening in breakevens also supports this view. The strong jobless claims number signals a tight labor market, and the underperformance of TIPS vs. nominals indicates that incremental Fed hawkishness is being translated into lower future inflation. Said differently, the combination of the 5y5y down, real yields up, and breakevens down is suggestive of price stability – possible only if the market were increasingly confident in the Fed's control over inflation.

Exhibit 72: Position MTM vs. 5y5y Swap since July 15



Source: Bloomberg, Morgan Stanley Research

Exhibit 73: Position MTM vs. CRY Index since July 15



Source: Bloomberg, Morgan Stanley Research

The second point is shown concisely by overlying our position's MTM with the CRY commodities index (see Exhibit 73). US inflation-markets are tightly linked with commodities prices (though perhaps less so than prior to the pandemic). This has played out in our trade, as the comovement between the blue and yellow lines indicate.

What does this mean for investors? With regards to the first point, we believe our trade targets inflation already in the pipeline, and not inflation that will be impacted by Fed policy. As we have noted previously, there are signs that sticky inflation has spread across the CPI basket (e.g., trimmed medians at 40y highs). To this end, the Apr23-Apr24 fixings should move higher.

On the second point, we refer to our commodity strategists' recently published piece arguing that the risk/reward is now skewed in the favor of higher oil prices. This would represent a tailwind to the trade, as fixings reprice accordingly.

Choppy Water for TIPS?

Liquidity conditions in the Treasury market have been heavily discussed in recent weeks. For example, our MSTVI index is at levels last seen in early 2020, and cash/OIS spreads have been showing signs of dislocation. We therefore decided to study whether inflation-linked markets are showing signs of illiquidity.

We find that TIPS are likely experiencing elevated illiquidity, though not at levels comparable to 2020 peaks. By analyzing indicators of RV opportunities, bid/ask spreads, and TRACE TIPS trading volumes, we conclude that liquidity has been decreasing as financial conditions have tightened. We also find increased signs of participation by buy-and-hold investors.

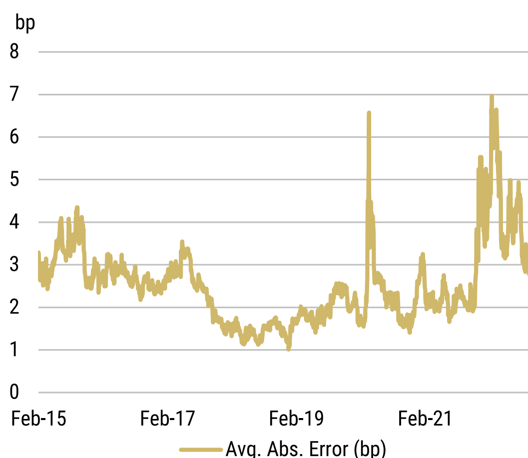
RV Opportunities

We compute the average absolute dispersion of seasonally adjusted real yields (SARY) from our spline to gauge RV opportunities (see Exhibit 74). Large values indicate RV opportunities, commonly associated with reduced liquidity, whereas small values suggest the opposite.

As expected, we find a large spike during 1Q20, as Covid uncertainty reduced liquidity. Interestingly, we find a second large spike on November 3, 2021, immediately following the Fed's taper announcement. This came as the market came to terms with the end of Fed support (SOMA ownership was ~21% of outstanding TIPS).

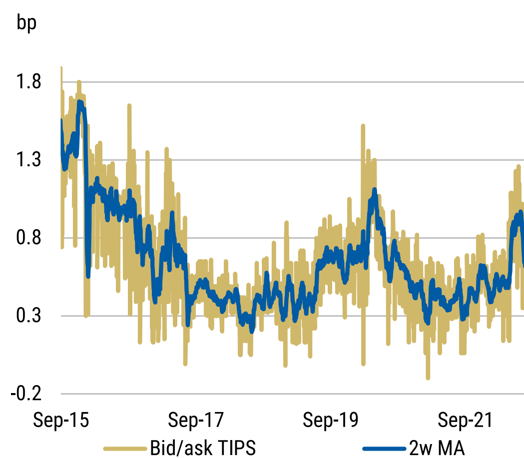
Since the November 2021 spike, however, the indicator has been trending downward. While the present level is still above QE levels, the direction of travel has been indicative of reduced/contained stress in the market.

Exhibit 74: Dispersion of SARY from spline



Source: Morgan Stanley Research

Exhibit 75: Bid/ask spreads on 10y TIPS



Source: Bloomberg, Morgan Stanley Research

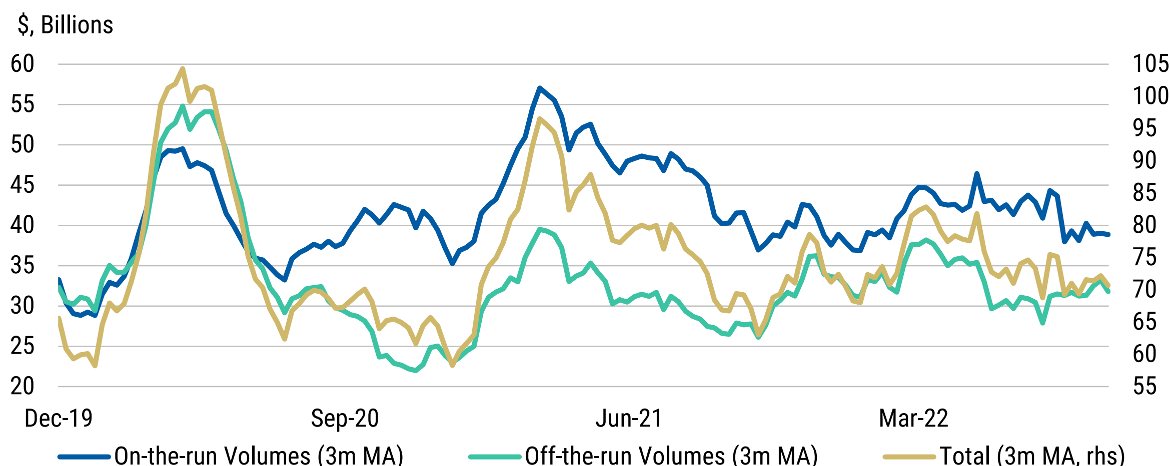
Bid/Ask Spreads

We next turn to look at bid/ask spreads for on-the-run 10y TIPS (see Exhibit 75). Historically, bid/ask spreads widen during periods of elevated stress and volatility. This comes as market makers perceive it's harder to convert securities to cash, and therefore demand additional compensation for their increased risk.

The 2w moving average in the bid/ask spreads has been elevated since November 2021, consistent with our relative value model. The moving average has not moved monotonically, however. There was a large spike in June 2022, when the strong CPI print led the market to price 75bp for Jun22 FOMC, and then a dip following the perceived dovish pivot in the July 2022 FOMC.

In recent weeks, the moving average has been trending upward, suggesting worsening liquidity conditions. This appears to be inconsistent with our RV model's signal. In part this is due to technical base effects, as July lows shift out of the computation window. However, we think this suggests differences in on-the-run and off-the-run liquidity. We therefore turn to TIPS trading volume data to verify whether this is the case.

Exhibit 76: TIPS trading weekly trading volumes



Source: FINRA, Morgan Stanley Research

Trading Volumes

An environment in which RV opportunities are not elevated vs. history, yet for which on-the-run bid/ask spreads are widening, suggests that trading volumes of on-the-runs vs. off-the-runs is decreasing. This is what we find when we look at weekly TRACE TIPS data (see Exhibit 76). We note that this data is released at a 1w lag.

Since August, weekly on-the-run 3m average volumes have dropped from $43bn to $39bn. Off-the-run volumes have increased from $28bn to $32bn over the same period. Overall, total TIPS volumes have been trending lower since April, falling around $11bn, though the change from on-the-run to off-the-run trading has left volumes generally unchanged over the past month.

What could explain this change in trading volume trends? We think it points to increased participation by yield-seeking participants, willing to warehouse the less liquid off-the runs in return for additional yield. As we wrote about last week, we still do not think real yields are a buy; however, 5y of ~1.90% real returns has perhaps been deemed as acceptable by investors for whom duration risk is not a concern.

Trade idea: Maintain long 1y1y US CPI swaps
Trade idea: Maintain long July '24 TIPS BE vs. short July '23 TIPS BE

Euro area | Close OATei24 BE, initiate 2y3y HICPx long

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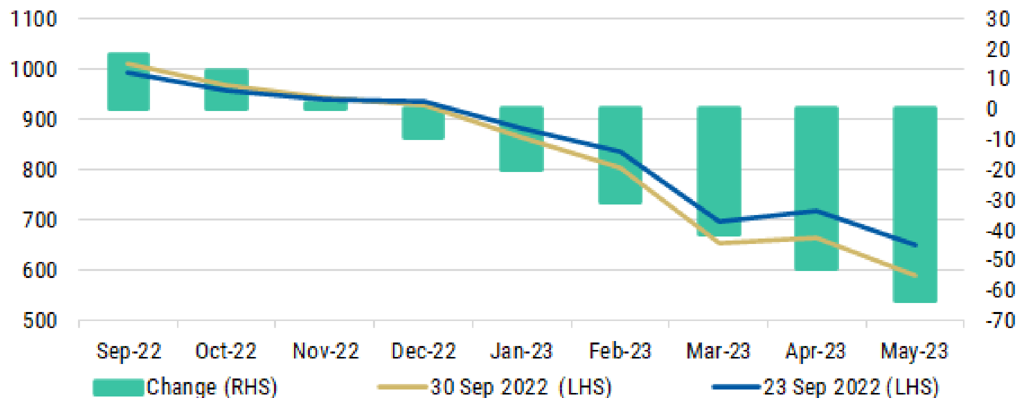
The following section has previously been published here

Downside inflation implications of policy announcements - risk of more

A key theme of this year has been the announcement of various policy measures by European governments, to shield consumers from higher gas prices. This policy intervention has a direct impact on break-evens, especially on those at the front-end of the curve: it pushes headline inflation lower, but indirectly supports core. But the impact on headline dominates.

We believe there is a significant risk that 1) more countries embrace policy measures and hence push down sub-1y HICPx swaps, 2) policy measures are extended beyond Dec 2023, which will push down the 2y point, and 3) we could see an undershoot of front-end break-evens, as the market has been overweight the front-end (2y sector) and carry is turning less appealing.

Exhibit 77: Significant repricing lower in front-end HICPx swaps over the last week



Source: Morgan Stanley Research, Bloomberg

With this in mind, we revise our EUR inflation trades and recommend the following:

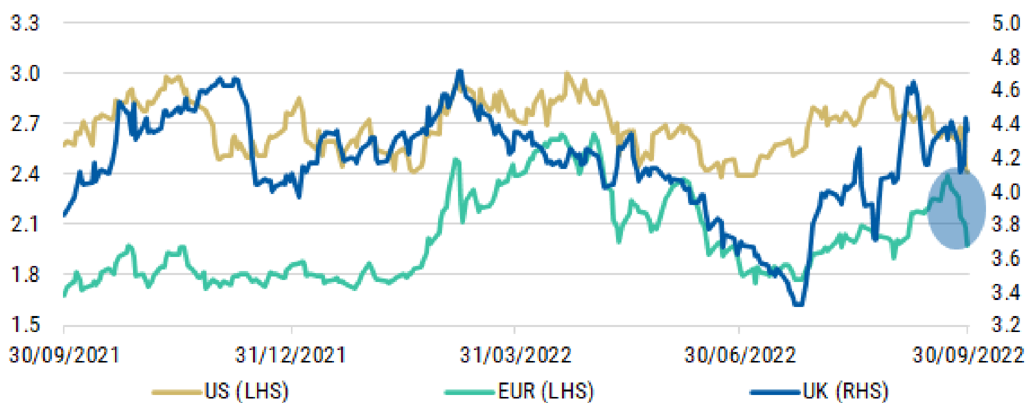
Trade idea: Exit OATei24 BE long
Trade idea: Enter long 2y3y HICPx swap: entry 1.94%, target 2.75%, stop 1.55%

Since early July, the BE on OATei24 has fallen by around 37bp but there has been about 80bp of positive carry, so investors who were long Eurolinker BEs made money on carry despite the recent BE tightening. But the sharp revision down in our HICPx forecasts will have an impact on carry chasing accounts, making them less likely to hold front-end BE longs.

Why we like 2y3y HICPx swap at current levels: We believe that concerns about reforms have taken investors out of long break-even positions. Some of that is "made in the USA" with the relevant 2y3y CPI forward having fallen by 45bp since the August peak. The 2y3y HICPx forward has fallen by the same amount but faster, i.e., during just eight trading sessions. In our view, this is an opportunity to fade the move, especially by investors with a medium- to long-term trading horizon.

Before the Russia-Ukraine conflict this forward used to trade around 1.8%. Since then, we think there has been a clear shift of governments towards more fiscal spending. This fiscal spending weighs on nominal duration and at the same time supports the notion of inflation stickiness. The risk to the trade is a further decrease in 5y break-evens that would also weigh on the forward. Technical investors should also see our modelling work on the 5y5y HICPx swap.

Exhibit 78: Weak 2y3y EUR HICPx offers opportunity to position for inflation stickiness



Source: Morgan Stanley Research, Bloomberg

Short-Duration Strategy

United States

Another week, another shock to markets. Amidst increased volatility due to outsized moves in UK gilts, secured funding markets continue to show us they are flush with cash.

This week, SOFR continued its march lower, now printing -4bp below the FF lower target. Lower SOFR volumes leading into quarter-end reflect dealer balance sheet constraints, pushing the RRP balance above $2.4tr for the first time since its inception.

This week, Fed officials largely ignored market volatility and reiterated their resolve to bring down inflation. We maintain EDZ3EDZ4 flatteners to capture risks of a higher terminal rate while benefiting from cuts being priced if the market sees increased growth or hard landing concerns.

In a special section, we provide an update on UST liquidity. We examine OIS swap spreads, bid-ask, and curve dispersion to find that current liquidity conditions resemble those observed in recent episodes of market stress (March 2020).

The effect on funding markets has been minimal. On one hand, we find that secured funding continues to be well supported, with SOFR -7bp below the ON RRP rate. On the other hand, 3m FRA-OIS and SFREDZ2 have widened, seemingly reflecting increased concerns for unsecured funding markets.

United States | Soft SOFR

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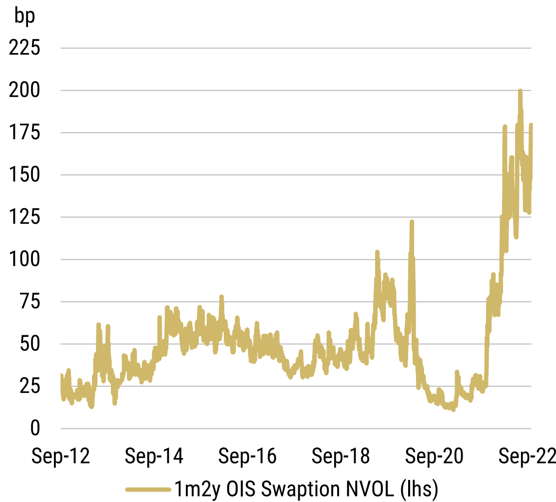
Volatility up, SOFR down

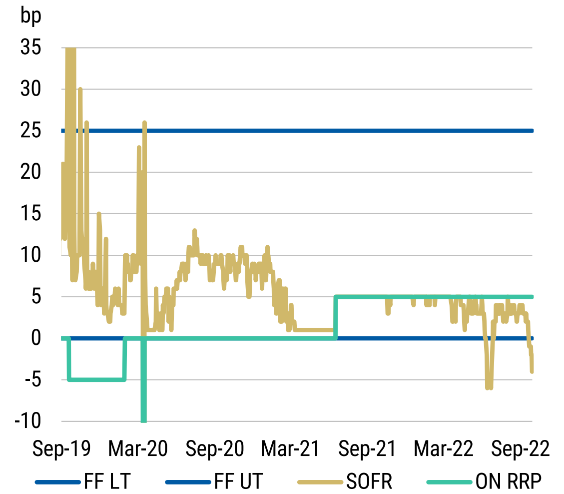
This week pushed implied front-end volatility close to multi-year highs (see Exhibit 79) given outsized moves in UK gilts. Over the week, US Treasury market liquidity significantly deteriorated (see update here). At the same time, US secured funding markets continue to flaunt their abundant cash, with SOFR this week printing -4bp (9/29) below the FF lower target (Exhibit 80).

Exhibit 79: Implied front-end volatility is now close to multi-year highs



Source: Bloomberg, Morgan Stanley Research

Exhibit 80: SOFR continued printing further below the FF LT this week

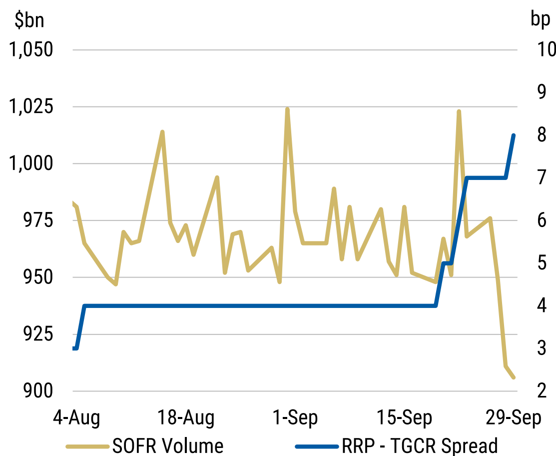


Source: Federal Reserve, Morgan Stanley Research

Lower repo rates likely motivated MMF cash to move from tri-party general collateral repo (TGCR) into the Fed's RRP. As shown in Exhibit 81, the spread between TGCR and the RRP award rate increased to 8bp this week. This was also reflected in lower SOFR volumes over the past week.

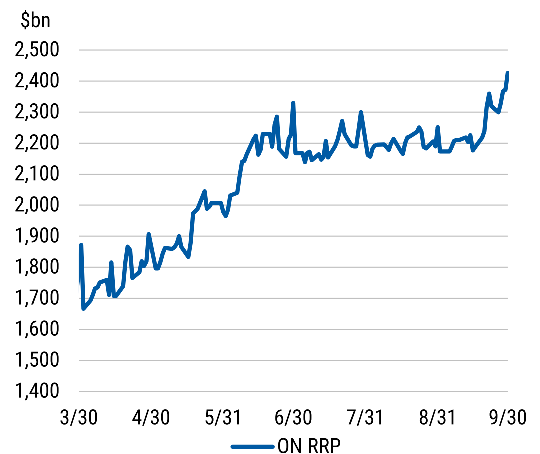
With this backdrop, the RRP balance reached a new high of $2.43tr today (9/30), as shown in Exhibit 82. In addition, increased front-end volatility contributed to higher repo allocation given incentive for MMFs to keep a low WAM. Also, T-bills continue to trade significantly rich vs. OIS, which keeps repo attractive.

Exhibit 81: Lower repo rates has led to lower SOFR volumes



Source: Federal Reserve, Morgan Stanley Research

Exhibit 82: The Fed's RRP reached a new high this week



Source: Federal Reserve, Morgan Stanley Research

FOMC: Still focused on inflation

The curve ended the week steeper, with 2s10s up by 8bp. However, the bulk of this steepening occurred on the back of outsized moves in long-end UK gilts at the beginning of the week. Over the past three days, 2s10s has flattened again by 11bp, helped by the BoE purchases on Wednesday and continued hawkish commentary from the FOMC.

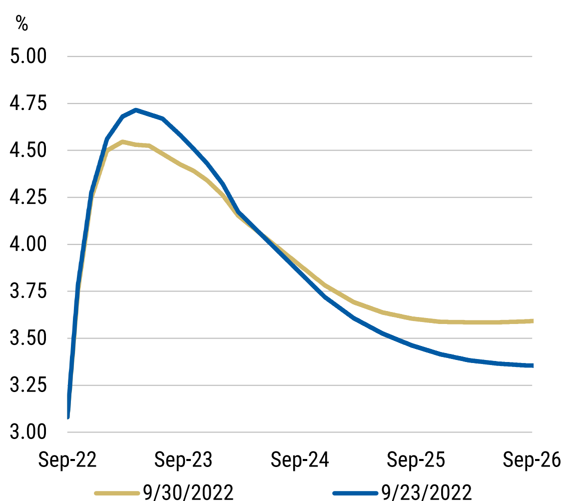
This shift in curve shape was reflected in market expectations for future hikes as shown by OIS forward swaps and SOFR futures, with the expected terminal rate in 2023 down by -19bp WoW (see Exhibit 83). At the same time, rate expectations for year-end 2025 increased by ~15bp.

The market also kept pricing out the possibility of cuts in 2023. As shown in Exhibit 84, the difference between the December 2023 and the May 2023 FOMC (where the market is currently pricing terminal) decreased by -9bp.

The market has likely responded to comments from various FOMC members including Brainard, Mester, and Bullard this week that continue to show a united front in staying committed in the fight against inflation.

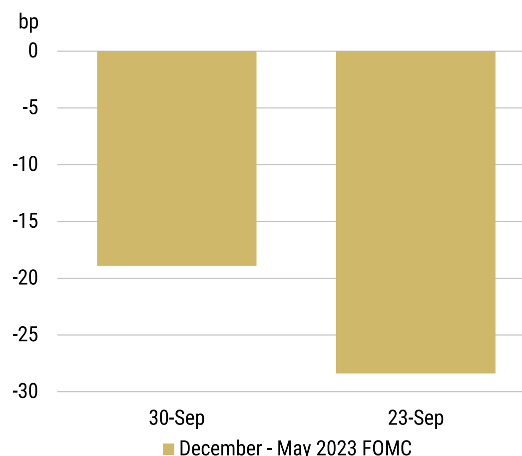
We maintain EDZ3EDZ4 flatteners to capture risks of a higher terminal rate while benefiting from cuts being priced if the market sees increased growth or hard landing concerns.

Exhibit 83: Market expectations have steepened in line with the curve



Source: Bloomberg, Morgan Stanley Research

Exhibit 84: Pricing for cuts in 2023 continued to decrease this week



Source: Bloomberg, Morgan Stanley Research

Trade idea: Maintain EDZ3EDZ4 flatteners at -70bp

United States | UST Liquidity Update

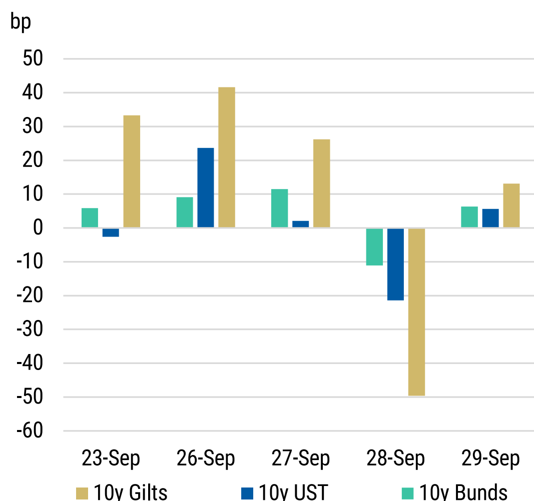
This is an excerpt from our publication: After the Storm: UST Liquidity Update

Choppy Waters

The global macro picture has significantly changed over the past week. Since the Federal Reserve delivered a third 75bp hike last Wednesday (9/21), US rates have been taken on a roller-coaster ride by developments abroad.

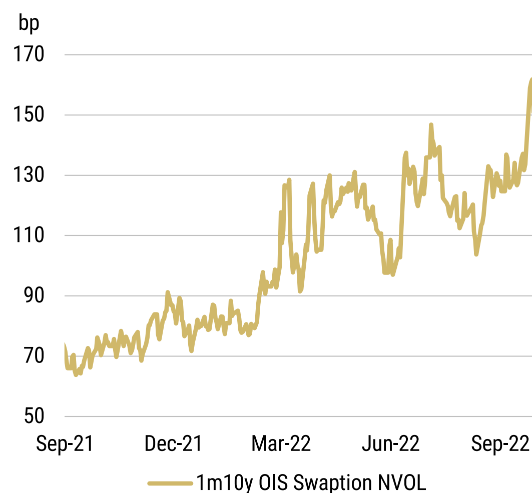
The decision to pursue expansionary fiscal policy though historically large tax cuts announced last Friday (9/23) combined with the ongoing efforts by the BoE to bring down double-digit inflation stirred a strong reaction in the UK Gilts market. After three tumultuous days of one-way selling that saw 10y gilts rise by over 100bp, the BoE announced on Wednesday (9/28) purchases to stabilize the market (see here for a detailed overview of recent developments and the outlook for UK rates).

Exhibit 85: Rates have experienced large d/d moves, led by the UK gilts



Source: Bloomberg, Morgan Stanley Research

Exhibit 86: 10-year implied volatility as measured by swaption NVOL made 1-year highs



Source: Bloomberg, Morgan Stanley Research

As shown in Exhibit 85, price action in the UK has determined the direction of travel for 10-year US rates over the past few days. On Monday (9/26), 10-year rates sold off by over 20bp and stopped shy of 4% the day after. Wednesday's (9/28) BoE purchases caused another 20bp+ move in 10-year US rates in the opposite direction. These large moves in rates led volatility to make new 1-year highs (Exhibit 86) .

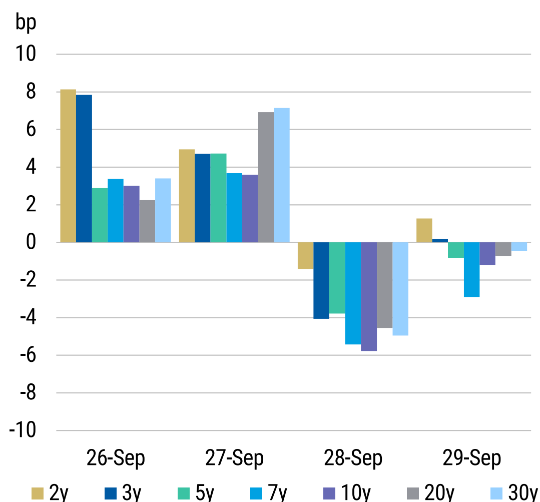
With this backdrop, we provide an update on US Treasury market liquidity and find that conditions have deteriorated significantly over the past week.

OIS Swap Spreads

We start our analysis with swap spreads as they provide an easy assessment of UST relative value. Typically, selling pressure in the US Treasury cash market translates to swaps outperforming cash and vice versa when demand is strong.

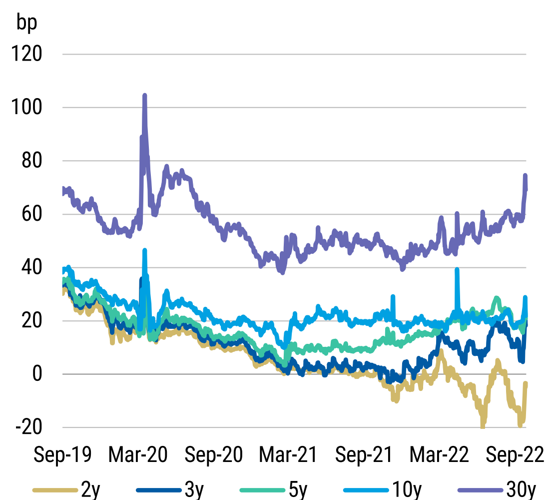
As shown in Exhibit 87, cash - OIS spreads widened significantly at the start of the week. Front-end spreads (2/3-year) led the way moving 8bp wider on Monday. For context, this was the largest day-over-day move for front-end cash - OIS spreads since the March 2020 "dash for cash" episode. This move showcased bleak demand for the sector given the weak 2-year auction (1.6bp tail) as well as the potential for foreign CB selling given their typical exposure to the sector.

Exhibit 87: Cash - OIS widened at the start of the week led by the front and long-end



Source: Bloomberg, Morgan Stanley Research

Exhibit 88: Cash - OIS spreads reached 2020 highs in 3-year and 30-year



Source: Bloomberg, Morgan Stanley Research

Long-end spreads (20/30-year) also widened significantly by 7bp on Tuesday. This is about 40% of the highest daily move observed in March of 2020. One plausible driver is the forced selling that likely emerged in the UK LDI community as pension portfolios found themselves with elevated margin calls given the pace of the gilt move in the long-end.

Over the past two days, the long-end has outperformed (30-year -5bp, 2-year ~0bp), suggesting that investors see the BoE's commitment to support market functioning as enough to remove the immediate risk of UK pension insolvency. On the other hand, the lag in front-end spreads could still reflect concerns of future foreign selling given the continued strength of the USD and the uncertain global macro outlook.

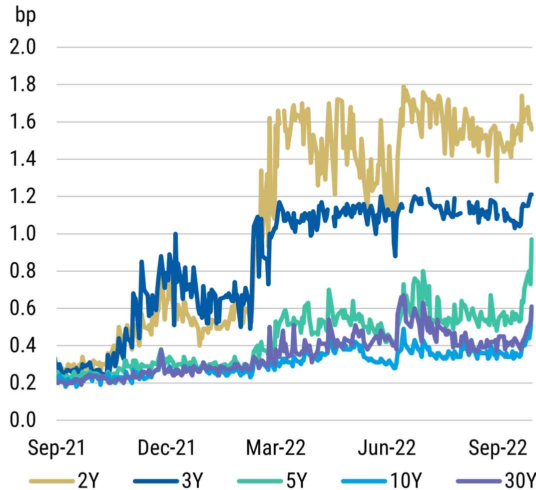
In Exhibit 88, we can observe that 3-year and 30-year cash - OIS spreads made new highs not seen since 2020. Other tenors remain below recent historic highs but are nonetheless elevated.

Bid-Ask

Next, we turn to median bid-ask spreads as they represent the cost of dealer intermediation in UST cash markets. In Exhibit 89, we show the daily median cost (bid/ask) as calculated by our treasury trading desk and find that the cost of intermediation increased over the past week across the curve.

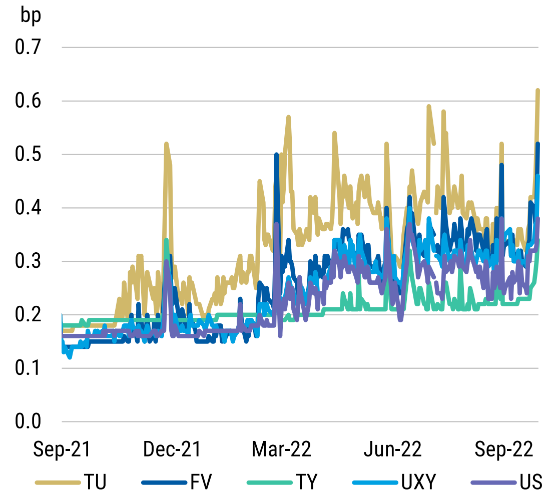
In UST cash, bid-ask increases were led by the 5-year point likely reflecting reduced volumes in that part of the curve. Futures also saw wider bid-ask spreads led by TU (2-year futures) given the likelihood of increased demand to close out positions (Exhibit 90).

Exhibit 89: Daily median bid-ask for $25k/01 in UST cash worsened led by the belly



Source: Morgan Stanley Treasury Desk

Exhibit 90: Daily median bid-ask for $25k/01 in UST futures worsened led by TU



Source: Morgan Stanley Treasury Desk, Morgan Stanley Research

In Exhibit 91, we show that bid-ask across most tenors in UST cash and futures are at their highest level in the past year. Also, we observe that the front-end continues to be the widest point of the UST cash curve given the greater sensitivity to short-term volatility and monetary policy. The outsized widening in 5-year reflects weak appetite for the sector, as shown in this week's auction that tailed by +2.8bp.

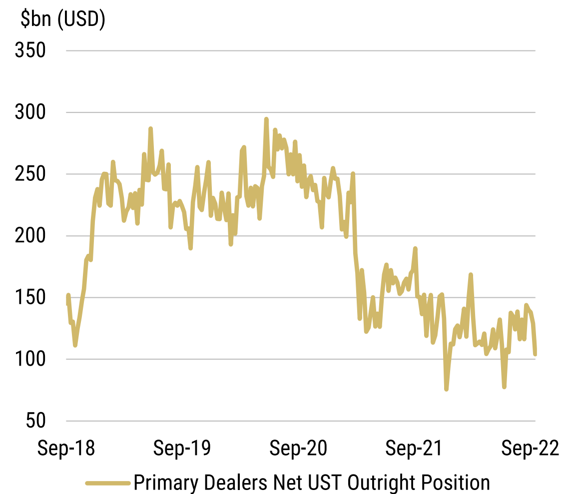
Exhibit 91: Liquidity in cash and futures is at its worst point in the past year for most tenors...

Median Bid/Ask on $25k/01 (bp)

	29-Sep	1y Mean	1y Max	1y Min	Percentile
UST Cash					
2y	1.56	1.12	1.79	0.25	85%
3y	1.21	0.90	1.24	0.24	97%
5y	0.97	0.45	0.97	0.22	100%
7y	1.22	0.60	1.22	0.33	100%
10y	0.59	0.32	0.59	0.19	100%
20y	1.28	0.75	1.52	0.30	80%
30y	0.61	0.37	0.67	0.20	87%
UST Futures					
TU	0.62	0.34	0.62	0.18	100%
FV	0.52	0.26	0.52	0.15	100%
TY	0.34	0.21	0.37	0.19	83%
UXY	0.46	0.25	0.46	0.15	100%
US	0.38	0.23	0.38	0.16	100%
UL	0.40	0.23	0.40	0.14	100%

Source: Morgan Stanley Treasury Desk, Morgan Stanley Research

Exhibit 92: Primary dealers' inventory not as bloated relative to past years



Source: NY Fed, Morgan Stanley Research

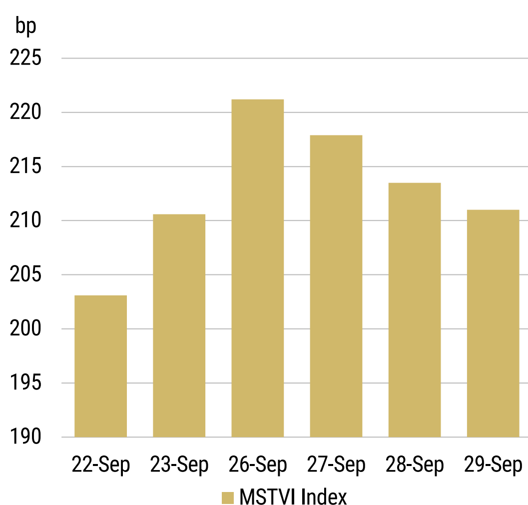
Also, in Exhibit 92, we note that increased volatility and regulatory constraints that limit dealer intermediation capacity (more below) have resulted in elevated bid/ask spreads

during times of stress despite lower outright UST exposure relative to previous years.

Curve Dispersion

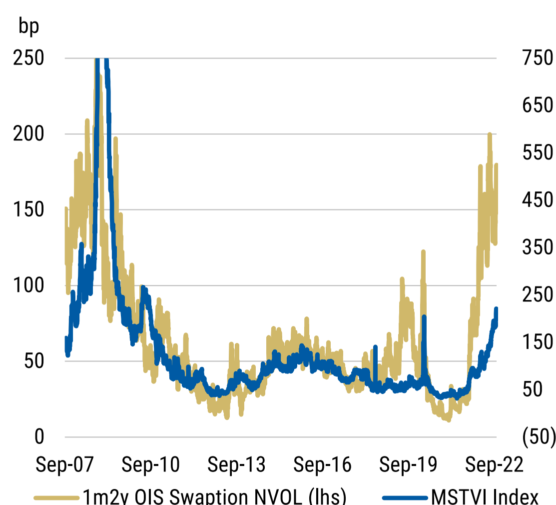
Finally, we turn to our Treasury Relative Opportunity Value Index (MSTVI on Bloomberg) to assess the yield dispersion across the UST cash curve relative to a fitted curve. Increased dispersion or yield error reflects worsening liquidity conditions and reduced willingness from dealers to hold on to less-liquid off-the-run securities. In Exhibit 93, we show that curve dispersion increased by ~18bp at its highest point this week.

Exhibit 93: Curve dispersion increased by ~15bp before retracing post BoE purchases



Source: Bloomberg, Morgan Stanley Research

Exhibit 94: Curve dispersion has increased due to highest rates volatility since 2008



Source: Bloomberg, Morgan Stanley Research

We observe that curve dispersion has been steadily increasing since 4Q21 and has now reached levels last seen in 1Q20 (Exhibit 94). However, we note that implied volatility has a strong historical correlation with curve dispersion and overall liquidity conditions in the UST market. 1-month/2-year volatility at its highest level since the GFC suggests that UST liquidity continues to be impaired by increasing uncertainty.

Foreign Selling

Even though data on the UST market is limited and usually released with a lag, the Federal Reserve H.4.1 report provides some insight.

Exhibit 95 shows that holdings (face value) of UST held in custody for foreign official and international accounts decreased by -$38bn WoW. In recent years, this pace only comes second to the -$52bn WoW decline observed in March of 2020. Back then, foreign holdings declined by ~$140bn+ for the month.

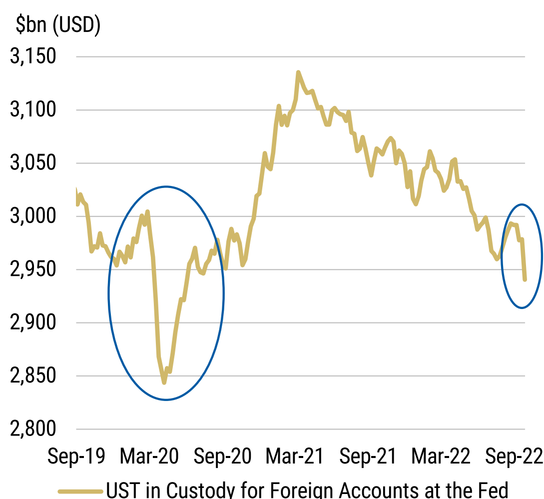
Reverse repo agreements with foreign official and international accounts also saw a decline of -$24bn WoW (Exhibit 96). However, this move is in line the previous dips observed this year of $25-30bn.

In 2020, usage decreased in Jan/Feb (-$56bn) as foreign investors tapped into USD. They seem to have used some of this USD to purchase UST securities as holdings increased by

$48bn over the same time period. Shortly after, outsized sales in March's "dash for cash" of over $140bn led the foreign RRP to actually increase again by $69bn.

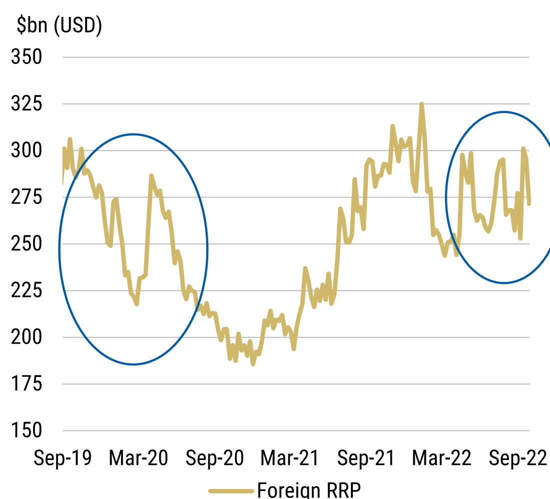
So far, foreign cash in RRP has remained fairly stable this year when compared to the steady decline observed in 2020. Taken together, data from the Fed suggests that outsized selling from foreign investors was behind the worsening of UST liquidity. However, the magnitude and pace so far indicates less selling pressure relative to previous periods of stress.

Exhibit 95: UST holdings at the Fed decreased by -$38bn WoW



Source: Federal Reserve, Morgan Stanley Research

Exhibit 96: Foreign RRP balance decreased but in line with this year's trends



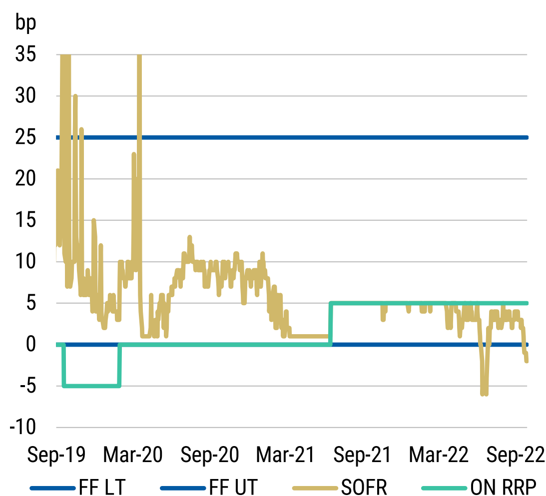
Source: Federal Reserve, Morgan Stanley Research

Secured Funding

As shown in Exhibit 97, funding conditions in repo continue to reflect an imbalance between cash and borrowing needs with SOFR printing 7bp below the ON RRP and 2bp below the lower target for fed funds.

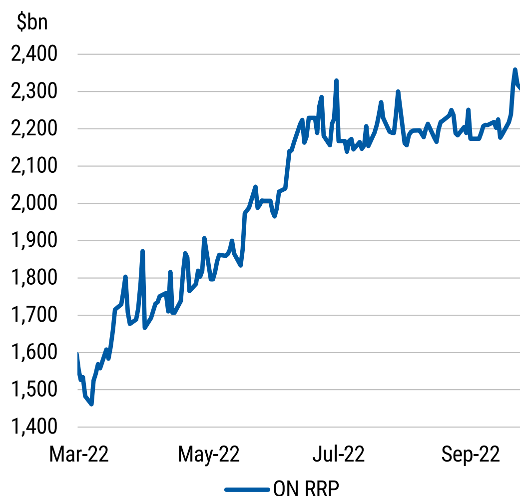
The Fed's RRP (Exhibit 98) continued to make new highs this week due to lower GC repo rates and greater allocation to repo (upcoming quarter-end, increased volatility leading to further reductions in WAM, etc.). Also, as we highlighted last week (see here), repo "specialness" continues to be a strong contributor to lower SOFR prints.

Exhibit 97: Repo continues to be well supported given cash/collateral imbalance



Source: Federal Reserve, Bloomberg, Morgan Stanley Research

Exhibit 98: The RRP continued to make new highs this week



Source: Federal Reserve, Bloomberg, Morgan Stanley Research

As we show, secured funding conditions are very different when compared to 2019-2020. The amount of cash supporting repo markets makes it unlikely for the recent deterioration in UST liquidity to lead the funding challenges observed in March 2020.

Unsecured Funding

Naturally, unsecured funding has greater exposure to increased volatility and worsening market conditions. As shown in Exhibit 99 and Exhibit 100, 3-month FRA OIS and SFREDZ2 increased over the past week reflecting increased concerns for unsecured funding.

However, we note that 3-month Libor - OIS is unchanged at 8bp week-over-week. This could suggest that recent price action reflects increased concerns for a potential unsecured funding spike this year-end, particularly for UK banks.

Exhibit 99: 3-month FRA - OIS reached March highs

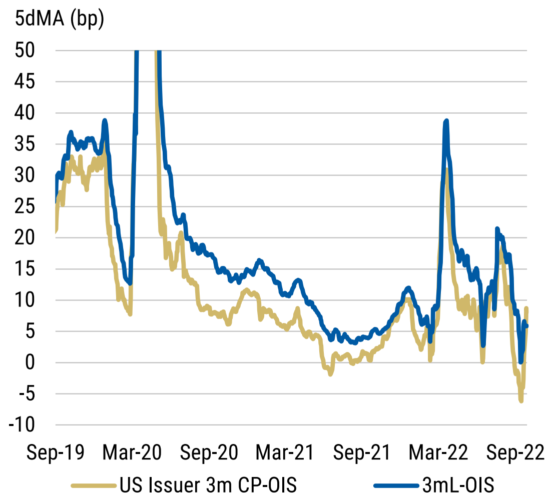
Source: Bloomberg, Morgan Stanley Research

Exhibit 100: SFREDZ2 spiked

Source: Bloomberg, Morgan Stanley Research

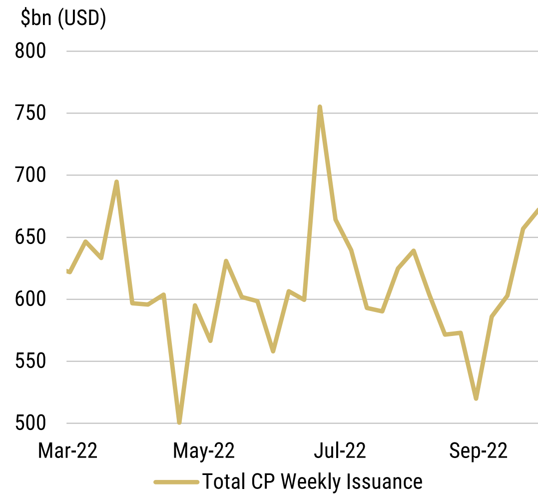
We explore this dynamic by looking at the commercial paper (CP) market. As shown in Exhibit 101, 3-month CP - OIS is currently below levels observed earlier this year. Also, we note that the recent increase in CP yields could be attributed to a pick-up in issuance this month (Exhibit 102).

Exhibit 101: 3-month Libor - OIS is below recent highs



Source: Bloomberg, Morgan Stanley Research

Exhibit 102: CP issuance is back up this month



Source: Federal Reserve, Morgan Stanley Research

Given that the situation in the UK remains fluid, the lagging nature of Libor as a panel rate could lead to wider 3-month Libor - OIS levels. However, current conditions do not suggest significant stress in unsecured funding. Moving forward, CP rates are likely to be an important indicator for the future path of Libor.

Technical Analysis

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Pivot Points

Pivot points are charting levels used by day traders to determine market direction, support, and resistance levels. We calculate weekly pivot points using the previous week's open, high, low, and closing levels.

Exhibit 103: Government bond yield weekly pivots, support and resistance levels

	UST 10y	CAN 10y	DBR 10y	UKT 10y	JGB 20y	ACGB 10y
Weekly resistance 3	4.177	3.508	2.478	4.818	1.120	4.228
Weekly resistance 2	4.090	3.425	2.386	4.637	1.093	4.126
Weekly resistance 1	4.049	3.388	2.359	4.593	1.083	4.064
Weekly pivot high	3.884	3.236	2.213	4.319	1.035	3.963
Weekly pivot low	3.841	3.194	2.167	4.229	1.021	3.939
Weekly Support 1	3.753	3.111	2.075	4.048	0.994	3.861
Weekly Support 2	3.712	3.074	2.048	4.004	0.984	3.799
Weekly Support 3	3.632	3.000	1.975	3.865	0.960	3.745

Source: Morgan Stanley Research

Exhibit 104: Foreign exchange rates weekly pivots, support, and resistance levels

	DXY	EURUSD	USDJPY	GBPUSD	AUDUSD	USDCAD
Weekly resistance 3	116.04	1.0049	145.93	1.1802	0.6625	1.4020
Weekly resistance 2	114.82	0.9987	145.64	1.1644	0.6553	1.3973
Weekly resistance 1	114.07	0.9927	145.31	1.1464	0.6509	1.3914
Weekly pivot high	112.84	0.9762	144.45	1.0997	0.6438	1.3766
Weekly pivot low	112.53	0.9731	144.30	1.0918	0.6419	1.3742
Weekly Support 1	111.62	0.9669	144.01	1.0760	0.6366	1.3695
Weekly Support 2	110.86	0.9609	143.68	1.0580	0.6322	1.3636
Weekly Support 3	110.27	0.9534	143.30	1.0372	0.6288	1.3571

Source: Morgan Stanley Research

Exhibit 105: Foreign exchange rates weekly pivots, support, and resistance levels

	EURJPY	EURCHF	EURNOK	EURSEK	NOKSEK	AUDNZD
Weekly resistance 3	145.41	0.9862	10.9668	11.0922	1.0886	1.1586
Weekly resistance 2	144.53	0.9815	10.8926	11.0230	1.0684	1.1549
Weekly resistance 1	143.55	0.9757	10.8011	10.9803	1.0560	1.1521
Weekly pivot high	140.97	0.9612	10.5701	10.9111	1.0358	1.1435
Weekly pivot low	140.52	0.9589	10.5329	10.8933	1.0312	1.1416
Weekly Support 1	139.64	0.9542	10.4587	10.8419	1.0156	1.1379
Weekly Support 2	138.66	0.9485	10.3672	10.7992	1.0032	1.1351
Weekly Support 3	137.50	0.9420	10.2648	10.7656	0.9922	1.1311

Source: Morgan Stanley Research

Cyclical and Secular Trends

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Government Bonds

In The Tactical Bull Market Is Back, we discussed a simple methodology based on the Ichimoku Kinko charting technique for classifying market movements as bullish, bearish, or range bound. Then, we define whether the market movement is cyclical or secular in nature. A cyclical move is shorter term in nature, and a secular move is longer term in nature. For cyclical moves, we further divide them into tactical and strategic. We use daily data to inform tactical moves, and weekly data to inform strategic moves. We use monthly data to inform secular movements.

Exhibit 106: Summary of cyclical (tactical & strategic) and secular bull, bear, and range-bound rates markets

	Daily Last	Daily Cloud Lower	Daily Cloud Upper	200d MA	Cyclical Tactical Daily	Cyclical Strategic Weekly	Secular Monthly
UST 2y	4.281	3.081	3.195	2.478	Bear Market	Bear Market	Bear Market
UST 5y	4.095	2.990	3.080	2.640	Bear Market	Bear Market	Bear Market
UST 10y	3.833	2.881	3.003	2.633	Bear Market	Bear Market	Bear Market
UST 30y	3.780	3.140	3.171	2.828	Bear Market	Bear Market	Bear Market
DBR 2y	1.759	0.661	0.748	0.279	Bear Market	Bear Market	Bear Market
DBR 5y	1.963	0.856	1.067	0.609	Bear Market	Bear Market	Bear Market
DBR 10y	2.108	1.086	1.304	0.854	Bear Market	Bear Market	Bear Market
DBR 30y	2.092	1.292	1.467	1.047	Bear Market	Bear Market	Bear Market
UKT 2y	4.232	2.261	2.373	1.755	Bear Market	Bear Market	Bear Market
UKT 5y	4.394	2.077	2.175	1.768	Bear Market	Bear Market	Bear Market
UKT 10y	4.093	2.225	2.280	1.966	Bear Market	Bear Market	Bear Market
UKT 30y	3.825	2.551	2.624	2.193	Bear Market	Bear Market	Bear Market
JGB 10y	0.244	0.204	0.236	0.212	Bear Market	Bear Market	Bear Market
JGB 20y	1.011	0.824	0.858	0.763	Bear Market	Bear Market	Bear Market
JGB 30y	1.393	1.146	1.185	1.035	Bear Market	Bear Market	Bear Market
JGB 40y	1.589	1.281	1.333	1.133	Bear Market	Bear Market	Bear Market
ACGB 2y	3.310	2.816	2.870	2.138	Bear Market	Bear Market	Bear Market
ACGB 5y	3.661	3.137	3.335	2.717	Bear Market	Bear Market	Bear Market
ACGB 10y	3.885	3.395	3.602	2.997	Bear Market	Bear Market	Bear Market
ACGB 20y	4.133	3.730	3.888	3.353	Bear Market	Bear Market	Bear Market
NZGB 2y	4.240	3.548	3.574	3.075	Bear Market	Bear Market	Bull Market
NZGB 5y	4.243	3.519	3.675	3.250	Bear Market	Bear Market	Bull Market
NZGB 10y	4.303	3.619	3.872	3.392	Bear Market	Bear Market	Bear Market
CAN 2y	3.791	3.214	3.282	2.505	Bear Market	Bear Market	Bear Market
CAN 5y	3.329	2.941	3.065	2.537	Bear Market	Bear Market	Bear Market
CAN 10y	3.173	2.850	3.068	2.600	Bear Market	Bear Market	Bear Market
CAN 30y	3.095	2.895	3.066	2.657	Bear Market	Bear Market	Bear Market

Source: Morgan Stanley Research, Bloomberg

Exhibit 107: Summary of cyclical (tactical and strategic) and secular bull, bear, and range-bound FX markets

	Daily Last	Daily Cloud Lower	Daily Cloud Upper	200d MA	Cyclical Tactical Daily	Cyclical Strategic Weekly	Secular Monthly
DXY	112.18	106.36	107.18	102.46	Bull Market	Bull Market	Bull Market
USDJPY	144.80	134.89	134.90	127.97	Bull Market	Bull Market	Bull Market
USDCAD	1.3836	1.2906	1.2976	1.2832	Bull Market	Bull Market	Bull Market
USDCHF	0.9873	0.9553	0.9711	0.9512	Bull Market	Bull Market	Bull Market
USDNOK	10.8905	9.7448	9.9082	9.4170	Bull Market	Bull Market	Bull Market
USDSEK	11.1019	10.3882	10.4358	9.9039	Bull Market	Bull Market	Bull Market
EURUSD	0.9799	1.0110	1.0258	1.0655	Bear Market	Bear Market	Bear Market
GBPUSD	1.1155	1.1969	1.2062	1.2594	Bear Market	Bear Market	Bear Market
AUDUSD	0.6399	0.6910	0.6994	0.7076	Bear Market	Bear Market	Bear Market
NZDUSD	0.5595	0.6265	0.6310	0.6471	Bear Market	Bear Market	Bear Market
EURJPY	141.89	137.16	138.84	135.89	Bull Market	Bull Market	Bull Market
NOKSEK	1.0196	1.0583	1.0702	1.0520	Bear Market	Bear Market	Bull Market
AUDNZD	1.1436	1.1085	1.1103	1.0943	Bull Market	Bull Market	Bull Market
USDBRL	5.4078	5.2086	5.2663	5.1637	Bull Market	Bull Market	Bull Market
USDMXN	20.14	20.18	20.43	20.26	Bear Market	Bear Market	Bear Market
USDARS	147.32	129.50	134.61	119.14	Bull Market	Bull Market	Bull Market
USDCLP	968.69	916.11	957.20	860.11	Bull Market	Bull Market	Bull Market
USDCOP	4,608.75	4,246.15	4,292.07	4,074.68	Bull Market	Bull Market	Bull Market
USDPEN	3.9832	3.8395	3.8425	3.8255	Bull Market	Bull Market	Bull Market
USDZAR	18.07	16.51	16.68	15.96	Bull Market	Bull Market	Bull Market
USDTRY	18.4738	17.1389	17.9564	15.8244	Bull Market	Bull Market	Bull Market
USDILS	3.5608	3.2940	3.3681	3.3105	Bull Market	Bull Market	Bear Market
USDRUB	118.69	76.43	77.44	75.11	Bull Market	Bull Market	Bull Market
USDPLN	4.9566	4.6182	4.6735	4.3949	Bull Market	Bull Market	Bull Market
USDCZK	25.1012	24.1036	24.2462	23.1668	Bull Market	Bull Market	Bull Market
USDHUF	431.76	395.35	399.04	362.23	Bull Market	Bull Market	Bull Market
USDCNY	7.1160	6.7714	6.7987	6.5930	Bull Market	Bull Market	Bull Market
USDIDR	15,228.00	14,819.00	14,849.00	14,594.08	Bull Market	Bull Market	Bull Market
USDINR	81.35	78.90	79.42	77.28	Bull Market	Bull Market	Bull Market
USDKRW	1,431.15	1,304.68	1,321.04	1,263.61	Bull Market	Bull Market	Bull Market
USDMYR	4.6375	4.4429	4.4634	4.3327	Bull Market	Bull Market	Bull Market
USDPHP	58.65	54.69	55.75	53.37	Bull Market	Bull Market	Bull Market
USDSGD	1.4367	1.3843	1.3882	1.3757	Bull Market	Bull Market	Bull Market
USDTWD	31.7710	29.9375	30.0893	29.2162	Bull Market	Bull Market	Bull Market
USDTHB	37.7300	35.7015	35.9220	34.5417	Bull Market	Bull Market	Bull Market
GOLD	1,661	1,755	1,769	1,826	Bear Market	Bear Market	Bull Market
SILVER	19.03	19.68	20.06	21.98	Bear Market	Bear Market	Bull Market
CRUDE OIL	79.68	90.76	98.25	89.35	Bear Market	Bear Market	Bull Market

Source: Morgan Stanley Research, Bloomberg

G4 Smarter (beta) Trading Strategy

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Enhancements to a G4 10y government bond futures momentum strategy have produced higher Sharpe ratios and stronger returns, relative to total return government bond indices for the G4, US, Germany, Japan, and the UK since 2000. See A "Smarter" (Beta) Way to Trade G4 10y Futures Duration? for more information on these strategies.

Trading Strategy 1 – "Trade Longs/Fade Shorts"

When the 5-day moving average crosses above the 20-day moving average, buy the futures contract (long duration) and hold for a 25-business-day period. When the 5-day moving average crosses below the 20-day moving average, buy the futures contract and hold for a 25-business-day period. In short, this strategy buys futures when the Simple Moving Average Crossover (SMAX) generates both a long and a short signal, given the historical outperformance of long signals traded long and underperformance of short signals traded short. Given that the SMAX could generate both a long and a short signal within the predefined holding period, an investor may have a 200% long position since each of the two signals would be traded in separate portfolio sleeves.

Trading Strategy 2 – Trade "Longs Only"

When the 5-day moving average crosses above the 20-day moving average, buy the futures contract (long duration) and hold for a 25-business-day period. When the 5-day moving average crosses below the 20-day moving average, do nothing. In short, an investor ONLY trades long signals initiated by the SMAX given their historical precedent to outperform

Exhibit 108: Trading signals for G4 smarter (beta) trading strategy

Current Risk, G4 10y Futures	G4 Strategy Weight	Trade Longs Portfolio	Fade Shorts Portfolio	Total Risk Trade Longs Only	Total Risk Trade Longs/Fade Shorts (max 200%)	Trade Longs Portfolio Entry Date	Trade Longs Portfolio Exit Date	Fade Shorts Portfolio Entry Date	Fade Shorts Portfolio Exit Date
JB 10y Future	32.50%	0%	0%	0%	0%	-	-	-	-
GE 10y Future	29.25%	0%	0%	0%	0%	-	-	-	-
US 10y Future	30.50%	0%	0%	0%	0%	-	-	-	-
UK 10y Future	7.75%	0%	0%	0%	0%	-	-	-	-

Source: Morgan Stanley Research

Bond Market Indicators

Our BMI(10) models are neutral to bearish for most markets. The vol-adjusted carry signal is positive for Japan. Momentum signals are broadly bearish. Equity market signals are bullish for all markets.

Our BMI(2) models are bullish for the UK and New Zealand, bearish for Canada, and neutral for all other markets. The vol-adjusted carry signal is positive for most markets, except for Canada. Momentum signals are bearish, except for Japan. Business cycle indicators are negative for the US, the UK and Japan.

Our iBMI models are neutral across all regions. Oil signal grew less bearish for TIPS and JGBi, remained neutral for UKTi, grew more bearish for HICPxT. Momentum signal grew less bullish for TIPS and UKTi and more bullish for HICPxT and JGBi. Equities signal grew more bearish for TIPS and HICPxT and became bearish for UKTi and JGBi.

Latest readings

Exhibit 109: Morgan Stanley Bond Market Indicators - BMI(10)

	Vol-Adjusted Carry	Momentum	Equity Markets	Business Cycle	FX	Average	Overall
US	-9.7 (-9.7)	-9.9 (-9.7)	8.9 (7.0)	-3.1 (-3.1)	3.6 (-3.4)	-2.0 (-3.8)	**-2.0 (-3.8)**
DE	-9.3 (-9.7)	-6.5 (-6.1)	7.4 (4.9)	2.1 (2.2)	6.0 (-3.6)	-0.1 (-2.5)	**0.0 (-2.5)**
UK	-7.5 (-6.5)	-9.8 (-9.8)	6.3 (2.1)	-0.3 (-0.2)	nan (10.0)	-2.8 (-0.9)	**-2.8 (0.0)**
JP	6.6 (5.6)	-8.3 (-5.5)	3.2 (-1.4)	-7.0 (-5.6)	-7.6 (-9.3)	-2.6 (-3.2)	**-2.6 (-3.2)**
AU	-4.9 (-5.0)	-3.4 (-2.9)	6.2 (3.7)	3.5 (5.0)	0.0 (-9.0)	0.3 (-1.6)	**0.0 (-1.6)**
NZ	-7.9 (-8.0)	-5.4 (-4.2)	5.5 (1.8)	7.2 (7.2)	7.0 (3.9)	1.3 (0.1)	**0.0 (0.0)**
CA	-9.9 (-10.0)	-4.0 (-4.9)	6.2 (2.8)	4.8 (4.8)	-9.6 (-9.8)	-2.5 (-3.4)	**0.0 (-3.4)**

Source: Morgan Stanley Research
Note: Positive # = long duration; Negative # = short duration, (#) = previous week Thursday close which may differ from the post-nonfarm payroll update, Indicators bounded between -10 and +10, Overall signal set to zero if abs(Signal)<=1.5

Exhibit 110: Morgan Stanley Bond Market Indicators - BMI(2)

	Vol-Adjusted Carry	Momentum	Equity Markets	Business Cycle	FX	Average	Overall
US	3.1 (3.9)	-10.0 (-10.0)	8.9 (7.0)	-3.1 (-3.1)	8.5 (-6.2)	1.5 (-1.7)	**0.0 (-1.7)**
DE	7.1 (8.0)	-7.8 (-7.6)	7.4 (4.9)	2.1 (2.2)	-9.6 (9.2)	-0.2 (3.3)	**0.0 (3.3)**
UK	9.2 (8.7)	-9.9 (-10.0)	6.3 (2.1)	-0.3 (-0.2)	10.0 (10.0)	3.1 (2.1)	**3.1 (2.1)**
JP	10.0 (10.0)	0.9 (4.0)	3.2 (-1.4)	-7.0 (-5.6)	-9.9 (-10.0)	-0.6 (-0.6)	**0.0 (0.0)**
AU	3.0 (1.8)	-7.9 (-6.1)	6.2 (3.7)	3.5 (5.0)	-9.6 (-10.0)	-1.0 (-1.1)	**0.0 (0.0)**
NZ	2.0 (1.3)	-8.5 (-5.9)	5.5 (1.8)	7.2 (7.2)	7.6 (-1.5)	2.8 (0.6)	**2.8 (0.0)**
CA	-6.1 (-5.4)	-9.3 (-9.6)	6.2 (2.8)	4.8 (4.8)	-9.0 (5.5)	-2.7 (-0.4)	**-2.7 (0.0)**

Source: Morgan Stanley Research
Note: Positive # = long duration; Negative # = short duration, (#) = previous week Thursday close which may differ from the post-nonfarm payroll update, Indicators bounded between -10 and +10, Overall signal set to zero if abs(Signal)<=1.5

Exhibit 111: Morgan Stanley Bond Market Indicators - xBMIs

	Long US	Long DE	Long UK	Long JP	Long AU	Long NZ	Long CA
vs. US	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	1.7 (2.0)	0.0 (0.0)
vs. DE	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)
vs. UK	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	1.6 (0.0)	2.1 (0.0)	0.0 (0.0)
vs. JP	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	2.0 (1.7)	0.0 (0.0)
vs. AU	0.0 (0.0)	0.0 (0.0)	-1.6 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)
vs. NZ	-1.7 (-2.0)	0.0 (0.0)	-2.1 (0.0)	-2.0 (-1.7)	0.0 (0.0)	0.0 (0.0)	-1.9 (-1.8)
vs. CA	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	1.9 (1.8)	0.0 (0.0)

Source: Morgan Stanley Research
Note: Positive # = long cross market spreads; Negative # = short cross market spread, (#) = previous week Thursday close which may differ from the post-nonfarm payroll update, Indicators bounded between -15 and +15, Signal is set to zero if abs(Signal)<=2

Exhibit 112: Morgan Stanley Euro Sovereign Bond Market Indicators - eBMI

	Business Cycle Surprises	Momentum	Vol. Adj. Carry	Supply	Risky Assets	Overall
Periphery vs. Core	1.6 (1.0)	1.8 (-6.5)	3.4 (2.9)	5.2 (5.2)	4.6 (5.2)	**3.3 (1.6)**
Semi-Core vs. Core	7.7 (5.7)	2.4 (-1.2)	7.5 (6.0)	-1.1 (-1.1)	8.1 (6.4)	**4.9 (3.2)**
Periphery vs. Semi-Core	-3.1 (-2.3)	-0.3 (-2.7)	-2.0 (-1.5)	3.2 (3.2)	-1.8 (-0.6)	**-1.6 (-1.6)**

Source: Morgan Stanley Research
Note: Positive # = long spreads; Negative # = short spreads, (#) = previous week Thursday close which may differ from the post-nonfarm payroll update, Indicators bounded between -10 and +10.

Exhibit 113: Morgan Stanley Inflation Bond Market Indicators - iBMI

Market	Oil	Momentum	Equities	Value	Average	Overall
TIPS	-2.6 (-2.8)	0.1 (2.3)	-2.7 (-1.7)	4.3 (2.5)	-0.2 (0.1)	**0.0 (0.0)**
UKTi	-1.2 (-1.2)	4.2 (4.6)	-1.5 (0.1)	5.3 (4.9)	1.7 (2.1)	**0.0 (0.0)**
HICPxT	-2.2 (-2.0)	2.8 (2.0)	-2.1 (-1.0)	0.4 (-1.9)	-0.3 (-0.7)	**0.0 (0.0)**
JGBi	-1.5 (-1.6)	4.6 (4.2)	-1.2 (0.7)	-5.6 (-5.7)	-0.9 (-0.6)	**0.0 (0.0)**

Source: Morgan Stanley Research
Note: Positive # = long inflation breakeven; Negative # = short inflation breakeven, (#) = previous week Thursday close which may differ from the post-nonfarm payroll update, Indicators bounded between -10 and +10, Overall signal set to zero if abs(Signal)<=1.0

How to read the xBMIs

The "FX/Rates" row displays the FX/rates relationship signal. The "Combined BMI differential" row displays the difference between the relevant BMI(10) signals after having applied the signal strength check, i.e., abs(signal) >= 1.5. The "Average xBMI" row displays the average of the "FX/Rates" and "Combined BMI differential" rows. And the "Overall" score requires that the sign of the "Average xBMI" signal match the sign of the "Combined BMI differential" signal and be ≥ the absolute value of 2.

Swap Spread Indicators

Our SSI(2) models imply that 2y spreads are roughly 13.6bp wide to fair value on a 6m rolling lookback. The 2sd trading threshold is met. Our model-implied fair value can be found on Bloomberg using the ticker MSSIUS2 Index.

Our SSI(10) models imply that 10y spreads are roughly 7bp wide to fair value on a 6m rolling lookback. The 2sd trading threshold is met. Our model-implied fair value can be found on Bloomberg using the ticker MSSIUS10 Index.

Our SSI(30) models suggest that 30y spreads are 50bp tight to fair value on our 2y lookback window. The 2sd trading threshold is met. Our model-implied fair value can be found on Bloomberg using the ticker MSSIUS30 Index.

Based on each of the SSI models, the 2s10s spread curve is ~6.8bp flat to fair value using a 6m lookback. The 10s30s spread curve is about ~31bp flat to fair value using our 2y lookback window.

Detail on the variable selection and model construction of these Swap Spread Indicators can be found in Modeling Swap Spreads. Within the piece, we discuss the various fundamental and flow-related drivers of 2y, 10y, and 30y spreads, and use these variables to construct multivariate regression models. We then develop and test trading strategies that employ these models. Updates to model-implied fair values, as well as backtesting of trading signals, can be found below.

Latest readings

Exhibit 114: Morgan Stanley Swap Spread Indicators - Model Implied Fair Values

	6m Rolling Lookback Window	2y Rolling Lookback Window	5y Rolling Lookback Window	Matched-Maturity Swap Spread Level
2y Swap Spreads	13.6	10.6	4.5	26.7
10y Swap Spreads	6.8	9.2	4.4	-4.1
30y Swap Spreads	-20.2	-22.2	-14.4	-50.9
2s10s Swap Spread Curve	-6.8	-1.4	-0.1	-30.7
2s30s Swap Spread Curve	-33.8	-32.8	-18.9	-77.6
10s30s Swap Spread Curve	-27	-31.4	-18.8	-46.8

Source: Morgan Stanley Research
Note: The levels shown in the table are the model-implied fair values for each of the spread sectors using various lookback windows. For curves, we calculate model-implied fair value based on the difference between the model-implied fair value of the two individual spreads that make up the spread curve.

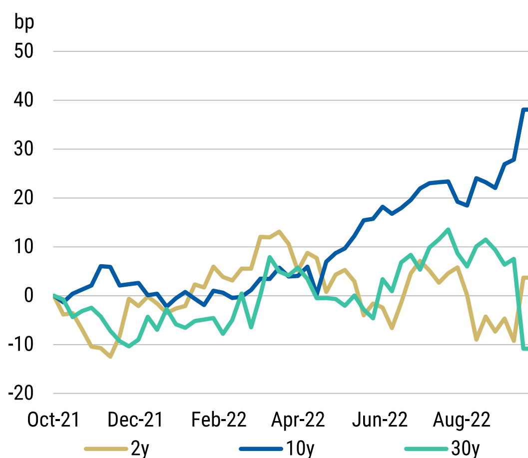
Exhibit 115: Morgan Stanley Swap Spread Indicators - Trading Signals

	Trading Signal*	Trade with 0.5sd threshold?	Trade with 1sd threshold?	Trade with 2sd threshold?
2y Swap Spreads	Tighten	Y	Y	Y
10y Swap Spreads	Widen	Y	Y	Y
30y Swap Spreads	Widen	Y	Y	Y

Source: Morgan Stanley Research
Note: The thresholds are derived from the standard deviation of the difference between model-implied fair value and market values for the preferred rolling window for each spread sector.
*We use our preferred lookback windows for the trading signals. Our preferred lookback windows, based on regression fit an explanatory power, are 6m for 2y and 10y spreads and 2y for 30y spreads.
**For curves, we use 2y rolling regression lookback windows for consistency when constructing the trading signals.

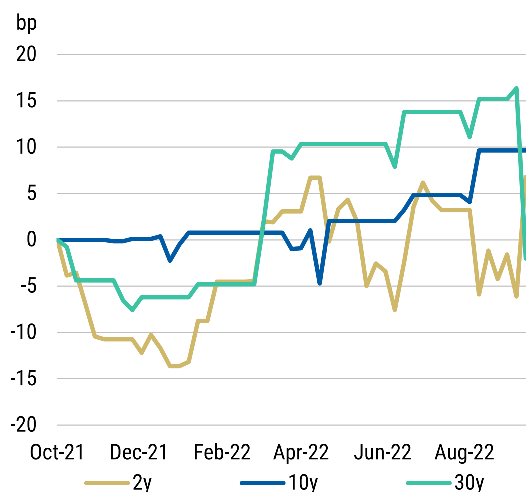
Backtesting results

Exhibit 116: Backtesting results for each spread sector using preferred lookback window and no trading threshold (last 12 months)



Source: Morgan Stanley Research
*Our preferred lookback windows, based on regression fit an explanatory power, are 6m for 2y and 10y spreads and 2y for 30y spreads

Exhibit 117: Backtesting results for each spread sector using preferred lookback window and a trading threshold of 1.0sd (last 12 months)



Source: Morgan Stanley Research
*Our preferred lookback windows, based on regression fit an explanatory power, are 6m for 2y and 10y spreads and 2y for 30y spread

Note about backtesting: The performance data provided is a hypothetical illustration of mathematical principles, it does not predict or project the performance of an investment or investment strategy. Past performance is no guarantee of future results.

Government Bond Supply

In the US, total coupon issuance (new 3y, 10y, 30y) settling in mid October is $120bn versus $2.5bn coupons and $36bn redemptions, resulting in net issuance of $81.5bn. **In the euro area,** we estimate about €21.5bn of issuance (from GER, AUT, FRA, SPA) versus no coupons and €21.5bn redemptions (from GER), resulting in zero bn of net issuance. **In the UK,** £7.75bn of UKTs will be issued against no coupons or redemptions. **In Japan,** 10y JGB will be issued for ¥2600bn and there will be an auction for enhanced liquidity for ¥500bn, against no coupons or redemptions. **In Canada,** 2y CAN 0.5% Nov 2023 will be issued for $4bn against no cash flow. **In Australia,** ACGB 1.75% Nov 2032 and ACGB 4.75% Apr 2027 will be issued for $1bn each, against no cash flow. **In New Zealand,** NZGB May 2024, NZGB May 2032, NZGB May 2041 will be issued for $200mn, $200mn and $100mn, respectively, against no cash flow.

Exhibit 118: Sovereign supply calendar

Monday	Tuesday	Wednesday	Thursday	Friday
4-OCT	**5-OCT**	**6-OCT**	**7-OCT**	**8-OCT**
	GER: DBRi 0.1% Apr 2033 Tap, €0.5bn; DBRi 0.1% Apr 2046 Tap, €0.2bn AUT: RAGB Auction, €1.265bn RAGB Apr 2025, RAGB Feb 2031 UK: UKT 0.25% Gilt 2025, £3bn UK: UKT 1.125% Gilt 2039, £2.25bn JPN: 10y JGB, ¥2600bn	GER: OBL 9 Oct 2026 Tap, €4bn UK: UKT 0.5% Gilt 2029, £2.5bn AUS: ACGB 1.75% Nov 2032, $1bn CAN: 2y CAN 0.5% Nov 2023, $4bn	FRA: Long Term OAT Auction, €10-11bn OAT 2.5% May 2030, OAT Nov 2031, OAT 0.75% May 2053, OAT 1.75% May 2066 SPA: SPGB Auction, €5-6bn* SPGB 2028, SPGB 0.5% 2031, SPGBei 0.7% 2033, SPGB 2.7% 2048 JPN: Auction for Enhanced Liquidity, ¥500bn NZ: NZGB May 2024, $200mn; NZGB May 2032, $200mn; NZGB May 2041, $100mn	AUS: ACGB 4.75% Apr 2027, $1bn
11-OCT	**12-OCT**	**13-OCT**	**14-OCT**	**15-OCT**
***EU: Possible New 20-25y Green EU Syndication, €7bn*	GER: BKO 15 Sept-2023 Tap, €5bn NETH: DSL Auction, €2-2.5bn* UK: UKT 0.5% 2061, £1.75bn* US: New 3y UST, $58bn* US: 10y UST Re-opening, $38bn* JPN: 30y JGB, ¥900bn*	GER: DBR 15 Aug 2052 Tap, €1bn ITA: BTP Auction, €9-9.25bn* UK: UKTi 0.125% Gilt 2051, £1.5bn* **POR: Possible OT Auction, €1bn* US: 30y UST Re-opening, $24bn* CAN: 5y CAN, $4bn*	IRE: IRISH Auction, €1-1.5bn* JPN: 5y JGB, ¥2500bn* NZ: NZGB May 2026, $200mn; NZGB May 2031, $200mn; NZGB May 2037, $100mn	
18-OCT	**19-OCT**	**20-OCT**	**21-OCT**	**22-OCT**
***UK: New Green UKT 31 July 2053,	JPN: 20y JGB, ¥1200bn*	GER: DBRg 15 Aug 2031 Tap, €3bn US: 20y Re-opening, $24bn* CAN: 2y CAN, $4.5bn*	FRA: Medium Term Auction, €10-11bn* FRA: Linker Auction, €1-1.5bn* SPA: SPGB Auction, €5-6bn* US: New 5y TIPS, $19bn* NZ: NZGB May 2024, $200mn; NZGB May 2032, $200mn; NZGB May 2041, $100mn CAN: 10y CAN, $5.5bn*	

Source: Morgan Stanley Research, Treasuries
* Morgan Stanley estimate. ** Possible Auction

In Case You Missed It

Podcast: Strong Views on Global Macro: Currency Intervention and Agency Mortgages | Ep. 111

29 Sep 2022

US agency MBS have dealt with high interest rate volatility, no Fed sponsorship, concerns about REIT deleveraging, and overseas selling. Matt talks with Jay Bacow, Co-Head of Securitized Products Strategy, about how these factors have cheapened the asset class and why an overweight makes sense.

Global Economics & FX Strategy: Are We Meeting at the Plaza?

29 Sep 2022

The rise of the dollar has brought attention to the historic Plaza Accord of 1985. Coordinated FX intervention is difficult in the modern era and we doubt it will occur any time soon. If it did, we doubt under current conditions that it would result in sustained dollar weakness..

UK Economics & Macro Strategy: A November to Remember

29 Sep 2022

We caution against reading the BoE's gilt market action as a dovish signal. We are looking for a 100bp hike in November, leaving the rest of our projected Bank Rate path unchanged – with the terminal rate at 4.25%. We believe 10-year gilt yields should stabilise sub-4.1% and remain bearish on GBP.

Global Volatility Playbook: Closer to Capitulation

29 Sep 2022

Drawdowns are well advanced in a number of assets, positioning is cautious and vols are discounting a lot. 1x2 put spreads are our trade of choice to position for further weakness that ultimately falls short of the high bar vol markets have set.

Global Macro Strategy: European Rates: ECB QT and Lessons from the 2013 Taper Tantrum

28 Sep 2022

Following the ECB's decision to start discussing the shrinking of its balance sheet at its non-monetary policy meeting on October 5, we published European Rates: First Thoughts on the ECB's QT, September 12, 2022. President Lagarde stressed on Monday that the ECB will consider QT once rate normalisation is complete, implying that there could be some time before an official announcement. In the case of Fed tapering, it was seven months between the first mention and the official announcement. Below we examine the behaviour of bond markets after the Federal Reserve highlighted the risk of QE tapering, which led to the so called 2013 taper tantrum, and see what insights this can offer.

Forecasts

Government bonds

Exhibit 119: Morgan Stanley sovereign 2y, 5y, 10y, and 30y yield base case forecasts

	2Y				5Y				10Y				30Y			
	3Q22	4Q22	1Q23	2Q23	3Q22	4Q22	1Q23	2Q23	3Q22	4Q22	1Q23	2Q23	3Q22	4Q22	1Q23	2Q23
US	4.16	4.55	4.43	4.30	3.92	4.20	4.15	4.10	3.69	4.00	3.88	3.75	3.62	3.90	3.83	3.75
Germany	1.70	1.50	1.20	1.10	2.00	1.75	1.50	1.30	2.25	2.00	1.75	1.60	2.35	2.10	1.90	1.80
Japan	-0.10	-0.10	-0.10	-0.10	0.00	0.00	0.00	0.05	0.25	0.25	0.20	0.35	1.30	1.25	1.10	1.35
UK	1.50	1.50	1.50	1.50	1.60	1.60	1.60	1.60	2.20	2.10	2.25	2.25	2.30	2.20	2.25	2.25
Canada	3.10	3.25	3.30	3.30	3.10	3.20	3.25	3.30	3.10	3.20	3.30	3.35	3.10	3.20	3.30	3.35
Australia	3.10	3.15	3.15	3.15	3.40	3.50	3.55	3.60	3.70	3.75	3.85	3.90	4.05	4.10	4.15	4.20
New Zealand	3.65	3.70	3.70	3.70	3.85	3.90	3.95	4.00	4.00	4.05	4.10	4.10	4.10	4.15	4.20	4.25
Austria*	5	5	5	5	10	15	15	15	45	50	60	50	50	55	65	55
Netherlands*	5	5	5	5	10	10	10	10	25	30	35	30	15	20	25	20
France*	5	5	5	5	20	25	30	25	50	55	65	55	75	85	95	85
Belgium*	5	5	5	5	20	25	30	25	50	60	70	60	90	100	110	100
Ireland*	5	5	5	5	20	30	35	30	55	70	80	70	80	95	105	95
Spain*	50	65	75	70	70	80	90	80	110	130	140	130	150	170	180	170
Italy*	70	100	130	120	140	160	190	180	200	230	250	240	240	280	290	280
Portugal*	45	60	70	65	65	75	85	75	125	155	165	155	175	215	225	215

Source: Morgan Stanley Research, *Spread to German Bunds

Exhibit 120: Morgan Stanley sovereign 10-year yield bull, base, and bear case forecasts

	Bull				Base				Bear			
	3Q22	4Q22	1Q23	2Q23	3Q22	4Q22	1Q23	2Q23	3Q22	4Q22	1Q23	2Q23
US	3.69	3.60	3.55	3.50	3.69	4.00	3.88	3.75	3.69	4.25	4.13	4.00
Germany	1.75	1.50	1.30	1.00	2.25	2.00	1.75	1.60	2.25	2.75	2.50	2.20
Japan	0.15	0.10	0.05	0.05	0.25	0.25	0.20	0.35	0.25	0.35	0.45	0.50
UK	1.70	1.70	1.65	1.65	2.20	2.10	2.25	2.25	2.30	2.30	2.20	2.10
Canada	2.95	3.00	3.05	3.10	3.10	3.20	3.30	3.35	3.25	3.35	3.45	3.55
Australia	3.55	3.55	3.60	3.65	3.70	3.75	3.85	3.90	3.75	3.90	4.00	4.10
New Zealand	3.80	3.85	3.90	3.95	4.00	4.05	4.10	4.10	4.10	4.20	4.25	4.30
Austria*	40	45	55	45	45	50	60	50	55	60	70	60
Netherlands*	20	25	30	25	25	30	35	30	35	40	45	40
France*	45	50	60	50	50	55	65	55	60	65	75	65
Belgium*	45	55	65	55	50	60	70	60	60	70	80	70
Ireland*	50	65	75	65	55	70	80	70	65	80	90	80
Spain*	100	110	120	110	110	130	140	130	120	150	160	150
Italy*	175	190	220	200	200	230	250	240	210	250	270	260
Portugal*	110	115	125	115	125	155	165	155	135	175	185	175

Source: Morgan Stanley Research, *Spread to German Bunds

Foreign exchange

Exhibit 121: Morgan Stanley foreign exchange base case forecasts

	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23
EUR/USD	0.97	0.93	0.95	0.97	0.99	1.01
USD/JPY	146	150	149	148	147	146
GBP/USD	1.10	1.00	1.03	1.05	1.06	1.07
USD/CHF	0.98	1.00	0.98	0.97	0.95	0.94
USD/SEK	11.24	11.83	11.37	10.93	10.51	10.10
USD/NOK	10.62	11.51	10.95	10.41	10.00	9.60
USD/CAD	1.36	1.41	1.39	1.38	1.35	1.32
AUD/USD	0.65	0.63	0.64	0.64	0.65	0.65
NZD/USD	0.57	0.55	0.55	0.56	0.56	0.57
EUR/JPY	142	140	142	144	146	147
EUR/GBP	0.88	0.93	0.92	0.92	0.93	0.94
EUR/CHF	0.95	0.93	0.93	0.94	0.94	0.95
EUR/SEK	10.90	11.00	10.80	10.60	10.40	10.20
EUR/NOK	10.30	10.70	10.40	10.10	9.90	9.70
USD/CNY	7.10	7.30	7.20	7.05	6.90	6.75
USD/HKD	7.85	7.85	7.84	7.82	7.81	7.80
USD/IDR	15000	15400	15200	15000	14858	14717
USD/INR	80.8	83.5	81.0	79.0	78.3	77.6
USD/KRW	1410	1480	1440	1400	1348	1296
USD/MYR	4.58	4.75	4.65	4.50	4.37	4.25
USD/PHP	58.5	62.0	60.0	58.0	56.6	55.2
USD/SGD	1.42	1.440	1.420	1.390	1.376	1.361
USD/TWD	31.7	32.5	32.0	31.0	31.1	31.2
USD/THB	37.5	38.5	36.8	35.5	34.9	34.3
USD/BRL	5.30	5.00	5.05	5.10	5.15	5.20
USD/MXN	20.20	20.25	20.30	20.50	20.80	21.00
USD/ARS	148	172	198	220	241	390
USD/CLP	1050	1040	1025	1000	941	883
USD/COP	4400	4650	4750	4800	4850	4700
USD/PEN	4.20	4.15	4.05	4.05	3.98	3.91
USD/ZAR	18.0	18.5	18.3	17.8	16.9	16.6
USD/TRY	18.50	20.00	21.00	22.00	23.00	24.00
USD/ILS	3.50	3.62	3.60	3.55	3.35	3.35
EUR/PLN	4.80	4.95	4.85	4.70	4.46	4.32
EUR/CZK	24.8	24.8	25.0	25.4	25.8	26.7
EUR/HUF	410	420	415	400	375	369
DXY	113	118	116	114	112	110
Fed Broad USD	127	131	129	128	126	125

Source: Morgan Stanley Research. Click here for custom cross forecasts

Exhibit 122: Morgan Stanley foreign exchange Base, Bear, Bull scenarios

2Q23	Bear	Base	Bull
EUR/USD	0.91	0.97	1.01
GBP/USD	1.00	1.05	1.13
USD/JPY	142	148	151
AUD/USD	0.58	0.64	0.67
USD/CNY	6.80	7.05	7.30
USD/INR	75.8	79.0	82.2
USD/ZAR	17.5	17.8	18.5
USD/BRL	4.60	5.10	5.50
USD/MXN	19.00	20.50	21.50

Source: Morgan Stanley Research

Trade Ideas

Below you will find a list of our current trade ideas, entry levels, entry dates, rationales, and risks.

Interest Rate Strategy

TRADE	ENTRY LEVEL	ENTRY DATE	RATIONALE	RISKS
EDZ3EDZ4 flatteners	-72bp	23-Sep-22	This trade captures upside in the terminal rate in 2023 and an increase in concerns about growth or a hard landing in 2024.	Inflation remains elevated longer than expected, or the FOMC shifts away from its "raise and hold" approach.
6m2s30s bear steepeners	-120bp	16-Sep-22	This trade complements our 1s10s flattener trade by offering zero-cost protection against a bear curve steepening, which is possible if the ECB decides to discuss QT or the BOJ makes changes to the YCC.	If the curve bear flattens by more than 25bp through the forwards, our gains on the 1s10s flattener are capped to 25bp of flattening.
November 139/137/136 Bund broken put fly	26.5 cents	16-Sep-22	Our view is driven by a number of factors, including the 10y Bund yield being rich, ECB comments highlighting concerns around inflation, and positioning.	Bund richness persists for longer than expected.
30s50s EUR Flattener	-35bp	16-Sep-22	The segment is too flat versus our model FV, offering a potential asymmetric opportunity for a flattening expression at the very long end.	Rates volatility decreases by more than 10% toward year-end.
Buy UKT 0S 33 versus 4Q 32 and 4H 34	11.5	9-Sep-22	QT kicks lead to sales of both UKT 4Q 32 and UKT 4H 34 relative to the UKT 0S 33, favouring the fly.	The continuation of high market volatility, which could keep the green gilt cheap.
Buy RX Invoice Spread	96.47	5-Sep-22	Wider non core-spreads and less QE support from the ECB should lead to wider ASW.	A major compression of the 10-year BTP/Bund spread pushes German ASW fair value lower.
Short SPGB Jan 27 vs. FTFR Feb 27	33bp	12-Aug-22	We think this is an interesting expression, considering that the spread is back to 2022 lows (ex late March, when investors were concerned with the outcome of the French elections).	A further richening of Spanish bonds, supported by domestic flows or a further tightening in peripheral risk more broadly.
Long BAZ2 - BAZ3 Steepeners	-61bp	5-Aug-22	Given strong economic momentum in North America and market pricing implying central bank cuts next year, we see the potential for the spread between end-2022 and end-2023 Canadian rates expectations to compress.	Oil prices decline along with global growth expectations, weighing on Canadian inflation and central bank policy expectations into 2023.

1s10s flatteners	-44bp	5-Aug-22	We expect most of the Fed's hawkishness to be priced in the form of higher terminal rates, whereby terminal rates are likely to be above neutral rates. That would lend itself to the possibility of inverted 1s10s and 2s10s curves, which we think would happen, and should continue in 2022. We see value in this trade on a long-term horizon.	Geopolitical risk puts downward pressure on the front of the curve.
Short FFN3	96.525	5-Aug-22	With the inflation and labor market backdrop, we see the market continuing to price a hawkish Fed stance. We suggest paying the June 23 FOMC meeting via selling the FFN3 contract.	The key risk is that inflation cools off, or that the Fed adopts a dovish reaction function.
Long UKT 1E 39 vs. UKT 0H 61	-23.2bp	22-Jul-22	We suspect that the strength in the 30y sector may face headwinds, including increased supply and QE.	The continuation of acute market volatility, which could keep the curve distorted.
Long June 2023 FRA/€STR basis	19.7	20-May-22	The prospects of a further cheapening on iTraxx crossover and the June 23 TLTRO repayments should lead to a wider basis.	The announcement of another extension of 3y TLTROs and an extension of APP.
TONA OIS 5s20s steepener (DV01 neutral)	68bp	29-Jul-22	Longer tenors should have room to steepen given the dovish global market pricing and the subsequent recovery in global risk sentiment.	A risk-off move, with a subsequent bull-flattening of the curve.
Buy 30y OAT vs BTP	139	10-May-22	Lower excess liquidity, an end of APP in H2, and an attractive valuation of OATs for Asian investors would lead to a protracted spread widening.	The key risk to the trade is an extension of APP.
Receive EUR 5y5y inflation swap	2.3	10-May-22	With the gradual tightening approach, ECB would be seen as behind the curve, increasing the demand for inflation protection.	Risks to the trade include a 50bp hike by the ECB in order to speed up the normalization process.
JGB 10s-20s steepener (2:1 DV01)	65bp	18-Jun-22	The 10y yield will likely be capped by the BoJ's unlimited purchase operation, while the 20y JGB yield will likely be vulnerable for any global yield sell-off without banks' demand.	The main risk to this trade is that of the curve bull-flattening more dramatically due to banks ramping up their net purchases again.
Pay fixed EUR 10y10y swap	55bp	14-Nov-21	The prospect of stickier eurozone inflation in 2H22 and a higher term premium due to the end of APP should contribute to duration weakness. A repricing of the 10s20s and 10s30s with the short end anchored would lead to both higher yields and steeper curves.	A more dovish ECB, higher pace of APP purchases.

Currency and Foreign Exchange

TRADE	ENTRY LEVEL	ENTRY DATE	RATIONALE	RISKS
Long USD/JPY 3m Seagull (Buy 142.50/150 Call spread, Sell 138.50 Put)	Zero cost	23-Sep-22	The current USD/JPY appear to be cheap vs. what the policy divergence narrative suggests thanks to the MoF's intervention. Given further room for policy divergence between the Fed and BoJ, and the effect of unilateral intervention seemingly short-lived, we see the current USD/JPY dip as a good opportunity for dip-buying. We take long USD/JPY via options, taking advantage of rich put skew.	Another aggressive intervention from Japan MoF, or the Fed turn clearly dovish.

TRADE	ENTRY LEVEL	ENTRY DATE	RATIONALE	RISKS
Long EUR/GBP 6m 0.90/0.95 call spread	1.1% P	16-Sep-22	While the eurozone and the UK are experiencing similar shocks, key differences point to a higher EUR/GBP. EUR may be more supported given 1) the eurozone has a large stock of liquid savings abroad; and 2) those savings are predominantly invested in fixed income assets and return differentials increasingly favor bringing capital back. In contrast, the UK continues to be reliant on capital imports, and investors may be more concerned about the real fiscal outlook in the UK than the eurozone. Should foreign capital prove unwilling to finance the UK's deficit, currency weakness would be needed.	UK growth improves and inflation falls, reducing stagflationary concerns in the UK.
Long CHF/JPY 3m Seagull (Buy 3m ATMF/155 Call Spread, Sell 144 Put)	0.55% P	16-Sep-22	We like expressing our constructive CHF view against the JPY. Our economists' expectation is that the BoJ will maintain the status quo at its upcoming meeting, contrasting with further policy normalisation by the SNB. USD/JPY should continue to be primarily driven by expectations for the Fed terminal rate rather than on the BoJ front. CHF/JPY tends to be comparatively insensitive to risk sentiment due to both sides of the pair being safe havens, but we expect it to strengthen as the BoJ falls further behind in the global tightening race.	The BoJ surprises markets by altering its stance and tightening policy this year. Japan's MoF intervenes to prevent further JPY depreciation.
Short GBP/USD	1.159	9-Sep-22	Weak growth expectations in the UK should continue to weigh on GBP. The announced fiscal stimulus may have provided a cushion to slowing growth, but this much fiscal easing does not come for free. The BoE is likely to continue with a prolonged tightening cycle, counteracting some of the growth boost. In addition, worries about fiscal sustainability and how the fiscal package will be funded will likely outweigh the positive effect from the fiscal-driven near-term growth boost, limiting any upside boost in GBP.	Growth remains surprisingly strong, supported by a large fiscal stimulus, and funding concerns dissipate.
Long USD/CAD	1.303	9-Sep-22	A relatively cautious Bank of Canada hiking path will likely contrast with the Fed, where Chair Powell has said the FOMC will "act now, forthrightly, strongly as we have been doing." Our oil market strategists have noted that "oil market fundamentals are no longer as strong as they were before June - high prices and aggressive central bank rate hikes have softened oil demand." Finally, a continued hawkish tone from the Federal Reserve will likely weigh on investor risk sentiment, boosting USD broadly and especially softening demand for risk-sensitive currencies like CAD.	The key risk to the trade is that oil prices rise quickly, boosting Canadian growth expectations and CAD.
Short EUR/USD	1.015	8-Jul-22	EUR/USD should decline as concerns over global growth persist and elevated inflation prompts continued increases in US rates, supporting the USD.	Inflation begins to show signs of slowing, reducing Fed policy expectations and weighing on the USD.

Inflation-Linked Bonds

TRADE	ENTRY LEVEL	ENTRY DATE	RATIONALE	RISKS

Long 2y3y EUR HICPx swap	1.94%	9/30/2022	We believe that fears toward reforms have taken investors out of long break-even positions. Some of that is "made in the USA," with the relevant 2y3y CPI forward having fallen by 45bp since the August peak. The 2y3y HICPx forward has fallen by the same amount but faster, i.e., during just 8 trading sessions. In our view, this is an opportunity to fade the move, especially by investors with a medium- to long-term trading horizon. We think there is a clear shift of governments toward more fiscal spending. This fiscal spending weighs on nominal duration and at the same time supports the notion of inflation stickiness.	A further decrease in 5y break-evens that also weighs on the forward.
Long July '24 TIPS BE vs. short July '23 TIPS BE	281bp	7/29/2022	We see inflation being stickier and more persistent than current market pricing suggests. We believe that present levels represent an attractive entry point.	Shock to inflation results in CPI dropping faster than anticipated
Long 1y1y ZCIS	277bp	7/15/2022	We see inflation being stickier and more persistent than current market pricing suggests. We believe that present levels represent an attractive entry point.	Shock to inflation results in CPI dropping faster than anticipated
Buy 5y UK RPI swap	4.26%	24-Jun-22	We expect more inflation premium to be priced into the front end of UK inflation forwards due to sticky inflation.	A fall in commodities that would weigh on all short-dated inflation instruments, including the 5y RPI forward.

Short-Duration Strategy

TRADE	ENTRY LEVEL	ENTRY DATE	RATIONALE	RISKS
TONA/SOFR basis 2s10s20s fly	-6.8bp	13-May-22	Global growth concerns and a subsequently wider credit spread would likely lead to further widening pressure in the belly of the curve, while we expect the widening pressure on both the short and long ends to likely be offset by the demand for foreign CCY JGB ASW from overseas real money investors.	Safe haven USD demand leads to strong widening pressure on the front end.

Exhibit 123: History of recommendations

Pay Fixed EUR 10y10y Swap

Instrument	Maturity	Trade	Entry Date	Entry Level	Exit Date	Exit Level	Target/ Objective	Stop/Re-assess	Size of Trade or Unit/Notional	CUSIP/ISIN/ BLOOMBERG
USD Forward Start Semi annual 30/360 vs 3M Libor)	3-Mar-42	Receive US 10y10y vs EUR 10y10y	01-Mar-22	0.02	21-Mar-22	2.50%				USFS1010 Curncy
****	3-Mar-42	Receive US 10y10y vs EUR 10y10y	01-Mar-22	0.01	21-Mar-22	1.32%				EUSA1010 Curncy
EUR Forward	10Y	Pay EUR 10y10y	14-Nov-21	0.54%	28-Mar-22	1.25%	1.00%			EUSA1010 Index

Buy OAT 30y versus BTP

Instrument	Maturity	Trade	Entry Date	Entry Level	Exit Date	Exit Level	Target/ Objective	Stop/Re-assess	Size of Trade or Unit/Notional	CUSIP/ISIN/ BLOOMBERG
BTPS 2.15 09/01/2052	1-Sep-52	Short BTP Sep 2052 vs long SPGB Jul 2066	18-Mar-22	0.02	22-Apr-22	3.08				IT0005480980
SPGB 3.45 07/30/2066	30-Jul-66	Short BTP Sep 2052 vs long SPGB Jul 2066	18-Mar-22	0.02	22-Apr-22	2.72				ES00000128E2
FRTR 0 ¾ 05/25/2053	25-May-53	Buy OAT 30y vs BTP	10-May-22	2.07	16-Sep-22	2.6				FR0014004J31
BTPS 2.15 09/01/2052	1-Sep-52	Buy OAT 30y vs BTP	10-May-22	3.42	16-Sep-22	4.1				IT0005480980

Conditional Bund ASW Widener

Instrument	Maturity	Trade	Entry Date	Entry Level	Exit Date	Exit Level	Target/ Objective	Stop/Re-assess	Size of Trade or Unit/Notional	CUSIP/ISIN/ BLOOMBERG
EUR Spread RX1 vs 6M		Buy Bund ASW vs Schatz	15-Oct-21	40.33bp	05-Nov-21	40.22				ASWABUND BGN Curncy
EUR Spread DU1 vs 6M		Buy Bund ASW vs Schatz	15-Oct-21	28.11bp	05-Nov-21	34.52				ASWASHATZ BGN Curncy

Buy UKT 1E 39 versus UKT 0H 61

Instrument	Maturity	Trade	Entry Date	Entry Level	Exit Date	Exit Level	Target/ Objective	Stop/Re-assess	Size of Trade or Unit/Notional	CUSIP/ISIN/ BLOOMBERG
UKT 0 1/2 10/22/61	22-Oct-61	Buy UKT 0H 61 on ASW	13-May-22	1.84	28-Jul-22	2.407				GB00BMBL1D50
40y SONIA swap	5-May-24	Buy UKT 0H 61 on ASW	13-May-22	1.55	28-Jul-22	2.11				BPSWS40 Curncy
UKT 1E 39	31-Jan-39	Buy 1E 39 versus 4Q 32 and 1Q 51	20-Jul-22	0.58%	12-Aug-22	0.45%	0.38%	0.65%		GB00BLPK7334
UKT 1Q 51	31-Jul-51	Buy 1E 39 versus 4Q 32 and 1Q 51	20-Jul-22	0.58%	12-Aug-22	0.45%	0.38%	0.65%		GB00BLH38158
UKT 4Q 32	7-Jun-32	Buy 1E 39 versus 4Q 32 and 1Q 51	20-Jul-22	0.58%	12-Aug-22	0.45%	0.38%	0.65%		GB0004893086

Buy UKT 0S 33 versus UKT 4Q 32 and UKT 4H 34

Instrument	Maturity	Trade	Entry Date	Entry Level	Exit Date	Exit Level	Target/ Objective	Stop/Re-assess	Size of Trade or Unit/Notional	CUSIP/ISIN/ BLOOMBERG
UKT 1E 39	31-Jan-39	Buy 1E 39 versus 4Q 32 and 1Q 51	20-Jul-22	0.58%	12-Aug-22	0.45%	0.38%	0.65%		GB00BLPK7334
UKT 1Q 51	31-Jul-51	Buy 1E 39 versus 4Q 32 and 1Q 51	20-Jul-22	0.58%	12-Aug-22	0.45%	0.38%	0.65%		GB00BLH38158
UKT 4Q 32	7-Jun-32	Buy 1E 39 versus 4Q 32 and 1Q 51	20-Jul-22	0.58%	12-Aug-22	0.45%	0.38%	0.65%		GB0004893086

EUR 30s50s Flattener

Instrument	Maturity	Trade	Entry Date	Entry Level	Exit Date	Exit Level	Target/ Objective	Stop/Re-assess	Size of Trade or Unit/Notional	CUSIP/ISIN/ BLOOMBERG
EUSA10 Curncy	19-Oct-31	Receive 5s10s30s Eur Swap Fly	15-Oct-21	0.22%	29-Oct-21	0.28%				EUSA10 Curncy
EUSA5 Curncy	19-Oct-26	Receive 5s10s30s Eur Swap Fly	15-Oct-21	-0.13%	29-Oct-21	0.02%				EUSA5 Curncy
EUSA30 Curncy	19-Oct-51	Receive 5s10s30s Eur Swap Fly	15-Oct-21	0.51%	29-Oct-21	0.34%				EUSA30 Curncy
EUSA30 Curncy	4-Mar-52	EUR 5s30s Flatteners	04-Mar-22	0.63%	13-May-22	1.54%				EUSA30 Curncy
EUSA5 Curncy	4-Mar-27	EUR 5s30s Flatteners	04-Mar-22	0.39%	13-May-22	1.32%				EUSA5 Curncy
10y swap EUR 6M	7-Jun-32	EUR 10s30s swap flattener	03-Jun-22	1.8	17-Jun-22	2.44				EUSA10 Curncy
30y swap EUR 6M	7-Jun-52	EUR 10s30s swap flattener	03-Jun-22	1.91	17-Jun-22	2.15				EUSA30 curncy
EUR V6m	22-Jul-32	EUR 10s30s steepeners	22-Jul-22	1.86%	16-Sep-22	2.58%				EUSA10 Curncy
EUR V6m	22-Jul-52	EUR 10s30s steepeners	22-Jul-22	1.41%	16-Sep-22	2.08%				EUSA30 Curncy

Broken Put Fly on RX

Instrument	Maturity	Trade	Entry Date	Entry Level	Exit Date	Exit Level	Target/ Objective	Stop/Re-assess	Size of Trade or Unit/Notional	CUSIP/ISIN/ BLOOMBERG
RXZ2	10-Dec-22	Broken put fly on RX	19-Aug-22	70 cents	16-Sep-22	405				RXZ2
RXZ2	10-Dec-22	Broken put fly on RX	19-Aug-22	35 cents	16-Sep-22	222				RXZ2
RXZ2	10-Dec-22	Broken put fly on RX	19-Aug-22	20 cents	16-Sep-22	146.5				RXZ2

Buy 3m USD/JPY Seagull (Buy 3m 142.5/150 Call Spread, Sell 138.5 Put)

Instrument	Maturity	Trade	Entry Date	Entry Level	Exit Date	Exit Level	Target/ Objective	Stop/Re-assess	Size of Trade or Unit/Notional	CUSIP/ISIN/ BLOOMBERG
USD/JPY	3m	Buy 3m USD/JPY seagulls (buy 3m ATMF/135 call spread, sell 124 put)	25-Apr-22	0.69% P	28-Jun-22	3.75% P				USDJPY CURNCY
USD/JPY	3m	Buy 3m USD/JPY seagulls (buy 3m ATMF/140 call spread, sell 128 put)	28-Jun-22	0.60% P	09-Sep-22	3%				USDJPY CURNCY

Source: Morgan Stanley Research

Definition of terms

Buy/Long: The analyst expects the total or excess return (depending on the nature of the recommendation) of the instrument or issuer that is the subject of the investment recommendation to be positive over the relevant time period.

Sell/Short: The analyst expects the total or excess return (depending on the nature of the recommendation) of the instrument or issuer that is the subject of the investment recommendation to be negative over the relevant time period.

Selling protection or Buying Risk: The analyst expects that the price of protection against the event occurring will decrease over the relevant time period.

Buying protection or Selling Risk: The analyst expects the price of protection against the event occurring will increase over the relevant time period.

Pay: The analyst expects that over the specified time period the variable rate underlying the swap agreement that is the subject of the investment recommendation will increase.

Receive: The analyst expects that over the specified time period the variable rate underlying the swap agreement that is the subject of the investment recommendation will decrease.

Unless otherwise specified, the time frame for recommendations included in the Morgan

Stanley Fixed Income Research reports is 1 - 3 months and the price of financial instruments mentioned in the recommendation is as at the date and time of publication of the recommendation.

When more than one issuer or instrument is included in a recommendation, analyst expects one part of the trade to outperform the other trade or combination of other trades included in the recommendation on a relative basis.

For important disclosures related to the proportion of all investment recommendations over the past 12 months that fit each of the categories defined above, and the proportion of issuers corresponding to each of those categories to which Morgan Stanley has supplied material services, please see the Morgan Stanley disclosure at https://ny.matrix.ms.com/eqr/article/webapp/81c33698-06b0-11ed-a95a-800d82b59ab4

Event Calendar

Exhibit 124: Risk Event Calendar

Date	Time (Ldn)	Ccy	Event	Ref. Period	Market	Previous
01-Oct	01:00	KRW	Exports (YoY)	Sep	3.3%	6.6%
	08:00	EUR	ECB's de Cos spks			
	08:00	EUR	ECB's Vasle spks			
02-Oct	14:01	AUD	Corelogic House Prices (MoM)	Sep		-1.6%
	23:00	AUD	PMI Manufacturing	Sep F		53.9
	N/A	BRL	Brazil General Elections			
2-5 O	N/A	GBP	UK Conservative Party Conference			
03-Oct	00:50	JPY	Tankan Large Manufacturing Index	3Q	11	9
	00:50	JPY	Tankan Large Non-Manufacturing Index	3Q	13	13
	00:50	JPY	BoJ Summary of Opinions	Sep-22		
	01:30	THB	Thailand PMI	Sep		53.7
	01:30	MYR	Malaysia PMI	Sep		50.3
	01:30	PHP	Philippines PMI	Sep		51.2
	01:30	JPY	PMI Manufacturing	Sep F		51
	05:00	IDR	CPI (YoY)	Sep	5.97%	4.69%
	07:30	SEK	Manufacturing PMI	Sep		50.6
	07:30	CHF	CPI (YoY)	Sep	3.6%	3.5%
	07:30	CHF	Core CPI (YoY)	Sep		2%
	08:00	TRY	CPI (YoY)	Sep	83.5%	80.21%
	08:15	EUR	Spanish PMI Manufacturing	Sep	49.4	49.9
	08:30	CHF	Manufacturing PMI	Sep	54.6	56.4
	08:45	EUR	Italian PMI Manufacturing	Sep	47.5	48
	08:50	EUR	French PMI Manufacturing	Sep F	47.8	47.8
	08:55	EUR	German PMI Manufacturing	Sep F	48.3	48.3
	09:00	EUR	PMI Manufacturing	Sep F	48.5	48.5
	09:00	NOK	Manufacturing PMI	Sep		52.3
	09:00	CHF	SNB Sight Deposits			747.1B
	N/A	EUR	Eurogroup Meeting			
	09:30	GBP	PMI Manufacturing	Sep F	48.5	48.5
	11:00	SEK	Riksbank's Floden spks (Economy and Monetary Policy)			
	12:30	CLP	Economic Activity (YoY)	Aug	-1.6%	1%
	14:00	ILS	BoI Rates Decision		2.75%	2%
	14:05	USD	Fed's Bostic (non-voter) spks			
	14:30	CAD	PMI Manufacturing	Sep		48.7
	14:45	USD	PMI Manufacturing	Sep F	51.8	51.8
	15:00	USD	Construction Spending (MoM)	Aug	-0.2%	-0.4%
	15:00	USD	ISM Manufacturing	Sep	52.2	52.8
	16:00	PEN	CPI (MoM)	Sep	0.47%	0.67%
	16:50	GBP	UK FinMin Kwarteng spks (Conservative Party Conference)			
	19:00	GBP	BoE's Mann spks			
	20:10	USD	Fed's Williams (voter) spks			

Date	Time	Currency	Event	Period	Forecast	Previous
	N/A	USD	Total Vehicle Sales	Sep	13.5m	13.18m
04-Oct	00:30	JPY	Tokyo CPI (YoY)	Sep	2.8%	2.9%
	00:50	JPY	Monetary Base (YoY)	Sep		0.4%
	00:50	JPY	Monetary Base End of Period	Sep		645B
	01:30	AUD	Owner-Occupier Home Loans (MoM)	Aug	-3.5%	-7%
	01:30	AUD	Home Loans (MoM)	Aug	-3.3%	-8.5%
	01:30	AUD	Building Approvals (MoM)	Aug	9%	-17.2%
	04:30	AUD	RBA Rates Decision		2.85%	2.35%
	06:30	AUD	Commodity Index (YoY)	Sep		21.7%
	09:00	EUR	Econfin Meeting			
	10:00	EUR	PPI (YoY)	Aug	43.2%	37.9%
	N/A	NZD	Global Dairy Trade Announces Milk Auction Results			
	13:30	EUR	ECB's Centeno spks			
	14:00	USD	Fed’s Logan (non-voter) spks			
	14:00	USD	Fed's Williams (voter) spks			
	14:15	USD	Fed’s Mester (voter) spks (Payments)			
	15:00	USD	Factory Orders	Aug	0.2%	-1%
	15:00	USD	Durable Goods Orders	Aug F		-0.2%
	15:00	USD	Durables Ex Transportation	Aug F		0.2%
	15:00	USD	JOLTs Job Openings	Aug		11.24m
	16:00	EUR	ECB's Lagarde spks			
	17:00	NZD	Corelogic House Prices (YoY)	Sep		5.8%
	18:00	USD	Fed's Daly (non-voter) spks			
	23:00	AUD	PMI Composite	Sep F		50.8
	23:00	AUD	PMI Services	Sep F		50.4
05-Oct	00:00	KRW	CPI (YoY)	Sep	5.7%	5.7%
	01:00	NZD	NZ Financial Statements			
	01:30	JPY	PMI Services	Sep F		51.9
	01:30	JPY	PMI Composite	Sep F		50.9
	01:30	SGD	Singapore PMI	Sep		56
	02:00	NZD	RBNZ Rates Decision		3.5%	3%
	02:00	PHP	CPI (YoY)	Sep	6.9%	6.3%
	04:30	THB	CPI (YoY)	Sep	6.55%	7.86%
	07:00	EUR	German Exports (MoM)	Aug	1.5%	-2%
	07:00	EUR	German Imports (MoM)	Aug	1.2%	-1.5%
	07:30	SEK	PMI Services	Sep		59.4
	07:45	EUR	French Industrial Production (MoM)	Aug	0.2%	-1.6%
	08:15	EUR	Spanish PMI Services	Sep	49.8	50.6
	08:45	EUR	Italian PMI Services	Sep	49	50.5
	08:45	EUR	Italian PMI Composite	Sep	48.3	49.6
	08:50	EUR	French PMI Services	Sep F	53	53
	08:55	EUR	German PMI Services	Sep F	45.4	45.4
	09:00	EUR	PMI Services	Sep F	48.9	48.9
	09:00	EUR	PMI Composite	Sep F	48.2	48.2
	09:20	TWD	Foreign Reserves	Sep		545.48B
	09:30	GBP	PMI Services	Sep F	49.2	49.2
	09:30	GBP	PMI Composite	Sep F	48.4	48.4
	N/A	GBP	UK PM Truss spks (Conservative Party Conference)			

Date	Time	Currency	Event	Period	Survey	Prior
	12:00	COP	CPI (MoM)	Sep	0.75%	1.02%
	N/A	RON	BNR Rates Decision		6%	5.5%
	N/A	INT	OPEC+ Meeting			
	13:15	USD	ADP Employment Change	Sep	200k	132k
	13:30	USD	Trade Balance	Aug	-68B	-70.7B
	13:30	CAD	Trade Balance	Aug	3.45B	4.05B
	N/A	PLN	NBP Rates Decision		7%	6.75%
	14:45	USD	PMI Services	Sep F	49.2	49.2
	15:00	USD	ISM Non-Manufacturing Composite	Sep	56	56.9
	15:30	USD	EIA Crude Oil Inventories			-215k
	17:00	RUB	GDP (YoY)	2Q F	-4.1%	-4.1%
	21:00	USD	Fed’s Bostic (non-voter) spks (Inflation)			
	22:00	KRW	Foreign Reserves	Sep		436.43B
06-Oct	00:50	JPY	Japan MoF Weekly Security Flow			264.8B
	01:00	NZD	ANZ Commodity Price	Sep		-3.3%
	01:30	AUD	Exports (MoM)	Aug	1.7%	-9.9%
	01:30	AUD	Imports (MoM)	Aug	-1%	5.2%
	01:30	AUD	Trade Balance	Aug	10000m	8733m
	04:15	NZD	NZ FinMin Robertston spks			
	07:00	EUR	German Factory Orders (MoM)	Aug	-0.5%	-1.1%
	07:00	SEK	GDP Indicator (MoM)	Aug		0%
	07:00	SEK	Industrial Orders (MoM)	Aug		3%
	07:00	SEK	Household Consumption (MoM)	Aug		-1%
	08:00	HUF	NBH 1-week Deposit Rate			13%
	08:00	EUR	Spanish Industrial Production (YoY)	Aug	4.55%	5.3%
	08:00	EUR	Spain Industrial Production (MoM)	Aug	-0.2%	-1.12%
	09:00	TWD	CPI (YoY)	Sep	2.8%	2.66%
	09:30	GBP	PMI Construction	Sep	48	49.2
	10:00	EUR	Retail Sales (MoM)	Aug	-0.4%	0.3%
	12:30	EUR	ECB Minutes			
	13:30	USD	Initial Jobless Claims		205k	193k
	15:00	CAD	Ivey PMI	Sep		60.9
	16:50	CAD	BoC's Macklem spks			
	18:00	USD	Fed's Cook (voter) spks (Economy and Monetary Policy)			
	18:00	USD	Fed’s Evans (non-voter) spks			
	22:00	USD	Fed's Waller (voter) spks (Economic Outlook)			
	23:30	USD	Fed’s Mester (voter) spks (Economic Outlook)			
	N/A	NOK	Norway Budget			
07-Oct	00:00	PEN	BCRP Rates Decision		7%	6.75%
	00:30	JPY	Overall Household Spending (YoY)	Aug	6.7%	3.4%
	00:30	JPY	Labor Cash Earnings (YoY)	Aug	1.4%	1.3%
	01:30	AUD	RBA Financial Stability Report			
	04:00	IDR	Foreign Reserves	Sep		132.2B
	05:00	SEK	Maklarstatistik House Prices			
	06:00	JPY	Leading Index CI	Aug P		98.9
	06:00	JPY	Coincident Index	Aug P		100.1
	06:45	CHF	Unemployment Rate	Sep	2%	2%
	07:00	EUR	German Import Prices (YoY)	Aug	30%	28.9%

	07:00	EUR	German Industrial Production (MoM)	Aug	-0.5%	-0.3%
	07:00	EUR	German Retail Sales (MoM)	Aug	-1%	1.9%
	07:00	NOK	Industrial Production (MoM)	Aug		1.5%
	07:00	NOK	GDP (MoM)	Aug		0.3%
	07:00	NOK	Mainland GDP (MoM)	Aug	0.4%	-0.3%
	07:45	EUR	French Trade Balance	Aug		-14.5B
	08:00	CHF	Foreign Currency Reserves	Sep		859.3B
	08:00	MYR	Foreign Reserves			106.3B
	09:00	TWD	Exports (YoY)	Sep	2.5%	2%
	09:00	EUR	Italian Retail Sales (MoM)	Aug		1.29%
	N/A	EUR	Informal Heads of State Meeting			
	10:00	SGD	Foreign Reserves	Sep		289B
	11:25	GBP	BoE's Ramsden spks (Fintech Services)			
	12:00	CLP	CPI (MoM)	Sep	0.9%	1.2%
	12:00	MXN	CPI (MoM)	Sep	0.69%	0.7%
	12:00	MXN	Bi-Weekly CPI (2w/2w)		0.36%	0.41%
	13:30	USD	Change in Nonfarm Payrolls	Sep	250k	315k
	13:30	USD	Unemployment Rate	Sep	3.7%	3.7%
	13:30	USD	Average Hourly Earnings (MoM)	Sep	0.3%	0.3%
	13:30	USD	Average Hourly Earnings (YoY)	Sep	5.1%	5.2%
	13:30	CAD	Employment Change	Sep	20k	-39.7k
	13:30	CAD	Full Time Employment Change	Sep		-77.2k
	13:30	CAD	Unemployment Rate	Sep	5.4%	5.4%
	15:00	USD	Fed's Williams (voter) spks			
	15:00	USD	Wholesale Inventories (MoM)	Aug F	1.3%	1.3%
	17:00	RUB	CPI (YoY)	Sep	13.5%	14.3%
	20:00	USD	Consumer Credit	Aug	25B	23.81B
	N/A	CNY	Foreign Reserves	Sep	3002B	3054.9B
7-15 O	N/A	PHP	Foreign Reserves	Sep		97.4B
08-Oct	02:45	CNY	PMI Composite	Sep		53
	02:45	CNY	PMI Services	Sep	54.5	55
9-14 O	N/A	CHF	Swiss House Prices	3Q		534.4
9-15 O	N/A	CNY	Aggregate Financing (CNY)	Sep		2432B
9-15 O	N/A	CNY	New Yuan Loans	Sep	1700B	1254B
9-15 O	N/A	CNY	M2 (YoY)	Sep	12.2%	12.2%

Source: Morgan Stanley Research, Bloomberg

Government Bond Ratings

Exhibit 125: Government Bond Ratings

no		Aaa/ AAA	Aa1/ AA+	Aa2/ AA	Aa3/ AA-	A1/ A+	A2/ A	A3/ A-	Baa1/ BBB+	Baa2/ BBB	Baa3/ BBB-	Ba1/ BB+	Ba2/ BB	Ba3/ BB-	B1/ B+	B2/ B	B3/ B-	Below B3/ B-
US	Moody	STA																
	S&P		STA															
	Fitch	STA																
JPN	Moody					STA												
	S&P					STA												
	Fitch						STA											
UK	Moody				STA													
	S&P			NEG														
	Fitch				STA													
GER	Moody	STA																
	S&P	STA																
	Fitch	STA																
FRA	Moody			STA														
	S&P			STA														
	Fitch			NEG														
AUT	Moody		STA															
	S&P		STA															
	Fitch		STA															
NETH	Moody	STA																
	S&P	STA																
	Fitch	STA																
FIN	Moody		STA															
	S&P		STA															
	Fitch		STA															
BEL	Moody				STA													
	S&P			STA														
	Fitch				STA													
SPA	Moody								STA									
	S&P							POS										
	Fitch							STA										
ITA	Moody										STA							
	S&P									NEG								
	Fitch										STA							
IRE	Moody						POS											
	S&P				STA													
	Fitch					STA												
POR	Moody									STA								
	S&P										STA							
	Fitch									STA								
GRE	Moody													STA				
	S&P												POS					
	Fitch												STA					
Australia	Moody	STA																
	S&P	STA																
	Fitch	STA																
New Zealand	Moody	STA																
	S&P		POS															
	Fitch		STA															
Canada	Moody	STA																
	S&P	STA																
	Fitch	STA																

Source: Morgan Stanley Research, Moody's, Standard and Poor, Fitch
STA: Outlook Stable, NEG: Outlook Negative, DEV: Outlook Developing, OW-: On Watch Negative, POS: Outlook Positive, SD: Selective Default

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(as of September 30, 2022)

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STOCK RATING CATEGORY	COVERAGE UNIVERSE		INVESTMENT BANKING CLIENTS (IBC)			OTHER MATERIAL INVESTMENT SERVICES CLIENTS (MISC)	
	COUNT	% OF TOTAL	COUNT	% OF TOTAL IBC	% OF RATING CATEGORY	COUNT	% OF TOTAL OTHER MISC
Overweight/Buy	**1342**	**38%**	**295**	**41%**	**22%**	**590**	**39%**
Equal-weight/Hold	**1582**	**45%**	**335**	**47%**	**21%**	**702**	**46%**
Not-Rated/Hold	**0**	**0%**	**0**	**0%**	**0%**	**0**	**0%**
Underweight/Sell	**610**	**17%**	**84**	**12%**	**14%**	**219**	**14%**
TOTAL	**3,534**		**714**			**1511**	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

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