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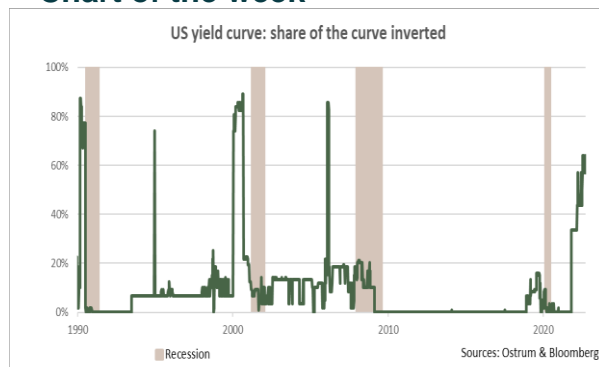
● Topic of the week: The European Union facing the challenge of the energy crisis

- Faced with the spectacular rise in the price of electricity, the EU proposes emergency measures to reduce the energy bill;
- These are based on a reduction in electricity consumption and a cap on excess revenues for energy companies;
- This will not prevent gas and electricity prices from remaining high this winter as well as in 2023 and 2024 due to limited supply;
- There is an urgent need to take measures to avoid a liquidity crisis for companies operating on the futures markets.

● Market review: Powell promises pain

- Fed: 75bp hike and acceleration of monetary tightening;
- Yields soar, carnage on equities;
- Substantial increase in Gilt issuance next year;
- The BoJ forced to intervene on the yen.

● Chart of the week



In the United States, the percentage of the yield curve being inverted has risen sharply since this summer to currently stand at 57%.

This is the result of the strong monetary tightening carried out by the Fed to fight against inflation that is far too high. Short rates, crystallizing monetary policy expectations, thus rose sharply to become higher than long rates. The rise in the latter was more limited due to fears weighing on growth. This inversion of the yield curve is a good signal that the US economy is entering recession in the coming months.

● Figure of the week

1.035

Source : Ostrum AM

The impressive plunge of the Pound Sterling after the mini-budget presented by the government last Friday. The pound trades near all-time lows against the dollar.



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● **Topic of the week**

The European Union facing the challenge of the energy crisis

Faced with the spectacular rise in the price of electricity, the European Commission is proposing an emergency intervention to reduce the energy bill. The measures under discussion aim to reduce electricity consumption and redistribute to the most affected households and businesses the excessive revenue collected by energy companies. There is an urgent need to adopt measures at the European level to coordinate the multiple interventions of the States and make them more effective with the approach of winter and a more significant risk concerning the continuation of Russian supplies of natural gas.

Very sharp rise in the price of gas and electricity

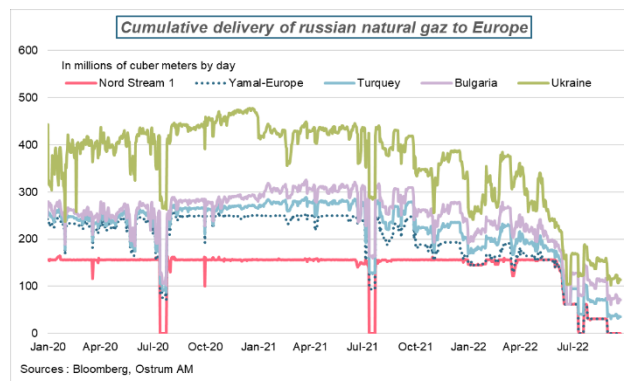
In Europe, the prices of natural gas and electricity have risen dramatically. Their rise started in the summer of 2021 due to the strong rebound in post-covid demand, lower Russian supplies (already), a lack of wind weighing on renewable energy production and low inventories due to harsh winter. It intensified sharply in 2022 with the war launched by Russia in Ukraine.

Natural gas: strategic weapon for Russia

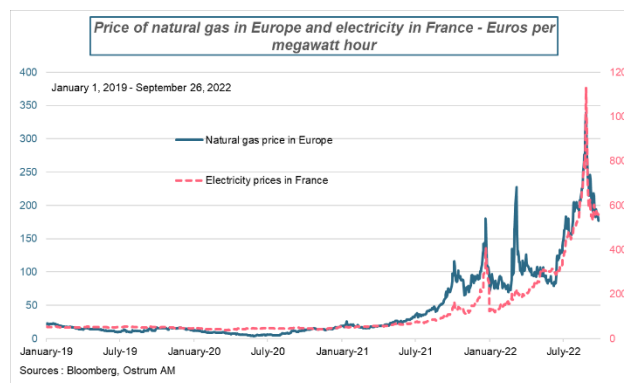
In retaliation for EU sanctions against it, Russia has sharply reduced its natural gas supplies to Europe. Given its strong dependence on Russian energy and more particularly on this source of energy (40% of EU natural gas imports came from Russia in 2020), this has resulted in a very sharp rise in the price of gas.

The Nord Stream 1 gas pipeline, the main source of Russian gas supply to Europe, has been shut down again since September 1 for an indefinite period, Gazprom citing technical reasons. This decision follows the announcement of an agreement within the G7 to apply a price cap on oil. This gas pipeline had already been temporarily shut down last July, Russia then claiming maintenance problems following the sanctions imposed. Vladimir Putin is using

natural gas as a strategic weapon in retaliation for the sanctions imposed on him.



The consequence is that today total Russian gas flows to Europe are just under 30% of what they were before the war in Ukraine. Added to this are fears of a halt in Russian supplies as winter approaches. These have become more significant since Putin's decision of a partial mobilization of reservists. The price of natural gas in Europe (TTF index) thus reached a historic peak at nearly 340 euros per megawatt hour (MWh) on August 26 before returning to around 180 euros today. This is to be compared to an average of 16 euros per MWh over the period 2015-2020, i.e. a multiplication of the price of natural gas by 11.



Link between the price of gas and electricity

This sharp rise in the price of gas had immediate repercussions on the price of electricity. As this cannot be stored, production is constantly adjusting to demand. The price of electricity is thus determined by the cost of the last plant used to ensure the balance between supply and demand. When demand is not too high, low-cost renewable energies are sufficient to ensure the balance. When these are no longer sufficient, nuclear power stations at a slightly higher but moderate cost are then called upon, then, finally, when demand is high, thermal power stations are used. The price of electricity is then indexed to that of coal or natural gas, which is higher. In addition, there is the tax on CO₂ emissions within the framework of the European carbon market.

The recent rise in the price of electricity has also been amplified by the sharp drop in hydroelectric production due to the drought and the maintenance of more than half of the French nuclear reactors caused in particular by the aging of the installations (corrosion control for certain).

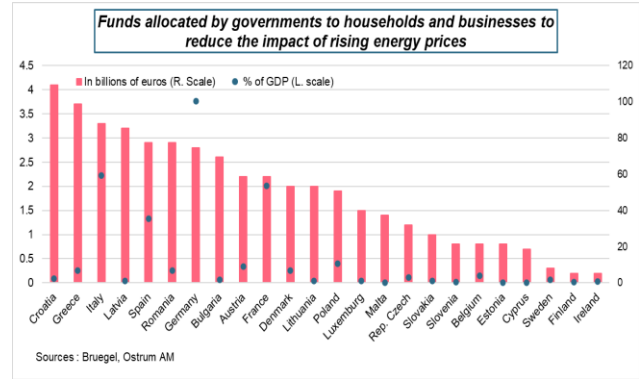
The price of electricity has thus been multiplied by 13 in France to stand today at 560 euros per MWh against an average of 42 euros between 2015 and 2020. On August 26, a peak of 1.130 euros per MWh was achieved.

Consequence: coming recession in the Eurozone

The sharp rise in gas and electricity prices is significantly increasing the energy bill and weighing on consumer prices. The sharp acceleration in inflation (to 9.1% in August in the Eurozone) is reflected in losses of purchasing power for households. The less favoured are the most affected due to a greater proportion of their income devoted to energy expenditure. Companies, for their part, are faced with the increase in their cost of production. This particularly affects companies that consume a lot of gas and electricity, such as metallurgy, paper mills, glassware and chemicals. Some metallurgy or fertilizer companies have thus had to reduce or stop their production in the face of the sharp rise in their cost.

Lower consumption and lower activity, perceptible through surveys of business leaders and households, should result in a recession within the Eurozone from the 4th quarter. So that it is not too strong, governments are stepping up measures to cushion the shock on the economy. According to Bruegel, the states of the European Union spent 440 billion euros between September 2021 and September 21, 2022, or 3% of EU GDP. This includes 310 billion euros to limit the rise in electricity prices, reduce energy taxes and provide subsidies.

These measures have so far not led to a sharp rise in the deficit-to-GDP ratios. They were financed mainly by stronger than expected growth, additional tax revenues linked to high inflation and the reallocation of unused funds which were initially intended for the Covid 19 crisis. But this will not last due to the length of the crisis, its intensification and the entry into recession in the Eurozone.



European Commission proposals

In order to coordinate the actions of governments so that they are more effective, the EC proposed, on September 14, an emergency intervention in the electricity market. It aims to reduce the energy bill. According to the EC, the increase in retail electricity prices year-on-year since July 2021 has averaged almost 50% and this is expected to continue this winter with the rise in the price of natural gas and the fixing of new contracts. Exceptional measures are therefore necessary and the emergency instrument for electricity should apply at the latest from 1 December 2022 and until 31 March 2023. The proposals are based on 3 pillars.

Reduce electricity consumption by at least 10%

Lowering the electricity demand of all consumers is the fastest and least expensive way to reduce the energy bill. In order to reduce electricity prices, the Commission is proposing that States commit to reducing electricity consumption by at least 10% until March 31, 2023, targeting peak hours. It proposes the obligation to reduce electricity consumption by at least 5% during peak hours (covering at least 10% of the hours of each month), when it is most expensive (when gas sets the price marginal). States can choose the appropriate measures, including recourse to financial compensation. A 5% reduction in peak demand is estimated to reduce gas consumption by around 4% this winter, or at least 1.2 billion cubic meters over 4 months, according to the EC.

Temporary cap on excess revenues of “inframarginal” electricity generators

These producers produce electricity using lower-cost technology such as renewable energies, lignite or nuclear. They thus benefited from exceptional revenues due to the sharp rise in wholesale electricity prices while their costs remained relatively unchanged. The Commission proposes to set a cap of €180 per MWh on the electricity market revenues generated by these technologies. Revenue above

this ceiling will be collected by the Member States and paid to households and businesses to reduce their energy bills. The Commission also encourages states that trade electricity to sign bilateral solidarity agreements in order to share excess revenue. According to EC estimates, this ceiling would allow States to receive 117 billion euros over one year.

Temporary solidarity contribution on exceptional profits of the fossil fuel sector

This concerns energy companies in the oil, coal, gas and refining sector. Member States would receive a part of the profits of 2022 exceeding by more than 20% the average profits of the previous 3 years. The rate applied would be at least 33%. These revenues would be intended for energy consumers and more particularly those most affected by high energy prices: the less favored households, energy-intensive businesses. This measure would be in effect for one year. Revenues are estimated at 25 billion euros.

Measures in progress or postponed

The Commission is continuing its work on instruments to improve the liquidity of energy companies active on the electricity futures markets. They are currently in difficulty due to the sharp rise in the price of gas and its volatility. The EC is working with market regulators on a modification of the rules relating to collateral as well as measures to limit the high intra-day volatility of prices.

The temporary framework for state emergency aid measures will be reviewed in October. In particular, they should allow States to provide public guarantees to companies very weakened by this energy crisis and thus avoid a sharp increase in bankruptcies.

The EC wants to establish a new benchmark for the price of gas in Europe other than the current TTF which was relevant when the gas was transported mainly via pipeline. This index does not take into account the sharp increase in liquefied natural gas imports.

Another subject postponed is that of strengthening the platform for joint energy purchases, which would allow countries not to compete in their supplies and to benefit from lower prices.

President Ursula Von Der Leyen also announced in the longer term a complete reform of the electricity market aimed in particular at decoupling the price of gas from the price of electricity.

A new European Hydrogen Bank will be created. Using the resources of the innovation fund, it will invest 3 billion euros to develop this market.

Several remarks

The EC proposals, aimed at redistributing excess profits from energy companies (excluding gas) to governments, are estimated to bring 140 billion euros to governments, or 1% of the European Union's GDP. This will encourage States to take additional measures to help the most disadvantaged households and the companies most affected by the rise in electricity prices. The cost is nevertheless lower than what was expected by the markets. There is also a lot of uncertainty about how this income will be redistributed to households and businesses, how soon they will be able to benefit from it and therefore the effective impact on growth and inflation.

In addition, many countries have already adopted measures aimed at reducing the impact of the energy crisis on households and businesses by introducing, for some, a ceiling on excess revenues of energy companies. These countries are therefore asking for more flexibility in the implementation of EU measures.

The adoption of a price cap on gas, although widely discussed before September 14, was not proposed by the EC. Some countries such as the Netherlands, Poland and Germany are not in favor of it because of their heavy dependence on Russian energy and oppose it for fear of being deprived of it. Vladimir Putin warned at the beginning of September that in the event of the introduction of a price cap on Russian gas, he would cut off all supplies to Europe, whether in gas, oil or carbon. Discussions could take place on this subject during the extraordinary meeting of the Council with the energy ministers on September 30.

Commission proposals must be approved by a qualified majority by the Council. A Eurogroup meeting is held on October 3 and a European Council on October 20 and 21, during which the proposals shall probably be accepted, after modifications to incorporate more flexibility. They should come into force before the winter.

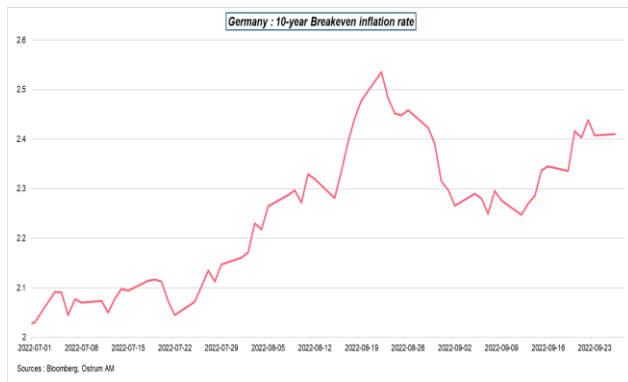
Market impact

Temporary drop in inflation breakeven points

On August 26, the announcement of the forthcoming organization of an emergency EU meeting to deal with the energy crisis resulted in a significant drop in inflation breakevens. The markets anticipated measures likely to calm the sharp rise in electricity prices. In Germany, the 10-year breakeven inflation rate fell from 2.46% on August 26 to 2.25% on September 7. This decrease is however also due to the "hawkish" speech of the central bankers in Jackson Hole, Jerome Powell intervening on the evening of the 26th, determined to raise their rates quickly and sharply

to fight against high inflation.

Inflation breakevens then started to rise again, probably due to the uncertain impact of the EC measures on each country's inflation, the publication of stronger-than-expected US inflation on 13 September (+0.6% over the month of August for the underlying index against 0.3% expected by the consensus) and the further fall in the euro against the dollar which increases the price of imported goods.

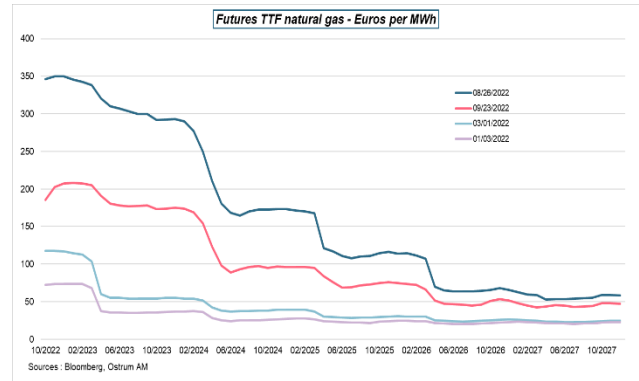


Lower electricity prices in the short term

The multiplication of measures taken by governments to reduce the impact of rising energy prices on households and businesses, combined with the proposals for emergency measures by the EC, currently under discussion, have resulted in a sharp fall in the price of gas and electricity compared to the peak reached on 26 August. However, these prices remain very high compared to the level that prevailed before the conflict (1st chart).

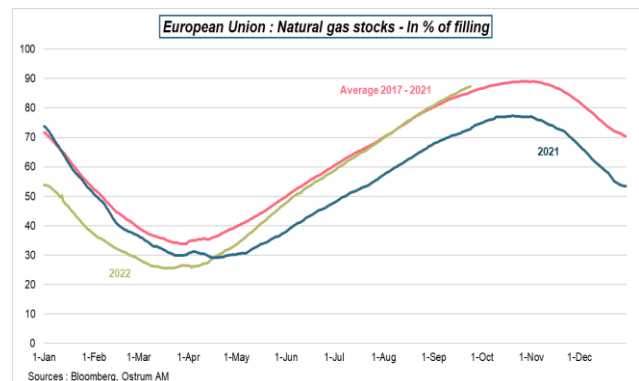
The price of natural gas and electricity will remain high

The risks of new tensions are significant given the drop in temperatures to come from October and the resulting increase in energy consumption. According to future contracts, the price of natural gas is expected to rise to just over 200 euros per MWh in November to remain at this level until March (pink curve). It is certainly much lower than what was expected at the end of last August (dark blue curve). There is also a greater risk of lower deliveries of Russian gas or even of a stoppage with the partial mobilization decreed by V. Putin.



Stocks will not be sufficient in the event of a harsh winter or a stoppage of Russian supplies

In order to secure their supplies as winter approaches, countries have significantly increased their natural gas stocks. The 80% target set by the EU for November 1, 2022 was thus reached at the end of August. It is currently at 87%, slightly above the 2017-2021 average.



This rapid replenishment of stocks was mainly due to a sharp increase in supplies of liquefied natural gas, mainly from the United States, then from Asia. Added to this was a lower demand, particularly from companies that had to reduce their production due to excessively high prices.

However, the situation between countries is contrasted. While France and Germany are approaching 90% storage capacity, the Netherlands and the Baltic countries are still far from it.

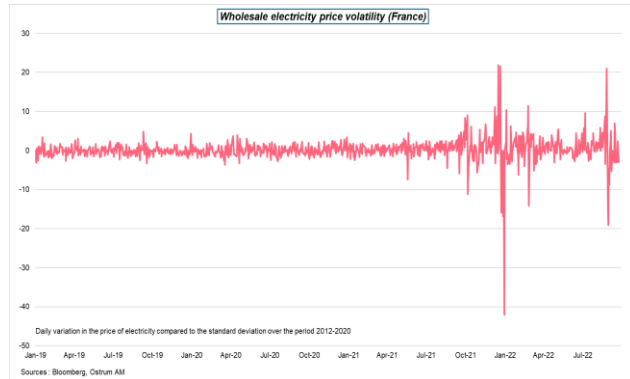
The reconstitution of gas stocks before winter is necessary for the EU but not sufficient in the event of a severe winter or an interruption of Russian natural gas supplies. This is what the markets are anticipating with a natural gas price expected on average at around 180 euros between April and December 2023.

Indeed, the increase in imports via liquefied natural gas seems to have reached its limits. It quickly made it possible to compensate for the lower Russian supplies, especially via

a sharp increase in imports from the United States. Additional flows via gas pipelines from safe countries come up against, in particular, a lack of cross-border infrastructure to bring the gas to the countries that need it most (Germany, Eastern European countries). Building new gas terminals and improving cross-border infrastructure will take time. The maintenance of high gas and electricity prices will therefore not end in this winter but will continue in 2023 and 2024.

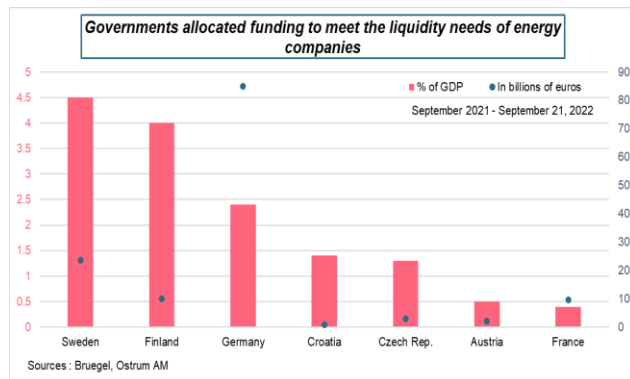
Risk of a liquidity crisis?

Energy suppliers are weakened by high price volatility.



This is particularly true for electricity companies. These public companies generally sell their electricity several years in advance to guarantee a certain price by posting guarantees. The sharp rise in gas and electricity prices generated a very significant increase in the cash needed to guarantee the coverage of future deliveries.

Companies very dependent on Russian gas have thus found themselves in serious difficulty, forcing the States to intervene massively given their strategic role in the country's energy supply. Germany has just nationalized Uniper. Norway and Sweden also intervened massively (to the level of 4.5% and 4% of GDP respectively) via guarantees or loans.



According to the Norwegian company Equinor, margin calls would represent at European level at least 1.5 trillion euros, a figure that the ECB considers excessive (20 to 25 billion

euros according to comments reported to Reuters). Some companies have been very affected, forcing them to leave the derivatives market, which has generated a lack of liquidity on the latter. This in turn can create more volatility and price spikes and affect a larger number of players. The Bank of International Settlements points out that the decline in activity in the US oil derivatives market is mainly related to hedging activity rather than that of speculative positions. This raises fears that some energy end users are withdrawing from hedging activity and absorbing price risks on their balance sheets. This could affect the physical market by threatening the energy security of the countries concerned.

Faced with the emergency, the European Union is preparing measures with the financial authorities to improve the liquidity of companies active on the futures markets, in particular by modifying the rules relating to guarantees and the means of limiting intra-day volatility. Christine Lagarde for her part indicated that she would support liquidity injections from governments to viable energy companies and that the ECB stood ready to provide liquidity to banks if necessary.

Conclusion

Rapid intervention by the European Union to make the actions of States more effective in reducing the energy bill of households and businesses is crucial. Despite everything, this will not prevent the price of gas and therefore of electricity from remaining high in the winter of 2023. The construction of the gas infrastructures necessary to completely compensate for the cessation of Russian imports will indeed take time. In the short term, urgent EU intervention is necessary due to a risk of a liquidity crisis for energy suppliers operating on the futures markets.

Aline Goupil-Raguènes

• **Market review**

Powell promises pain

Market carnage with Fed tightening and UK fiscal easing

The hawkish monetary policy turn reaffirmed at Jackson Hole really materialized this week. The Federal Reserve will assume a sharp slowdown in economic activity and an increase in unemployment to contain inflationary pressures. The SNB (+75bp), the Riksbank (+100bp) also opted for large rate increases. The BoE, for its part, raised policy rates by 50bp but will begin its quantitative tightening in October. The BoJ seems lost in its contradictions between targeting long rates and intervening in the foreign exchange rate. In the emerging world, the SARB is raising its rates, unlike the Turkish Central bank, which has chosen the heterodox approach of easing monetary conditions despite galloping inflation (about 80%).

The monetary tightening by the main central banks obviously weighs more on the stock markets, which plunge by 5%. Long-term bond yields are soaring. The Bund breaches the 2% threshold for the first time since 2011. The T-note is trading around 3.75% like the Gilt which risks indigestion with the revision of the outlook for public debt issuance (£193bn over the coming fiscal year). Spreads are tightening with the rebuilding of risk premia and the restart of protection buying on the new series of iTraxx. The on-the-run crossover index is trading above 630 bps. The fall of the Japanese yen accelerated until the unilateral intervention by the BoJ around 145 against the dollar. This open market operation seems to have stabilized the yen for now. In this troubled context, we would almost forget about the Italian elections to which BTP spreads have paid little attention so far or the deadly escalation announced by Putin which mobilizes 300 thousand additional men to fight in Ukraine whilst agitating the nuclear threat again.

The Fed thus raised rates by 75bp to 3-3.25%. The FOMC decision is accompanied by a revision of the Fed funds rate trajectory including two larger hikes of 75 bp and 50 bp respectively in the fourth quarter. The expected economic impact of monetary tightening amounts to 0.5 pp of GDP growth over 2023 (1.2% against 1.7% forecast in June) due to a rise in the unemployment rate to 4.4%. The Fed's forecasts nevertheless raise a question: with core PCE inflation forecast at 3.1% in the 4th quarter of 2023, will the half-point rise in unemployment be enough to materially change the inflation situation? Prudence in monetary policy arguably implies a protracted restrictive bias. Quantitative tightening will also take over from rate hikes. The T-bill portfolio has started to shrink in line with the target of \$60bn reduction in Treasuries holdings. In contrast, MBS's portfolio cannot be reduced without outright sales. In the UK, the BoE opted for a 50bp rate increase with the slightest possible majority given three votes in favour of a 75bp hike and one

for 25bp. The quantitative tightening will include outright Gilt sales of £10bn per quarter. The reduction in the BoE balance sheet will amount to almost £100 billion over the next 12 months. The fiscal support decided by PM Liz Truss will require bond issuance of up to £193bn. The BoE's macroeconomic forecasts will be reviewed in November. Capping energy prices will dampen consumer price inflation in the near term but transfers to households are a risky bet in the current environment. The SNB also raised its policy rate by 75 bp, under the pretext of inflation but above all it follows from the ECB's monetary tightening. Elsewhere, the BoJ faces the side effects of limitless QE. The collapse of the Japanese yen forces the BoJ to a perilous intervention in the foreign exchange market.

Monetary tightening weighs heavily on asset valuations even before the possible recession or likely geopolitical upheavals linked to Russia's aggression in Ukraine are fully priced in. Bond yields are rising rapidly. The T-note is trading above 3.75% with real rates above 1.35% on 10-year maturities. The 10-year TIPS auction resulted in an unusual issuance premium. The dynamics of the US yield curve have also changed since August. The real yield curve is flattening while the term structure of inflation expectations is steepening again, with the recent drop in oil prices (WTI below \$80) amplifying this trend reversal. At current levels, long TIPS entail a very good hedge against the risk of stagflation. In the euro area, the Bund follows the upturn in Treasury yields hitting an intraday high at 2.10% on Friday. The reach for convexity exposure in an environment of high volatility spurred demand for 30-year bonds so that the 10s30s spread is now negative. Inversion of the euro yield curve may only be a matter of weeks. Sovereign spreads are disconcertingly stable given the risks of inflation, the ongoing energy crisis and the elections in Italy. Italian BTP is trading around 230 pb. The EU's decision to withhold €7.5 billion worth of subsidies to Hungary seemed to be a warning to the future, likely far-right, government of Italy. Credit spreads remain skewed to the upside, but like swap spreads, the adjustment is much less significant now compared with that of equities. Investors may sell liquid assets first. Unsurprisingly, the Nasdaq, down 10% over one month, plunged amid upward pressure on bond yields. Flows are still unfavorable to European equities where only banks seem to benefit from the new interest rate environment. The euro's plunge has softened the valuation adjustment but the June lows have now been breached.

Finally, the dollar has been the only reliable safe haven since the beginning of the year. The greenback rose 2% in a week's time. The euro dropped under the 98c threshold and the sinking yen finally finds some support from the BoJ intervention. Unilateral intervention is not always successful and only highlights the contradictions in Japanese monetary policy.

Axel Botte

Global strategist

● Main market indicators

| G4 Government Bonds | 26-Sep-22 | 1w k (bp) | 1m (bp) | 2022 (bp) |
|------------------------------------|------------------|-------------------|-----------------|------------------|
| EUR Bunds 2y | 1.94% | +33 | +95 | +256 |
| EUR Bunds 10y | 2.08% | +27 | +69 | +225 |
| EUR Bunds 2s10s | 13bp | -6 | -26 | -30 |
| USD Treasuries 2y | 4.21% | +27 | +81 | +348 |
| USD Treasuries 10y | 3.75% | +26 | +71 | +224 |
| USD Treasuries 2s10s | -46.3bp | -1 | -10 | -124 |
| GBP Gilt 10y | 4.07% | +93 | +146 | +310 |
| JPY JGB 10y | 0.25% | -1 | +4 | -8 |
| € Sovereign Spreads (10y) | 26-Sep-22 | 1w k (bp) | 1m (bp) | 2022 (bp) |
| France | 59.36bp | +5 | -2 | +22 |
| Italy | 239.61bp | +12 | +5 | +104 |
| Spain | 117.17bp | +3 | -2 | +43 |
| Inflation Break-evens (10y) | 26-Sep-22 | 1w k (bp) | 1m (bp) | 2022 (bp) |
| EUR 10y Inflation Swap | 2.59% | +3 | -16 | +53 |
| USD 10y Inflation Swap | 2.62% | +3 | -21 | -15 |
| GBP 10y Inflation Swap | 4.26% | -1 | -44 | +8 |
| EUR Credit Indices | 26-Sep-22 | 1w k (bp) | 1m (bp) | 2022 (bp) |
| EUR Corporate Credit OAS | 204bp | +3 | +8 | +109 |
| EUR Agencies OAS | 86bp | +1 | +1 | +37 |
| EUR Securitized - Covered OAS | 105bp | +2 | +1 | +59 |
| EUR Pan-European High Yield OAS | 568bp | +7 | +9 | +250 |
| EUR/USD CDS Indices 5y | 26-Sep-22 | 1w k (bp) | 1m (bp) | 2022 (bp) |
| iTraxx IG | 133bp | +22 | +21 | +85 |
| iTraxx Crossover | 648bp | +95 | +93 | +405 |
| CDX IG | 107bp | +19 | +23 | +58 |
| CDX High Yield | 576bp | +50 | +82 | +283 |
| Emerging Markets | 26-Sep-22 | 1w k (bp) | 1m (bp) | 2022 (bp) |
| JPM EMBI Global Div. Spread | 517bp | +12 | +23 | +149 |
| Currencies | 26-Sep-22 | 1w k (%) | 1m (%) | 2022 (%) |
| EUR/USD | \$0.965 | -3.691 | -3.131 | -15.1 |
| GBP/USD | \$1.086 | -4.995 | -7.527 | -19.7 |
| USD/JPY | JPY 144 | -0.625 | -4.490 | -20.1 |
| Commodity Futures | 26-Sep-22 | -1w k (\$) | -1m (\$) | 2022 (%) |
| Crude Brent | \$86.8 | -\$5.2 | -\$12.2 | 17.54 |
| Gold | \$1 643.0 | -\$32.9 | -\$95.2 | -10.18 |
| Equity Market Indices | 26-Sep-22 | -1w k (%) | -1m (%) | 2022 (%) |
| S&P 500 | 3 677 | -5.72 | -9.38 | -22.9 |
| EuroStoxx 50 | 3 351 | -4.24 | -7.01 | -22.0 |
| CAC 40 | 5 794 | -4.42 | -7.66 | -19.0 |
| Nikkei 225 | 26 432 | -5.18 | -7.72 | -8.2 |
| Shanghai Composite | 3 051 | -2.07 | -5.72 | -16.2 |
| VIX - Implied Volatility Index | 31.72 | 23.14 | 24.10 | 84.2 |

Source: Bloomberg, Ostrum AM

Additional notes

Ostrum Asset Management

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