MyStratWeekly
Market views and strategy

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N° 092 // **November 28, 2022**

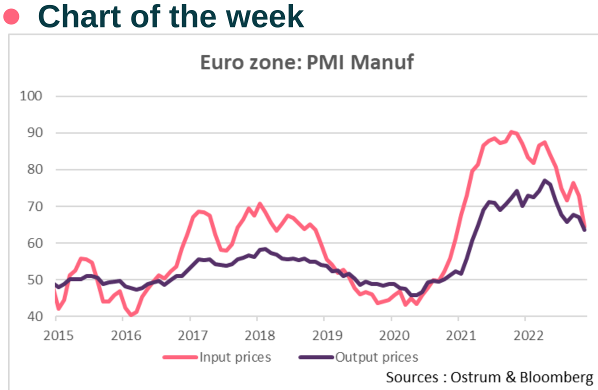
Topic of the week: Risks associated with reduced liquidity in the US Treasury bond market

- **Liquidity in the US Treasury market fell in 2022 to return to lows since March 2020;**
- **The increase in volatility, linked to uncertainty about the Fed's monetary policy, and structural reasons are at the root of this;**
- **The growing presence of hedge funds and high-frequency trading firms makes the Treasury market vulnerable in times of stress, such as March 2020 when the Fed was forced to step in;**
- **Necessary reforms are under discussion but very few have been taken, to prevent the market from amplifying shocks instead of absorbing them, which constitutes a threat to global financial stability.**

Market review: Mean-reversion

- **Risky assets up in limited volumes**
- **Rebalancing of portfolios and short covering**
- **Yield curve inversion persists**
- **Central banks have not said their last word**

Chart of the week



Interesting detail in manufacturing PMI last week. The input price component slowed down very quickly (64.4 when we were at 90, 12 months earlier) while the output price component held up better (63.7 against 76 months ago).

This means that we are beginning to see a decrease in inflationary pressures.

This is positive for business margins, the cost structure is deteriorating less quickly while sales price increases are still sustained.

Figure of the week

1

Source : Ostrum AM

German consumption rose by 1.0% in the third quarter. A very resilient figure that shows that supportive policies are effective.

Stéphane Déo
Head of markets strategy
stephane.deo@ostrum.com

Axel Botte
Global strategist
axel.botte@ostrum.com

Zouhoure Bousbih
Emerging countries strategist
zouhoure.bousbih@ostrum.com

Aline Goupil- Raguénès
Developed countries strategist
aline.goupil-raguenes@ostrum.com

Topic of the week

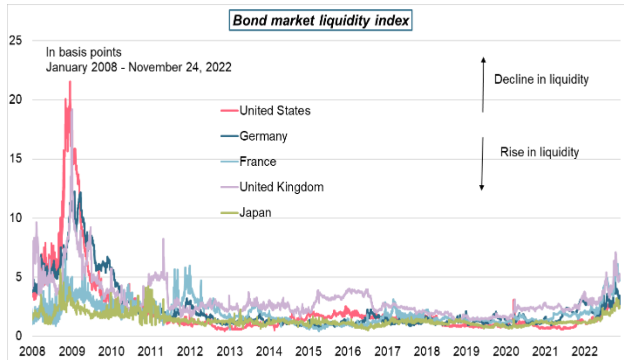
Risks associated with reduced liquidity in the US Treasury bond market

Liquidity in the US Treasury bond market decreased in 2022 to return to lows since March 2020. This is the result of uncertainty related to the Federal Reserve's monetary policy and structural reasons. While the size of the market has increased almost fivefold since 2008, the growing presence of hedge funds and high-frequency trading firms makes the Treasury market vulnerable to stress, as happened in March 2020 when the Fed was forced to step in. Reforms are under discussion but very little has been taken to prevent the market from amplifying shocks instead of absorbing them, which constitutes a threat to global financial stability.

Decline in liquidity

Major sovereign bond markets are usually very liquid and usually more liquid than other markets in times of stress. This is essential in order to allow participants to buy and sell securities easily without causing significant price movements.

However, since the beginning of the year, the liquidity of the main bond markets has been decreasing. This can be seen in the graph below representing the Bloomberg liquidity indices. It represents the average absolute deviation of security returns from the estimated curve. A rise in the index signals less liquidity.

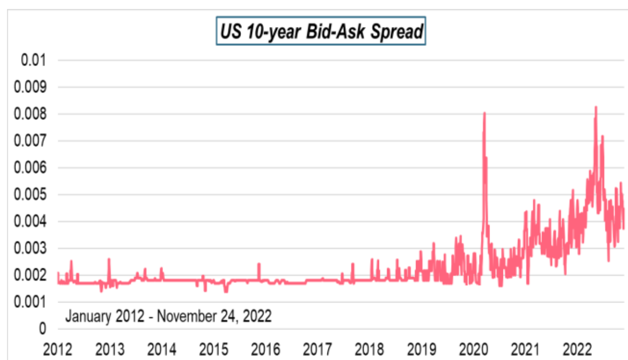


Sources : Bloomberg, Ostrum AM

We are certainly very far from the levels that prevailed in December 2008, during the global financial crisis, but we return in the United States to the liquidity levels of March 2020, at the start of the Covid-19 crisis. In Germany and France, liquidity measured by this index has been at its lowest since 2012, in the United Kingdom and in Japan since 2011.

In this paper, we will focus on the US bond market given its importance. It indeed occupies a special place given that it is the largest in the world ($23.7 trillion), the most liquid, that it serves as a reference for many assets at the global level and that central banks use it in the management of their foreign exchange reserves.

The drop in liquidity is reflected in particular in the increase in the bid-ask spread, which measures the difference between the maximum price when buying a security and the minimum price when selling. This spread even occasionally exceeded, in May 2022, the peak reached in March 2020, according to the index below.



Sources : Bloomberg, Ostrum AM

This drop in liquidity has been accompanied by a decrease in the depth of the bond market.

Why is it worrying

Sovereign bond markets, especially the larger ones, are essential to financial stability. They play a key role in the financing of States, they serve as a safe haven in the event of risk aversion, they are used as a reference in the price of other assets and in particular the riskiest (equities, corporate bonds), they serve as collateral for a large number of trades (securitisations, etc.) and are also necessary for compliance with the prudential ratios of certain financial institutions (such as banks).

Added to this is their role in monetary policy through massive purchases by central banks to ease financial conditions during the 2008/2009 crisis and, more recently, during the Covid-19 crisis.

Given the importance of bond markets for financial stability, it is necessary that there is sufficient liquidity to allow them to function properly, even in the event of a shock.

In the United States, the sudden reduction in liquidity in March 2020 had forced the Fed to intervene urgently by rapidly lowering its key rates, bringing them back to 0%, by launching various liquidity facilities and by resuming its massive purchases of government bonds. More recently, in the United Kingdom, the Bank of England was also forced to intervene in the bond market following the risk to financial stability posed by pension funds.

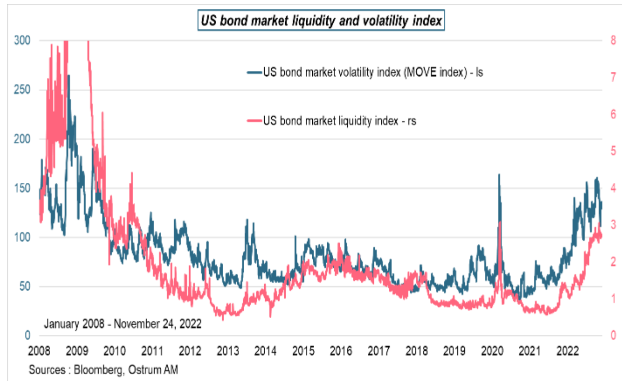
International institutions and central banks are closely monitoring the risks linked to the decline in liquidity on the bond markets. This is thus mentioned in the latest financial stability reports from the IMF, the ECB, the Fed and by the Financial Stability Committee.

For the moment, the decline in liquidity observed since the beginning of the year has not created any dysfunction in the American market. Daily trading volumes remain at high levels: around $640 billion. This is not reassuring, however, as a recent paper from the New York Fed points out[1]. It is indeed usual to observe the maintenance of a high level of trades in periods of low liquidity. This has notably characterized periods around market dysfunctions such as during the near bankruptcy of LTCM in 1998, the global financial crisis of 2008/2009, the rally of October 15, 2014 and the shock suffered in March 2020.

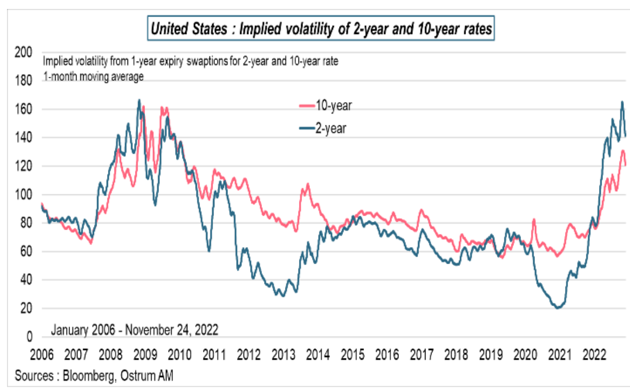
The causes of reduced liquidity

Rise in volatility linked to monetary policy uncertainty

One of the reasons for the drop in liquidity comes from the sharp increase in volatility in the bond markets since the start of the year. As we can see in the following chart in the United States, the decline in liquidity and the increase in volatility, measured by the MOVE index, moved together. The indices have returned to the levels of March 2020. They remain much lower than those which prevailed in 2008/2009.



By maturity, we observe that volatility has increased more on 2-year bonds compared to 10-year bonds, as shown in the following graph. It represents the implied volatility of swaptions on 2-year and 10-year rates in 1-year period. The implied volatility of the 2-year rate returned to the highs reached in 2008/2009.



The greater volatility on the 2-year rate reflects the increase in uncertainty linked to monetary policy. Inflation, initially considered transitory by the central banks and the Fed in particular, surprised by its persistence and magnitude (7.7% in October after 9.1% in June). The Fed therefore had to tighten its monetary policy much more aggressively than expected by the markets, to quickly bring the Fed funds rate back into restrictive territory, with a total of 300 basis points of rate hikes between March and November 2022. 2-year rates, reflecting investors' monetary policy expectations, thus experienced greater volatility than the 10-year rate due

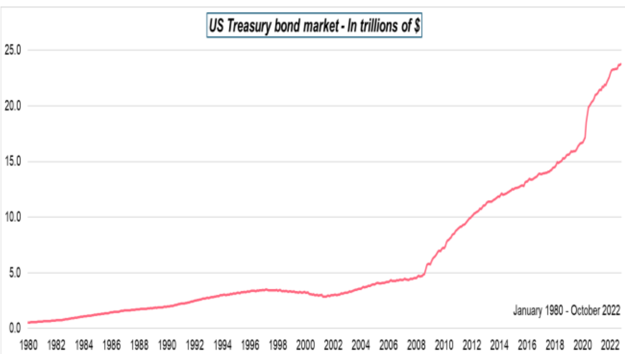
[1] https://libertystreeteconomics.newyorkfed.org/2022/11/how-liquid-has-the-treasury-market-been-in-2022/

to the increase in uncertainty about the monetary policy. The Fed also began to reduce the size of its balance sheet from June, thereby removing support from the bond market and contributing to the drop in liquidity. In a context of high volatility, it is normal that transaction costs have increased and therefore that liquidity has decreased.

Structural reasons are at work

Very sharp increase in the size of the US bond market

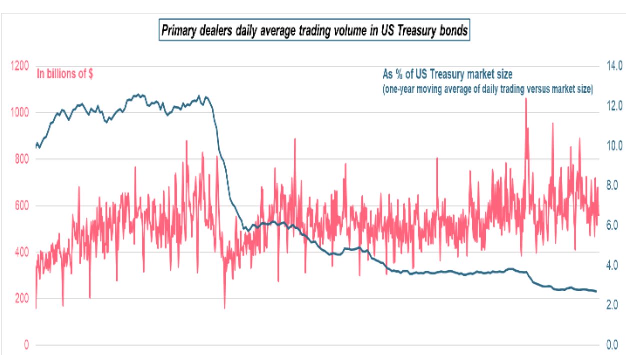
In line with the sharp increase in public debt, the size of the US Treasury bond market rose sharply. It has grown from $5 trillion in 2008 to almost $24 trillion today (23.7). This follows in particular the measures taken by the government to cushion the shock on the economy linked to the financial crisis of 2008/2009 and, more recently, the vast support plans adopted by Donald Trump and then Joe Biden following the Covid-19 crisis.



Sources : Datastream, Ostrum AM

Marked reduction in the presence of primary dealers…

At the same time, the primary dealers, the most important negotiators on the US Treasury market (the largest banks directly buying the bonds issued by the Treasury), played a much more limited role on the Treasury market.



Sources : Bloomberg, Datastream, Ostrum AM

The volume of daily trading carried out by the primary dealers on US Treasury bonds remained broadly unchanged (moving in the range of $400 to $800 billion, excluding one-off peak) while the size of the market has almost quintupled since 2008. This led to a sharp drop in the share of primary dealers on the US Treasury bond market. This has fallen from 12.2% in June 2008 to 2.7% in 2022. This is largely due to the tightening of regulations following the 2008 crisis.

… following the tightening of regulations

After the 2008 crisis, regulations tightened in order to strengthen the financial system. Banks have since been required to hold more capital to cover potential bond losses. This has made Treasury holding and intermediation more expensive, which has resulted in a decline in their presence in this market.

Non-banks have taken over

Non-bank institutions have taken over from banks in market arbitrage and liquidity provision. The share of hedge funds and, more recently, high-frequency trading firms in the US bond market has increased markedly. However, these establishments are much less regulated than banks and behave differently.

Compared to other asset managers, hedge funds incorporate much higher leverage and less liquid strategies. This accentuated the volatility and the drop in liquidity on the bond market in March 2020. The sharp increase in uncertainty following the unprecedented shock of the Covid-19 pandemic generated a movement of panic on the markets and in particular the US Treasury bond market. Instead of a classic flight to quality in times of high risk aversion, investors chased liquidity to cover their needs by selling highly liquid assets like Treasurys. This resulted in a sharp rise in bond yields, forcing hedge funds to unwind their positions, by selling their bonds, to meet margin calls. This accentuated pressure on interest rates. Open-ended funds also sold their bonds to meet investor redemption demands. In times of stress, the abrupt withdrawal of high-frequency trading companies also contributes to the drop in liquidity on the bond market.

All of these factors contributed to reducing liquidity in the US Treasury market in times of stress, which amplified market volatility and forced the Fed to intervene urgently and massively.

Reforms needed

Given the risks to financial stability, reforms are needed to improve the functioning of the US bond market. It is a question of making it more resilient to allow it to absorb shocks and not to amplify them. Many reforms have been under discussion since 2021 and very few have been taken. Here are the main ones.

The US Treasury plans to buy the less liquid bonds

The US Treasury has launched a survey of market participants regarding their opinion on a possible repurchase of the least liquid bonds. These are bonds that have been issued for some time and are circulating with greater difficulty in the market due to less demand. Newly issued bonds offer a more attractive coupon rate compared to those in circulation given the rise in rates that took place following the sharp monetary tightening operated by the Fed.

Purchases of less liquid bonds (off-the-runs) would allow market participants to trade more newly issued bonds and thus increase liquidity. These purchases of less liquid bonds will have to be offset by an equivalent debt issue by the Treasury. For the moment no decision has been taken yet.

Change the additional leverage ratio rule for large banks

The revision of the prudential rules concerning the capital to be held by the banks to cover potential losses on the Treasury bonds held, and therefore without risk, would allow these establishments to be more present on the bond market and to better fulfill their role of liquidity provider. In April 2020, the Fed suspended the supplementary leverage ratio (SLR) for a period of one year in order to increase market liquidity. During a speech delivered on September 30, Michelle Bowman, Governor of the Fed, hinted at a revision of this ratio for the largest establishments.

Increase transparency

On November 17, Nellie Liang, the Treasury's Undersecretary for Domestic Finance, offered to make more US Treasury market transaction data public. This would be done daily for the most traded bonds (on-the-runs) from the 1st quarter of 2023. Progressively, the publication would be extended to other bonds and the frequency increased (every hour). The aim is to improve the resilience and transparency of the market. This would increase investor confidence in times of stress and encourage them to stay in the market. The authorities would also be better able to judge market conditions and better able to intervene quickly in the event of a malfunction.

Develop centralized clearing on Treasury bonds

The regulator of the American markets, the SEC (Securities and Exchange Commission), proposes to increase the centralized clearing of Treasury bonds. The transactions would then be sent to a clearing house which would act as an intermediary between the buyer and the seller. The counterparties would provide liquidity in order to guarantee the execution of the transactions in the event of failure of one of the two. This would increase the resilience of the markets by providing additional liquidity in times of stress.

Developing “all to all trading”

Among the avenues for improvement, the authorities are studying the possibility of expanding “all to all trading” allowing any participant in the US Treasury market to carry out trades with any other participant. This would increase liquidity by increasing the number and diversity of counterparties without having to rely solely on large banks. It is a recommended solution by PIMCO.

Strengthen the regulation of non-banking institutions operating on the Treasury market

The SEC proposes that participants in the US Treasury bond market, for trades greater than $25 billion per month, be registered as "dealers" in the same way as banks. This would force them to be more transparent in terms of transactions, positions and capital to be held. This proposal would notably concern certain high-frequency trading firms and certain hedge funds. The latter are strongly opposed to it, arguing that such a reform would threaten the viability of certain activities.

Conclusion

The drop in liquidity on the US bond market, at its lowest since March 2020, and the lack of reforms to improve its functioning, make it vulnerable to a new shock. Given the risks to financial stability posed by a liquidity crisis in this market, the Fed would once again be forced to intervene urgently, via massive bond purchases. This is likely to occur when the latter has not completed its rate hikes and has pledged to maintain a restrictive monetary policy as long as inflation does not converge durably towards the 2% target.

Aline Goupil-Raguénès

Market review

Mean-reversion

The rebalancing of portfolios towards the end of the year is benefiting risky assets and long rates… before a call to order from central banks?

The Thanksgiving week is often the time for portfolio readjustments, which, given the narrow trading volumes, may induce significant price movements across financial markets. Profit-taking was the name of the game. This involved indeed buying back underweighted exposures in risky assets (equities, credit, long-term bonds, etc.) and reducing the bullish bets on the US dollar to the benefit of a broad range of currencies, while staying away from the cryptocurrency drama. Thus, the rebound in equity markets since the October low point extended to 12% on the S&P 500 on the eve of Thanksgiving. Implied or realized volatility fell considerably so that the VIX index returns towards 20%. The recession risk is receding according to European data releases, but the inversion of the yield curves seems to herald a 'pivot' by central banks, which remains perplexing due to the persistence of inflationary. Admittedly, oil is falling with the resurgence of covid in China and European procrastination over mechanism to cap Russian oil prices due to take effect on December 6. The US 10-year yield plunged back around 3.70%, further accentuating the inversion of the curve on the 2s10s to nearly -80 bp. The euro area is not left out, so that only the Schatz offers a return of more than 2%. The euro rose to the $1.04 area while cable (Sterling-dollar exchange rate) is creeping higher to $1.21.

The latest data releases are perplexing as to the risk of a recession that has been consensus for months. The IFO has stabilized like the INSEE confidence index. Fiscal support plans follow one another in France, Italy and Germany, where the energy-linked handouts could total €83 billion next year. Its financing will go through a levy on excess profits of electricity producers, including renewable energy companies. The tax threshold for excess profits set at €130/MWh in solar or wind power seems too low not to hinder the energy transition (the European Commission recommended €180/MWh). German GDP growth for 3Q 2022 came out at 0.4%qoq with a stronger than expected contribution from consumption and corporate investment spending. At the same time, Beijing is in lockdown, which casts doubt on a resumption of activity in China. The harmful zero-covid policy cannot be compensated by more bank credit. However, this is the option chosen by the PBoC, which announces a reduction in the reserve requirement ratio after several measures aimed at stabilizing the real estate sector. The Chinese recovery is moreover a double-edged sword given the immediate effect of recovery expectations on commodity prices (copper is trading above $8k per ton). In the United States, the poor November PMI readings are invalidated by the upside surprises on new home sales and new orders of capital goods. FOMC minutes confirmed a shift in monetary tightening, pointing to a 50bp hike in December.

The fall in bond yields and the inversion of yield curves appear protracted. The T-note yield is trading about 3.70% with a 2s10s spread close to -80bp. Short covering plays a major role in this bond rally, all the more so that market depth last week was limited. Inflation likely down further in November to about 7.5% may be supportive of US bonds until the next FOMC and the quarterly update of the Fed funds dot chart. As in the past summer, the Fed faces an early easing in financial conditions. More is at stake for the ECB, which faces persistent inflation risk due to fiscal choices and wage pressures. The IG Metall agreement is for an 8.5% wage increase over two years. Isabel Schnabel suggested that expansionary fiscal policy will require tighter monetary policy. The inversion of the curve (-22 bp) will be difficult to maintain with a deposit rate at 2% from December and probably 3% in the spring. The Bund is trading around 1.95%. The downward trend in risk-free rates has benefitted euro area sovereign spreads. The 10-year OAT spread is trading at 44 bp, Iberian bonds are under 100 bp and Italy is around 190 bp. In the United Kingdom, the BoE will sell £12 billion worth of gilts bought in emergency in October from November 29. These transactions come on top of QT sales (£6 Bn in 2022). UK gilt yields are now trading close to 3%.

The improvement continues in credit markets thanks to the reduction in fund outflows and the rebalancing of portfolios in view of the end of the year. Hedges on CDS indices are unwound, bringing the IG below 90 bp and the Crossover below 450 bp. The primary market picked up between the end of the quarterly reporting period and the upcoming holiday season. Three-quarters of new issues in November (totaling €70 Bn) tightened thereafter. Spreads on European credit stand at around 110bp against swap rates. The tightening is less clear on agency and supranational debt given the pause in the narrowing trend on swap spreads. It is indeed too early to rule out the risk of end-of-year tensions on the availability of collateral. High yield is drawing investor interest while new issuance remains close to nil. Spreads are down around 20 bps over the past week (528 bps).

The greenback is prone to profit taking on the grounds of slower Fed tightening ahead. However, any reversal of the Nasdaq index immediately triggers a bid on the dollar. Pound sterling continued to rally towards $1.21 after the October Krach to a $1.035 low.

Axel Botte
Global strategist

Main market indicators

G4 Government Bonds	28-Nov-22	1wk (bp)	1m (bp)	2022 (bp)
EUR Bunds 2y	2.18%	+8	+24	+280
EUR Bunds 10y	1.98%	-1	-12	+216
EUR Bunds 2s10s	-20.6bp	-9	-36	-64
USD Treasuries 2y	4.45%	-10	+4	+372
USD Treasuries 10y	3.66%	-16	-35	+215
USD Treasuries 2s10s	-79.4bp	-6	-38	-157
GBP Gilt 10y	3.11%	-7	-36	+214
JPY JGB 10y	0.25%	+1	+20	+9
€ Sovereign Spreads (10y)	**28-Nov-22**	**1wk (bp)**	**1m (bp)**	**2022 (bp)**
France	46.89bp	0	-7	+9
Italy	192.48bp	-2	-23	+57
Spain	99.36bp	0	-9	+25
Inflation Break-evens (10y)	**28-Nov-22**	**1wk (bp)**	**1m (bp)**	**2022 (bp)**
EUR 10y Inflation Swap	2.6%	+5	-3	+53
USD 10y Inflation Swap	2.58%	-2	-17	-19
GBP 10y Inflation Swap	4.05%	-7	-20	-13
EUR Credit Indices	**28-Nov-22**	**1wk (bp)**	**1m (bp)**	**2022 (bp)**
EUR Corporate Credit OAS	182bp	-10	-46	+87
EUR Agencies OAS	79bp	-2	-10	+30
EUR Securitized - Covered OAS	85bp	-3	-12	+39
EUR Pan-European High Yield OAS	520bp	-31	-111	+202
EUR/USD CDS Indices 5y	**28-Nov-22**	**1wk (bp)**	**1m (bp)**	**2022 (bp)**
iTraxx IG	92bp	-3	-20	+44
iTraxx Crossover	466bp	-9	-81	+223
CDX IG	80bp	-2	-10	+30
CDX High Yield	470bp	-12	-36	+177
Emerging Markets	**28-Nov-22**	**1wk (bp)**	**1m (bp)**	**2022 (bp)**
JPM EMBI Global Div. Spread	480bp	-8	-83	+111
Currencies	**28-Nov-22**	**1wk (%)**	**1m (%)**	**2022 (%)**
EUR/USD	$1.047	2.177	5.018	-8.0
GBP/USD	$1.209	2.216	4.047	-10.7
USD/JPY	JPY 138	2.695	6.640	-16.9
Commodity Futures	**28-Nov-22**	**-1wk ($)**	**-1m ($)**	**2022 (%)**
Crude Brent	$81.0	-$6.4	-$12.8	11.17
Gold	$1 753.9	$15.8	$109.0	-4.12
Equity Market Indices	**28-Nov-22**	**-1wk (%)**	**-1m (%)**	**2022 (%)**
S&P 500	4 026	2.02	3.21	-15.5
EuroStoxx 50	3 931	0.56	8.81	-8.5
CAC 40	6 653	0.28	6.05	-7.0
Nikkei 225	28 163	0.94	3.90	-2.2
Shanghai Composite	3 079	-0.21	5.58	-15.4
VIX - Implied Volatility Index	22.20	-3.98	-13.79	28.9

Source: Bloomberg, Ostrum AM

Additional notes

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