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ECONOMIC RESEARCH



BNP PARIBAS

The bank
for a changing
world

Headline inflation, after dropping in 2023, would stabilise in 2024, but stay above the ECB's 2% target, before declining again in 2025, when it would reach the ECB's 2% inflation target in the second half of that year (chart 2). Core inflation would remain above this target for the entire forecast horizon, which runs until the end of 2025. Forecasting inflation several years into the future is a difficult task. A Bundesbank research paper of 2018⁵ has shown that for the euro area, consensus forecasts of inflation are informative up to a horizon of 3 to 5 quarters. The authors nevertheless argue that *"despite what our results say, it can make sense to produce macroeconomic projections for three years ahead, as the Eurosystem does."* However, over longer horizons *"the projections should be regarded less as forecasts and more as scenario analyses which shed light on the interrelationships influencing economic developments."* This point seems very relevant in the current environment, where inflation is the result of multiple supply and demand shocks that make it very challenging to assess the pass-through of these shocks but also to assess how fast it will react to monetary policy tightening and an economic downturn. It will be interesting to see how the governing council will strike a balance between reacting to inflation data, once they have started to decline, or focusing on the ECB's medium-term inflation projections in setting its policy. At a time that forecasting inflation is more difficult than ever, having good forecasts is more important than ever when they are a key input in determining the appropriate level of monetary restraint.

William De Vijlder

2022. In addition, "new fiscal measures decided since the September 2022 projections, most of which aim at reducing energy price increases in 2023, dampen the upward revision to inflation in 2023, but contribute significantly to the upward revision in 2024 as many of the measures expire."

5. Jörg Breitung and Malte Knüppel, The trouble with predictions, Deutsche Bundesbank research brief, April 2018.

ECB PROJECTION OF EUROZONE HICP

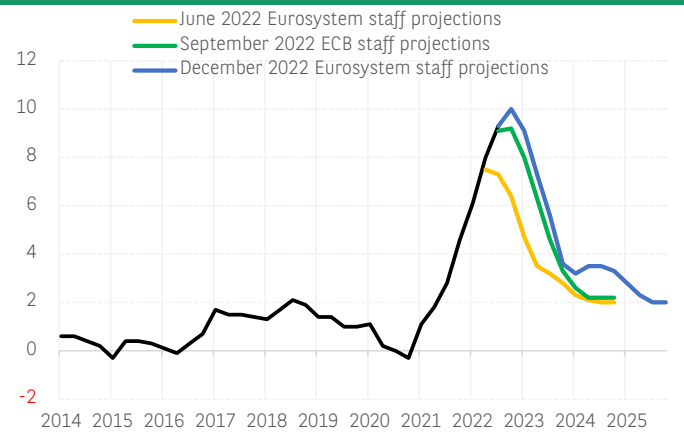


CHART 2

SOURCE: EUROSTAT, ECB, BNP PARIBAS



MARKETS OVERVIEW

OVERVIEW

Week 9-12-22 to 16-12-22

| | | | |
|--------------------|-------|---------|----------|
| ↘ CAC 40 | 6 678 | ▶ 6 453 | -3.4 % |
| ↘ S&P 500 | 3 934 | ▶ 3 852 | -2.1 % |
| ↘ Volatility (VIX) | 22.8 | ▶ 22.6 | -0.2 pb |
| ↗ Euribor 3M (%) | 2.01 | ▶ 2.05 | +4.2 bp |
| ↗ Libor \$ 3M (%) | 4.73 | ▶ 4.75 | +1.3 bp |
| ↗ OAT 10y (%) | 2.39 | ▶ 2.68 | +29.4 bp |
| ↗ Bund 10y (%) | 1.93 | ▶ 2.16 | +23.4 bp |
| ↘ US Tr. 10y (%) | 3.57 | ▶ 3.48 | -8.5 bp |
| ↗ Euro vs dollar | 1.05 | ▶ 1.06 | +0.7 % |
| ↘ Gold (ounce, \$) | 1 798 | ▶ 1 790 | -0.5 % |
| ↗ Oil (Brent, \$) | 76.4 | ▶ 79.2 | +3.6 % |

Interest Rates

| | | | |
|-------------|-------|----------------|----------------|
| € ECB | 2.00 | 2.00 at 02/11 | 0.00 at 03/01 |
| Eonia | -0.51 | -0.51 at 03/01 | -0.51 at 03/01 |
| Euribor 3M | 2.05 | 2.08 at 14/12 | -0.58 at 05/01 |
| Euribor 12M | 2.99 | 2.99 at 16/12 | -0.50 at 05/01 |
| \$ FED | 4.50 | 4.50 at 15/12 | 0.25 at 03/01 |
| Libor 3M | 4.75 | 4.78 at 30/11 | 0.21 at 03/01 |
| Libor 12M | 5.48 | 5.67 at 04/11 | 0.58 at 03/01 |
| £ BoE | 3.50 | 3.50 at 15/12 | 0.25 at 03/01 |
| Libor 3M | 3.78 | 3.82 at 13/12 | 0.26 at 03/01 |
| Libor 12M | 0.81 | 0.81 at 03/01 | 0.81 at 03/01 |

At 16-12-22

MONEY & BOND MARKETS

| Yield (%) | highest 22 | lowest 22 | |
|--------------|------------|---------------|----------------|
| € AVG 5-7y | 2.64 | 2.79 at 28/09 | -0.04 at 03/01 |
| Bund 2y | 2.35 | 2.35 at 16/12 | -0.83 at 04/03 |
| Bund 10y | 2.16 | 2.44 at 21/10 | -0.14 at 24/01 |
| OAT 10y | 2.68 | 3.00 at 21/10 | 0.15 at 04/01 |
| Corp. BBB | 4.39 | 5.14 at 21/10 | 0.90 at 05/01 |
| \$ Treas. 2y | 4.30 | 4.78 at 07/11 | 0.70 at 04/01 |
| Treas. 10y | 3.48 | 4.23 at 24/10 | 1.63 at 03/01 |
| High Yield | 8.71 | 9.97 at 13/10 | 5.07 at 03/01 |
| £ gilt. 2y | 3.55 | 4.59 at 27/09 | 0.69 at 03/01 |
| gilt. 10y | 3.33 | 4.50 at 27/09 | 0.97 at 03/01 |

At 16-12-22

EXCHANGE RATES

| 1€ = | highest 22 | lowest 22 | 2022 |
|------|------------|-----------------|--------|
| USD | 1.06 | 0.96 at 10/02 | -6.7% |
| GBP | 0.87 | 0.90 at 28/09 | +4.1% |
| CHF | 0.99 | 1.06 at 10/02 | -4.5% |
| JPY | 145.08 | 147.34 at 26/10 | +10.8% |
| AUD | 1.59 | 1.62 at 04/02 | +1.6% |
| CNY | 7.40 | 7.49 at 28/11 | +2.1% |
| BRL | 5.61 | 6.44 at 06/01 | -11.5% |
| RUB | 68.79 | 164.76 at 07/03 | -19.4% |
| INR | 87.97 | 88.14 at 15/12 | +4.1% |

At 16-12-22

Change

COMMODITIES

| Spot price, \$ | highest 22 | lowest 22 | 2022 | 2022(€) |
|----------------|------------|-----------------|----------------|---------------|
| Oil, Brent | 79.2 | 128.2 at 08/03 | 76.3 at 08/12 | +1.0% +8.2% |
| Gold (ounce) | 1 790 | 2 056 at 08/03 | 1 628 at 03/11 | -1.8% +5.2% |
| Metals, LME | 3 915 | 5 506 at 07/03 | 3 453 at 27/09 | -13.0% -6.8% |
| Copper (ton) | 8 234 | 10 702 at 04/03 | 7 160 at 14/07 | -15.5% -9.4% |
| wheat (ton) | 271 | 4.7 at 17/05 | 254 at 06/12 | +14.1% +22.2% |
| Corn (ton) | 253 | 3.2 at 28/06 | 226 at 03/01 | +1.1% +18.8% |

At 16-12-22

Change

EQUITY INDICES

| Index | highest 22 | lowest 22 | 2022 | Year 2022 to 16-12, € |
|----------------------|------------|-----------------|-----------------|-----------------------|
| World | | | | |
| MSCI World | 2 606 | 3 248 at 04/01 | 2 368 at 12/10 | -19.4% |
| North America | | | | |
| S&P500 | 3 852 | 4 797 at 03/01 | 3 577 at 12/10 | -19.2% |
| Europe | | | | |
| EuroStoxx50 | 3 804 | 4 392 at 05/01 | 3 279 at 29/09 | -11.5% |
| CAC 40 | 6 453 | 7 376 at 05/01 | 5 677 at 29/09 | -1.0% |
| DAX 30 | 13 893 | 16 272 at 05/01 | 11 976 at 29/09 | -12.5% |
| IBEX 35 | 8 113 | 8 934 at 27/05 | 7 261 at 12/10 | -0.7% |
| FTSE100 | 7 332 | 7 672 at 10/02 | 6 826 at 12/10 | -0.1% |
| Asia | | | | |
| MSCI, loc. | 1 096 | 1 165 at 05/01 | 1 012 at 30/09 | -0.4% |
| Nikkei | 27 527 | 29 332 at 05/01 | 24 718 at 09/03 | -4.4% |
| Emerging | | | | |
| MSCI Emerging (\$) | 957 | 1 267 at 12/01 | 843 at 24/10 | -2.2% |
| China | 64 | 86 at 20/01 | 47 at 31/10 | -22.7% |
| India | 778 | 891 at 13/01 | 699 at 17/06 | +2.7% |
| Brazil | 1 374 | 2 003 at 04/04 | 1 311 at 14/07 | -9.3% |

At 16-12-22

Change

PERFORMANCE BY SECTOR (Eurostoxx50 & S&P500)

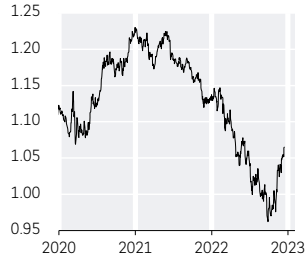
| Year 2022 to 16-12, \$ | Year 2022 to 16-12, € |
|------------------------|-----------------------|
| Oil & Gas | +60.4% |
| Commodities | +12.0% |
| Insurance | +11.4% |
| Banks | +4.7% |
| Health | +2.8% |
| Food industry | +0.2% |
| Utilities | -3.6% |
| Media | -5.6% |
| Index | -8.8% |
| Travel & leisure | -11.2% |
| Chemical | -12.5% |
| Telecoms | -13.7% |
| Car | -14.7% |
| Consumption Goods | -17.5% |
| Industry | -17.7% |
| Construction | -25.5% |
| Technology | -28.6% |
| Retail | -36.6% |
| Real Estate | -49.4% |

SOURCE: REFINITIV, BNP PARIBAS,



MARKETS OVERVIEW

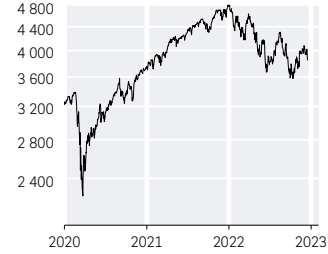
EURO-DOLLAR



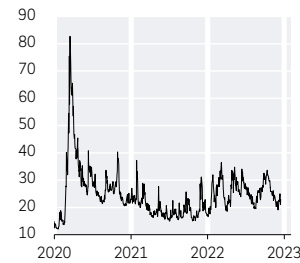
EUROSTOXX50



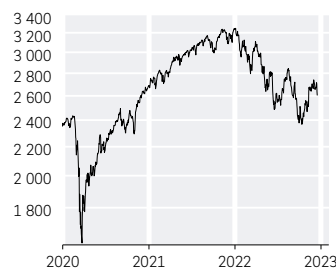
S&P500



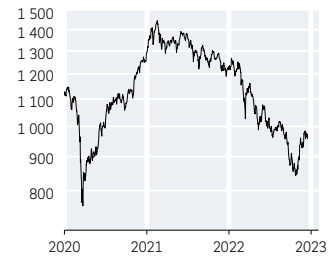
VOLATILITY (VIX, S&P500)



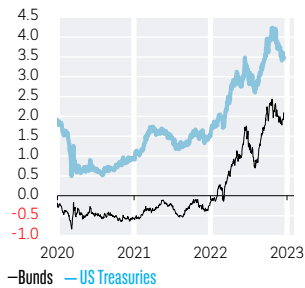
MSCI WORLD (USD)



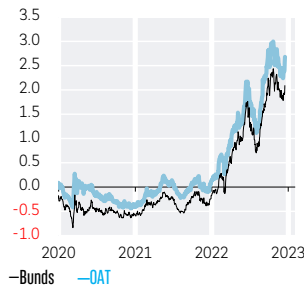
MSCI EMERGING (USD)



10Y BOND YIELD, TREASURIES VS BUND



10Y BOND YIELD

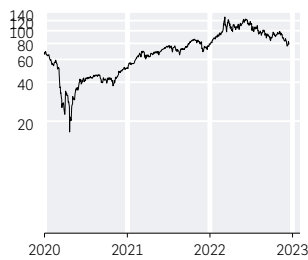


10Y BOND YIELD & SPREADS

Year 2022 to 16-12

| | | |
|-------|-------------|--------|
| 4.74% | Greece | 257 bp |
| 4.18% | Italy | 202 bp |
| 3.24% | Spain | 108 bp |
| 3.06% | Portugal | 89 bp |
| 2.80% | Austria | 63 bp |
| 2.79% | Belgium | 62 bp |
| 2.76% | Finland | 59 bp |
| 2.68% | France | 52 bp |
| 2.66% | Ireland | 49 bp |
| 2.49% | Netherlands | 32 bp |
| 2.16% | Germany | |

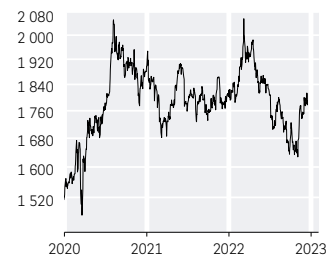
OIL (BRENT, USD)



METALS (LMEX, USD)



GOLD (OUNCE, USD)



SOURCE: REFINITIV, BNP PARIBAS



ECONOMIC PULSE

JAPAN: CONSUMER CONFIDENCE PLUNGES, THE TANKAN EDGES HIGHER

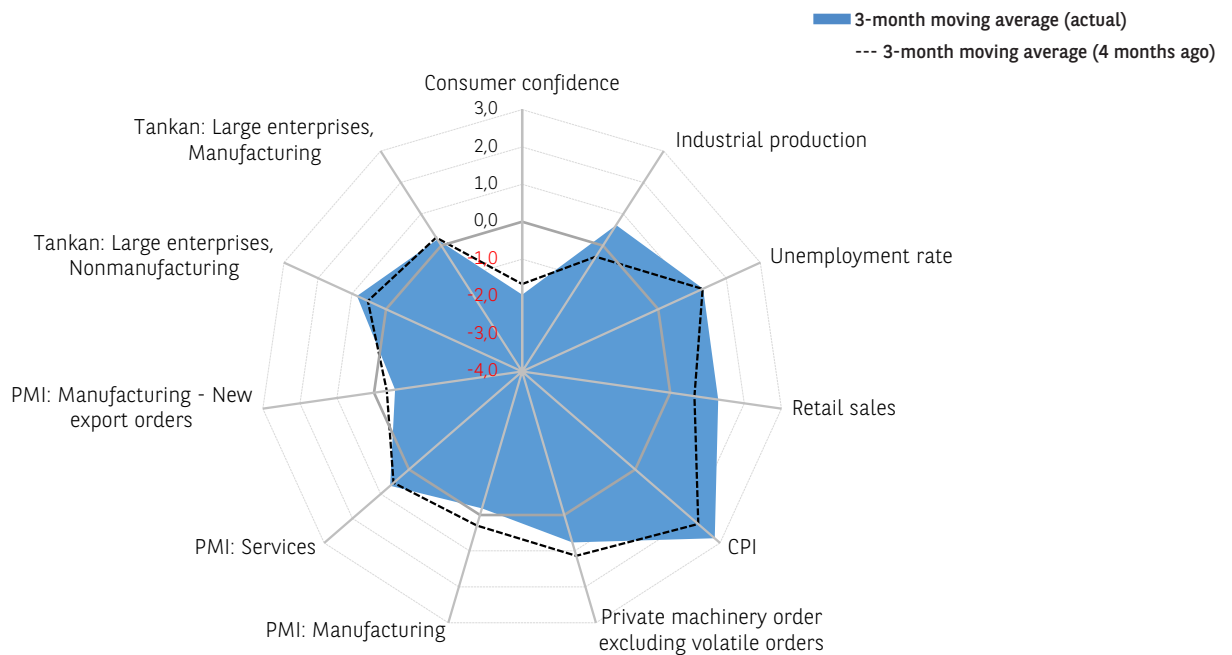
Confidence amongst Japanese consumers dropped sharply this autumn, reflecting the difficulties they are experiencing in the face of inflation rising to its highest level for more than thirty years (3.8% y/y in October). According to the Cabinet Office, consumer confidence has fallen back to its level from the summer of 2020, when the pandemic was in full swing. Meanwhile, the Tankan survey for the fourth quarter of 2022 surprised on the upside: the overall balance climbed from 3 to 6, whilst the forecast contained in the previous survey was for a one-point fall. The index has now returned to pre-Covid levels, illustrating the economy's slow and difficult recovery from the pandemic. The PMI survey for December was hardly more optimistic: the composite index rose from 48.9 to 50, taking it just into expansionary territory. Moreover, the new export orders component dipped by 1 point to 48.9.

Looking in detail at the Tankan survey, the balance of opinion has improved in manufacturing (up 2 points to 2), driven by steel (up 8 points) and textiles (up 5 points). However, the energy crisis continues to hit the chemicals and paper industries (which both saw 4-point falls). There was a bigger improvement in services (up 5 points to 10), thanks to a rebound in restaurants and accommodation (up 27 points) that can be partly attributed to the ending of Covid restrictions in mid-October. The balance of opinion on employment fell by 3 points, reflecting the continued strong pressure on recruitment (a negative balance indicates that more companies are experiencing a deficit of labour than a surplus). This is no surprise: at 2.6% in October, the unemployment rate remains at an historically low level for the country. Prior to 2016, this rate had not fallen below 3% for more than twenty years.

With regards to external balances, the trade balance improved, after an almost uninterrupted deterioration since early 2020. The deficit shrank again in November, from JPY2,207 billion to JPY1,732 billion. This improvement in the goods balance mainly reflected volume effects; last month saw a bigger fall in real imports (-6.6% m/m) than in exports (-0.1% m/m).

Guillaume Derrien

JAPAN: QUARTERLY CHANGES



SOURCE: REFINITIV, BNP PARIBAS

The indicators in the radar are all transformed into 'z-scores' (deviations from the long-term average, as standard deviations). These z-scores have mean zero and their values are between -4 and +3. In the radar chart, the blue area shows the actual conditions of economic activity. It is compared with the situation four months earlier (dotted-line). An expansion of the blue area compared to the dotted area signals an increase in the variable.



ECONOMIC PULSE

SPAIN: A WIDESPREAD EASING OF INFLATION IN SIGHT?

In its second estimate, the Spanish statistical institute (INE) raised slightly the harmonised inflation rate (HICP) for November from 6.6% y/y to 6.7% y/y. This is still a significant decline from the 10.7% y/y figure reported in July, as Spain now reports the smallest rate of inflation in the Eurozone. Energy prices, the main contributor to this deceleration, are falling back sharply, dropping from an 8% y/y increase in October to 4.5% y/y in November. The 3m/3m measure provides an even better illustration of the size of the recent decline: it dropped to -49.3%, the steepest decline since the current statistical series began in 2002. Although the core HICP (excluding energy and fresh food prices) picked up from 6.2% to 6.3% y/y, the 3m/3m (4.4%) declined for the third consecutive month, suggesting the year-on-year rate will head downward this winter.

Although peak inflation seems to have been reached, price pressures are likely to stay at a high level in 2023. To limit this risk, the government plans to expand its anti-inflation package – which proved to be effective on energy prices – to include measures to contain food prices. The specifics of this package have not been released yet¹.

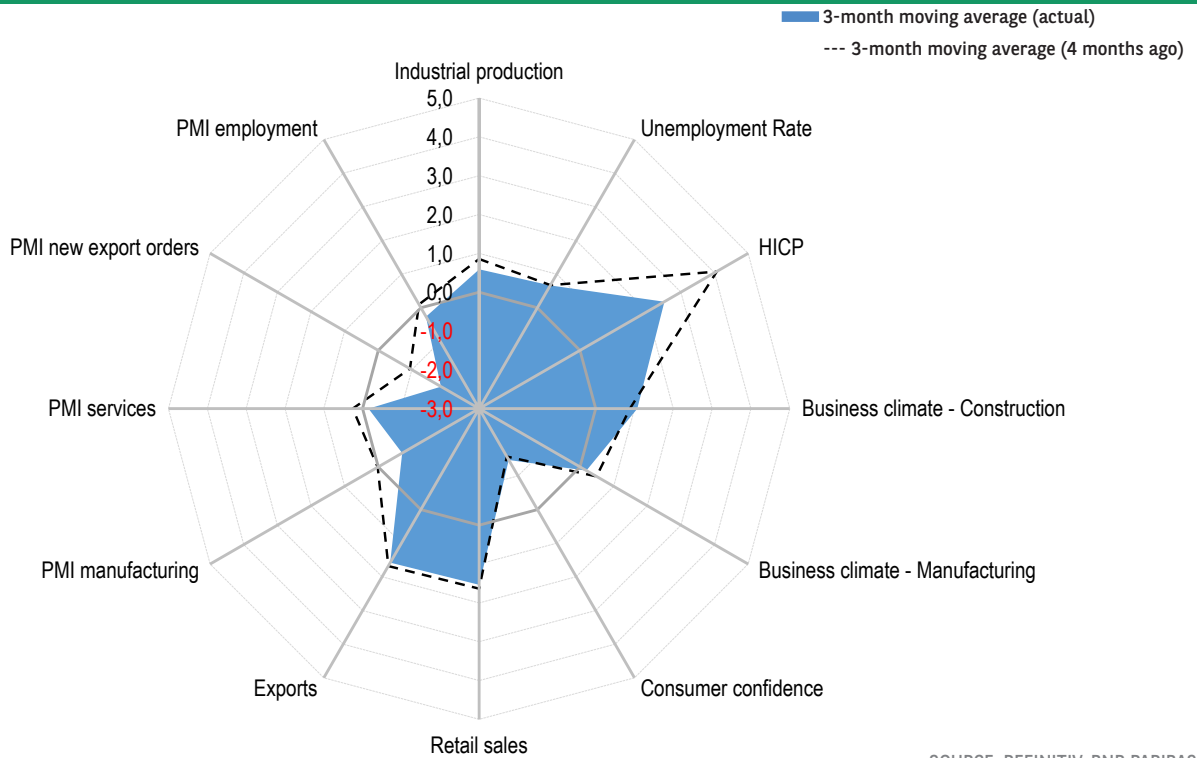
With wage growth holding below inflation, household purchasing power continues to erode. According to INE, nominal wages rose 0.7% q/q in the third quarter and 2.9% over the past 12 months. Excluding the INE category “bonuses and late payments”, the increase of salaries was even smaller, up 0.3% q/q and 2.3% y/y, respectively.

Yet the level of wage increases that companies are willing to give could be hampered by the deterioration of the economic environment (as shown in our barometer). According to the European Commission survey, business confidence in Spain deteriorated in November, down 3.4 points to 7.7. This mainly reflects the increasingly clear decline in demand. The indicators for order books, export orders and production have continued to fall since spring. Although the manufacturing PMI rose slightly in November, up 1 point to 45.7, it is still largely mired in contraction territory. According to these surveys, industrial output should drop after holding flat since the beginning of the year. This is already the case in certain industries hard hit by the energy crisis, including chemicals (-10.1% since the beginning of the year), paper (-4.7%) and lumber (-15.9%).

Guillaume Derrien

1. See *El Gobierno presentará antes de fin de año un nuevo paquete de medidas para contener el precio de los alimentos* (Before year-end, the government will present a new package to contain food prices), El País, 7 December 2022.

SPAIN: QUARTERLY CHANGES



SOURCE: REFINITIV, BNP PARIBAS

The indicators in the radar are all transformed into 'z-scores' (deviations from the long-term average, as standard deviations). These z-scores have mean zero and their values are between -3 and +5. In the radar chart, the blue area shows the actual conditions of economic activity. It is compared with the situation four months earlier (dotted-line). An expansion of the blue area compared to the dotted area signals an increase in the variable.



ECONOMIC PULSE

UNITED KINGDOM: PEAK INFLATION?

UK inflation finally fell in November to +10.7% y/y (+0.4% m/m), compared with +11.1% in October (+2% m/m). Other good news is that core inflation is also falling, for the first time since September 2021 (-0.2 points, i.e. 6.3% y/y). In the face of still very high inflation, however, the Bank of England (BoE) Monetary Policy Committee (MPC) decided to raise its key rate further by 50 basis points, thus bringing it to 3.5%. The rise is less significant than in November (+75 bp) as the BoE must also reconcile it with the risk of recession.

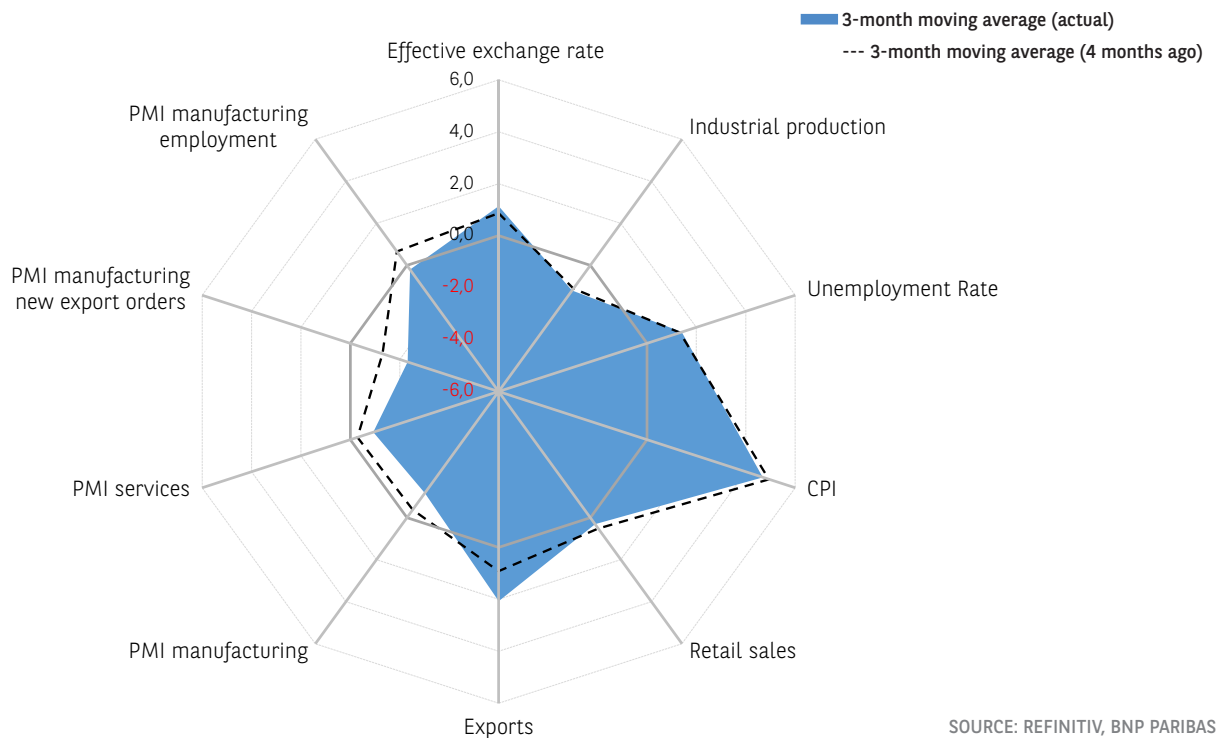
While BoE Governor Andrew Bailey said inflation had peaked, he expressed concern that UK companies would keep raising prices too fast for too long, for two reasons. In October, the upturn in inflation was mainly driven by the increase in electricity prices (+17% m/m) and gas prices (+37% m/m), despite the implementation of the energy price guarantee. This cap on energy prices did have an effect in November and mechanically helped to limit the rise in inflation. However, it is not expected to be renewed for companies from the end of March 2023. And yet the lifting of this measure should expose them to a sharp increase in their operating costs, which is likely to have a repercussion on sale prices.

Furthermore, the slowdown in the price of goods remained limited in November. The prices of food, alcoholic beverages and tobacco (+12.7% y/y, compared to 13.2% in October) and industrial goods (+14.6%, compared to 15.4%) are decelerating, but the pace of the rise remains higher than in September. Although inflation in general is expected to move gradually lower, in retail trade this evolution will probably be more limited. According to the Confederation of British Industry's (CBI) Distributive Trades Survey (DTS), the vast majority of wholesale and retail trade companies are expecting short-term price increases, which would dampen disinflation. Inflation in services remained stable, at 6.3% year-on-year (i.e. +0.2% m/m). The CBI's Service Sector Survey (SSS) suggests that the slower price increase is likely to continue, although the balance of responses expecting a price increase in the next three months remains particularly high.

The new hike in the BoE's key interest rate is also increasing pressure on households: already penalised by the increase in the cost of living, their financial situation is also deteriorating due to the effect of the rise in interest rates on mortgages. However, in its Financial Stability Report (FSR), the BoE's Financial Policy Committee (FPC) indicates that households are more resilient than during the 2007 financial crisis and the recession in the early 1990s: the proportion of disposable income spent on mortgage payments is expected to rise but remain below the record levels reached in 2007 and the 1990s.

Félix Berte

UK: QUARTERLY CHANGES



SOURCE: REFINITIV, BNP PARIBAS

The indicators in the radar are all transformed into 'z-scores' (deviations from the long-term average, as standard deviations). These z-scores have mean zero and their values are between -6 and +6. In the radar chart, the blue area shows the actual conditions of economic activity. It is compared with the situation four months earlier (dotted-line). An expansion of the blue area compared to the dotted area signals an increase in the variable.



ECONOMIC PULSE

COVID-19: NINTH WAVE OF THE PANDEMIC

3.9 million new cases were counted between 7 and 13 December, compared with approximately 3.6 million the previous week, representing an increase of 8.3%. This is the fifth consecutive week of rising infections, a development that is all the more noteworthy as all regions reported an increase in weekly cases, with the exception of Africa, which reported a fall of 17%. North America stood out with a markedly higher increase (25%), followed by South America (13%), Europe (6%) and Asia (2%) (figure 1). Asia alone accounted for 43.6% of the 3.9 million new cases around the world, with 1.7 million infections.

On a weekly basis, Japan once again recorded the highest number of new cases (931,313, +9% compared to the previous week), followed by the United States (505,152, +26%), France (480,713, +16%), South Korea (472,954, +11%), Brazil (242,511, +15%), Germany (226,241, +9%), Australia (123,488, +8%) and Hong Kong (94,115, +35%). In China (183,960, -35%), Italy (165,971, -37%) and Taiwan (114,430, -2%), the number of new cases fell compared to the previous week, but they remain at a high level.

Vaccination coverage also continues to increase, but at a progressively slower rate. To date, 13 billion doses of vaccine have been administered worldwide since the start of the campaigns in Q4 2020, including 2.65 billion booster doses. As a consequence, almost 68.6% of the global population have received at least one dose of vaccine (figure 2).

Tarik Rharrab

DAILY CONFIRMED COVID-19 CASES (7-DAY MOVING AVERAGE)

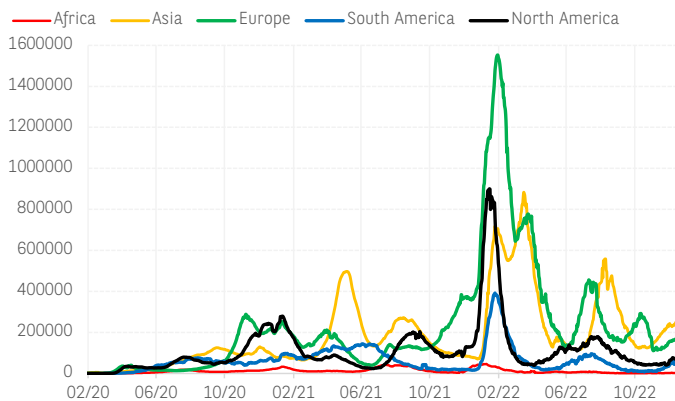


CHART 1

SOURCE: JOHNS-HOPKINS UNIVERSITY (14/12/2022), BNP PARIBAS

SHARE OF PEOPLE WHO RECEIVED AT LEAST ONE DOSE OF VACCINE

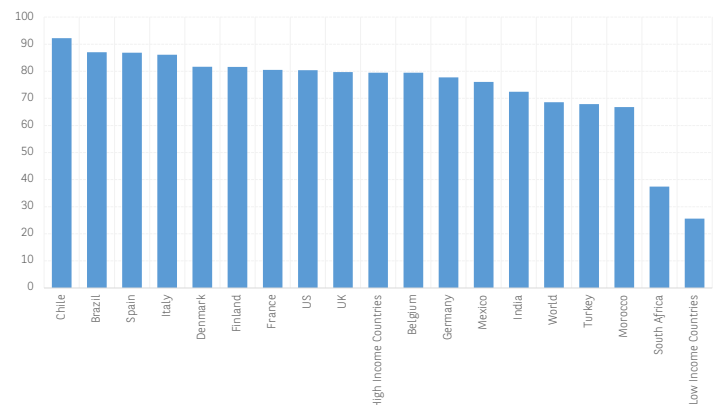


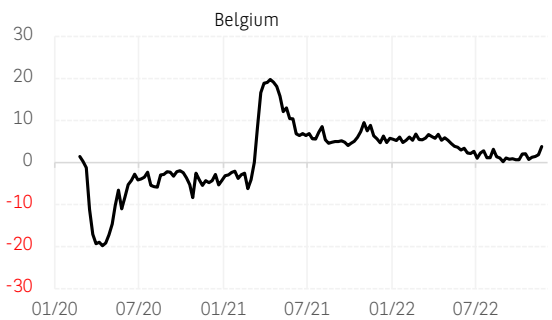
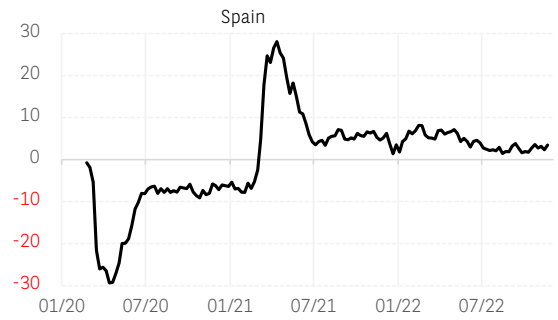
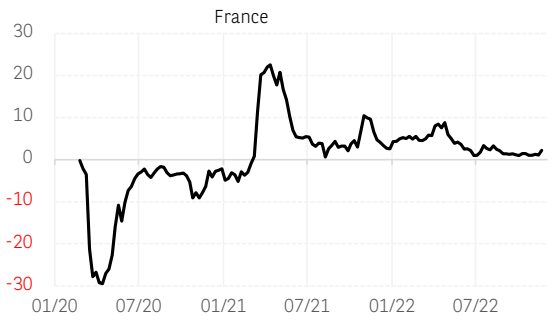
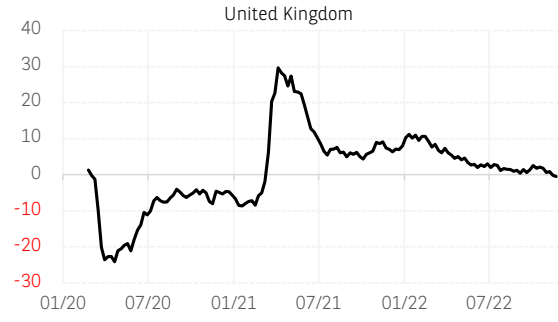
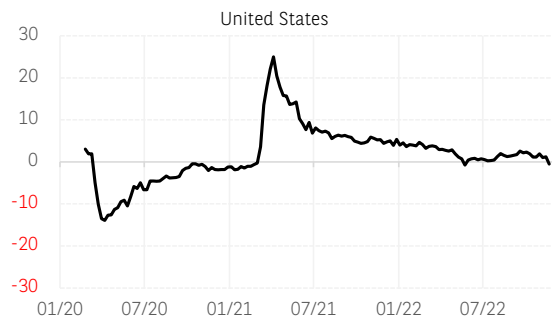
CHART 2

SOURCE: OUR WORLD IN DATA (15/12/2022), BNP PARIBAS



OECD WEEKLY TRACKER

— OECD Weekly tracker, y/2y GDP growth [RHS]

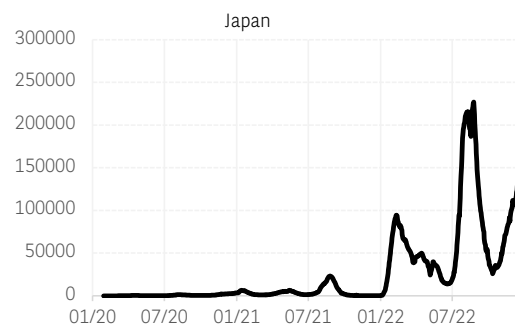
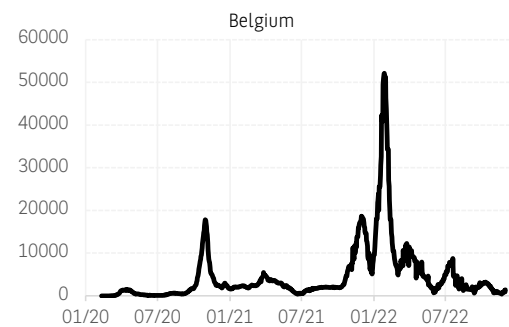
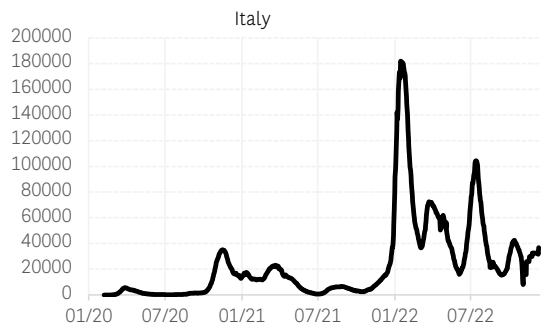
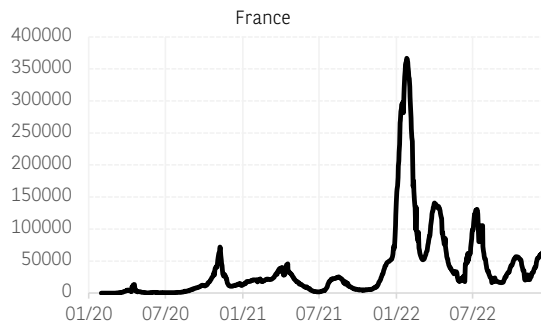
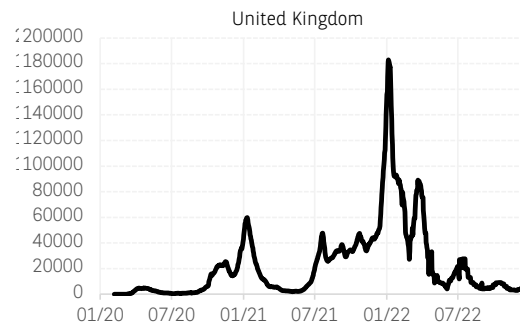
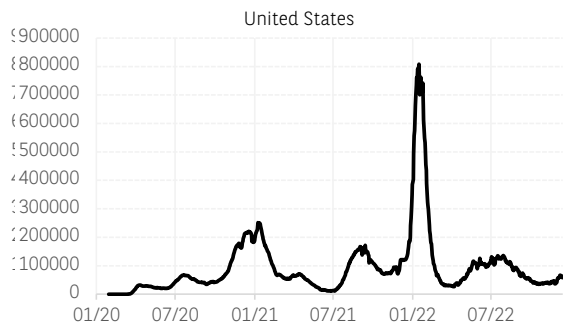


SOURCE: OECD, BNP PARIBAS (01/12/2022),



DAILY NEW CASES

— Daily new confirmed cases of Covid-19 (7-day moving average)



SOURCE: JOHNS-HOPKINS UNIVERSITY, BNP PARIBAS (14/12/2022)



ECONOMIC SCENARIO

UNITED STATES

The US economy rebounded strongly during Q3, following two quarters of negative growth, thanks to healthy performances in corporate investment, household spending and, in particular, exports. The labour market is showing very early signs of a slowdown, but job creation remains high, the unemployment rate is still low and wages are still buoyant. Inflation seems to have peaked in the middle of the year and should continue to fall while remaining significantly above the target of 2% by late 2023. Following the mid-term elections, the Democrats retained a narrow majority in the Senate and the Republicans won a very tiny majority in the House of Representatives. This should limit what President Joe Biden can do over the remainder of his term, but, at the same time, compromises could also be reached.

CHINA

The recovery of the Chinese economy since its Q2 2022 contraction has been sluggish and unbalanced. Industrial production has been the main growth driver, but it is expected to lose steam in the short term, largely due to the weakening in external demand and slower export growth. Meanwhile, activity driven by the domestic market and the services sector still struggle to strengthen. The authorities are enhancing fiscal and monetary easing measures. However, the drags on domestic demand remain powerful: the correction in the property sector continues, and the deterioration in the labour market, the still tight Covid policy in spite of small adjustments, and weak household confidence weigh on private consumption. Consumer price inflation is very moderate.

EUROZONE

Growth in the euro zone in the third quarter was weak, but at least it remained positive, while the survey data (business and consumer confidence) seemed to be clearly pointing to a decline. Although a contraction was avoided in the third quarter, the euro zone is unlikely to avoid recession. The combination of the inflationary shock, the energy crisis and the enforced monetary tightening and their increasingly negative effects are likely to overcome the resistance seen to date. However, the recession should remain shallow (a cumulative fall in GDP of 1.1% between Q4 2022 and Q2 2023) thanks to the fiscal policy cushion and the current tightness of the labour market. In annual average terms, real GDP growth in the euro zone is expected to reach 3.2% in 2022 but then turn negative in 2023 (-0.5%). The subsequent recovery is likely to be weak. Although it should start to decline towards the end of this year or the beginning of next year, inflation is likely to remain elevated, well above the 2% target at the end of next year and only falling back to it at the end of 2024, which will keep monetary policy in restrictive territory.

FRANCE

Real GDP growth has continued during the 3rd quarter (0.2% q/q, after +0.5% during the 2nd quarter), driven by a growth of manufacturing production partly explained by a recovery of sectors exposed to supply-side problems (particularly the car sector) and partly related to growing inventories in order to avoid potential stronger constraints on production during the winter. This element should weigh on Q4 GDP growth, which should also suffer from the ongoing inflation acceleration (6.2% y/y in October) towards a new peak above 7% in February (before a gradual disinflation). These shocks should weigh on GDP growth in 2023 (0% according to our forecasts, after 2.5% in 2022).

RATES AND EXCHANGE RATES

In the US, the Federal Reserve will continue its tightening policy, bringing the federal funds rate to its terminal rate for this cycle at 5.25% (upper end of the target range) in the first quarter of next year. Given the expected slow decline in inflation and despite the economy entering recession, this level should be maintained through 2023 and only be followed by rate cuts in 2024. US Treasuries are largely pricing in the upcoming rate hikes. In the near term there is still some upward potential, but subsequently yields should move lower as the inflation outlook improves and the market starts anticipating policy easing in 2024.

The ECB Governing Council will continue to raise its policy rates at its next meetings. We expect the terminal rate -i.e. the peak rate in this cycle- to be reached by the end of the first quarter of next year. We expect a peak for the deposit rate at 3.00%. We expect quantitative tightening to start in the second quarter of 2023. Early on in 2023, we expect higher government bond yields on the back of important supply but thereafter yields should move lower, driven by a gradual decline in inflation. Lower US yields should also play a role in the decline of eurozone yields.

The Bank of Japan is expected to maintain its current policy stance and we do not envisage a rate hike.

We expect the dollar to weaken somewhat versus the euro. The dollar's valuation is expensive, positioning in the market is very long and the long-term interest rate differential should narrow.

The yen has already weakened significantly versus the dollar, reflecting the increased policy divergence between the Fed and the Bank of Japan. We expect the exchange rate to remain around current levels in the near term. In 2023, the yen should strengthen versus the dollar considering that the federal funds rate should have reached its terminal rate.

GDP GROWTH & INFLATION

| % | GDP Growth | | | | Inflation | | | |
|----------------|------------|--------|--------|--------|-----------|--------|--------|--------|
| | 2021 | 2022 e | 2023 e | 2024 e | 2021 | 2022 e | 2023 e | 2024 e |
| United-States | 5,7 | 1,9 | -0,1 | -0,2 | 4,7 | 8,1 | 4,4 | 2,4 |
| Japan | 1,7 | 1,5 | 0,9 | 0,3 | -0,2 | 2,4 | 2,1 | 1,3 |
| United-Kingdom | 7,4 | 4,4 | -0,9 | 0,8 | 2,6 | 9,1 | 6,9 | 2,1 |
| Euro Area | 5,3 | 3,2 | -0,5 | 1,3 | 2,6 | 8,4 | 5,6 | 2,3 |
| Germany | 2,6 | 1,8 | -1,0 | 1,1 | 3,2 | 8,8 | 5,7 | 2,0 |
| France | 6,8 | 2,5 | 0,0 | 1,0 | 2,1 | 6,0 | 6,4 | 2,7 |
| Italy | 6,6 | 3,8 | -0,4 | 1,1 | 1,9 | 8,7 | 7,2 | 2,0 |
| Spain | 5,1 | 4,6 | 0,0 | 1,3 | 3,0 | 8,3 | 2,3 | 1,5 |
| China | 8,1 | 3,2 | 4,5 | 4,8 | 0,9 | 2,1 | 2,7 | 2,5 |
| India* | 9,3 | 8,3 | 6,2 | 6,5 | 5,4 | 7,9 | 5,9 | 5,5 |
| Brazil | 4,6 | 3,0 | 0,5 | 1,3 | 8,3 | 9,4 | 5,4 | 4,9 |
| Russia | 4,5 | -7,0 | 0,8 | 0,3 | 7,1 | 14,0 | 10,5 | 7,6 |

SOURCE: BNP PARIBAS GROUP ECONOMIC RESEARCH (E: ESTIMATES & FORECASTS)
*FISCAL YEAR FROM 1ST APRIL OF YEAR N TO MARCH 31ST OF YEAR N+1

INTEREST & EXCHANGE RATES

| Interest rates, % | | Q1 2023 | Q2 2023 | Q3 2023 | Q4 2023 | Q4 2024 |
|-------------------|-------------------------|---------|---------|---------|---------|---------|
| End of period | | | | | | |
| US | Fed Funds (upper limit) | 5.25 | 5.25 | 5.25 | 5.25 | 3.25 |
| | T-Note 10y | 4.30 | 4.00 | 3.75 | 3.50 | 3.25 |
| Eurozone | Deposit rate | 3.00 | 3.00 | 3.00 | 3.00 | 2.00 |
| | Bund 10y | 2.75 | 2.65 | 2.50 | 2.30 | 2.00 |
| | OAT 10y | 3.45 | 3.30 | 3.10 | 2.90 | 2.50 |
| | BTP 10y | 5.25 | 5.05 | 4.80 | 4.60 | 3.80 |
| UK | BONO 10y | 4.05 | 3.90 | 3.75 | 3.55 | 2.90 |
| | Base rate | 4.25 | 4.25 | 4.25 | 4.25 | 3.50 |
| Japan | Gilts 10y | 4.00 | 3.75 | 3.60 | 3.35 | 3.15 |
| | Bol Rate | -0.10 | -0.10 | -0.10 | -0.10 | -0.10 |
| Japan | JGB 10y | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |

| Exchange Rates | | Q1 2023 | Q2 2023 | Q3 2023 | Q4 2023 | Q4 2024 |
|----------------|-----------|---------|---------|---------|---------|---------|
| End of period | | | | | | |
| USD | EUR / USD | 1.01 | 1.00 | 1.03 | 1.06 | 1.10 |
| | USD / JPY | 140 | 138 | 133 | 128 | 120 |
| | GBP / USD | 1.09 | 1.08 | 1.11 | 1.14 | 1.18 |
| EUR | EUR / GBP | 0.93 | 0.93 | 0.95 | 0.95 | 0.95 |
| | EUR / JPY | 141 | 138 | 137 | 136 | 132 |
| Brent | | | | | | |
| End of period | | | | | | |
| Brent | USD/bbl | 95 | 93 | 95 | 92 | 95 |

SOURCES: BNP PARIBAS (E: ESTIMATES & FORECASTS) (MARKET ECONOMICS, INTEREST RATE STRATEGY, FX STRATEGY, COMMODITIES DESK STRATEGY)



CALENDAR

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LATEST INDICATORS

In China, several data were published for the month of November. Home prices were down again, industrial production growth slowed down more than expected, whereas retail sales contracted significantly versus November last year and more than the already bearish consensus. The unemployment rate increased more than expected. Residential property sales are plummeting compared to the data one year ago and property investment is also shrinking. The ECB hiked its deposit rate with 50 bp but the move was accompanied by a strong message that rate increases will continue at a steady pace. The survey data (flash PMIs for manufacturing and services, ZEW survey) showed an improvement versus the previous month. In France, business confidence was stable in December. The manufacturing PMI created a positive surprise by moving higher but the services PMI was down a lot. In Germany, the ZEW expectations index recorded a big improvement, more than expected. The assessment of the current situation improved only slightly. The manufacturing and services PMIs created a positive surprise by moving significantly higher. In Japan, the Tankan survey of small companies showed an improvement in manufacturing and non-manufacturing. The large company survey of non-manufacturing companies was up as well but the survey was down in manufacturing. The manufacturing PMI hardly changed but the services PMI recorded a significant improvement. In the UK, employment data improved in the past three months versus the previous three months. Inflation eased, consumer confidence improved marginally from a very low level but retail sales were down unexpectedly in November versus the previous month. The services PMI improved quite a bit, reaching 50, but the manufacturing PMI dropped. The Bank of England increased its policy rate with 50 bp. In the US, inflation in November was down versus the previous month, creating a positive surprise. Retail sales dropped more than anticipated. The manufacturing and services PMIs recorded a significant decline. Finally, the FOMC increased its policy rate further, with a 50 bp move that was in line with expectations.

| DATE | COUNTRY | INDICATOR | PERIOD | CONSENSUS | ACTUAL | PREVIOUS |
|------------|----------------|----------------------------------|--------|-----------|--------|----------|
| 12/13/2022 | France | Total Payrolls | 3Q | 0.4% | 0.4% | 0.3% |
| 12/13/2022 | United Kingdom | Employment Change 3M/3M | Oct | -17k | 27k | -52k |
| 12/13/2022 | Germany | ZEW Survey Expectations | Dec | -26.4 | -23.3 | -36.7 |
| 12/13/2022 | Germany | ZEW Survey Current Situation | Dec | -57.0 | -61.4 | -64.5 |
| 12/13/2022 | Eurozone | ZEW Survey Expectations | Dec | -- | -23.6 | -38.7 |
| 12/13/2022 | United States | CPI MoM | Nov | 0.3% | 0.1% | 0.4% |
| 12/13/2022 | United States | CPI Ex Food and Energy MoM | Nov | 0.3% | 0.2% | 0.3% |
| 12/14/2022 | Japan | Tankan Large Mfg Index | 4Q | 6,0 | 7,0 | 8,0 |
| 12/14/2022 | Japan | Tankan Large Non-Mfg Index | 4Q | 17,0 | 19,0 | 14,0 |
| 12/14/2022 | Japan | Tankan Small Mfg Index | 4Q | -5,0 | -2,0 | -4,0 |
| 12/14/2022 | Japan | Tankan Small Non-Mfg Index | 4Q | 5,0 | 6,0 | 2,0 |
| 12/14/2022 | United Kingdom | CPI YoY | Nov | 10.9% | 10.7% | 11.1% |
| 12/14/2022 | United Kingdom | CPI Core YoY | Nov | 6.5% | 6.3% | 6.5% |
| 12/14/2022 | United States | FOMC Rate Decision (Upper Bound) | Dec | 4.50% | 4.50% | 4.00% |
| 12/15/2022 | China | New Home Prices MoM | Nov | -- | -0.25% | -0.37% |
| 12/15/2022 | China | Industrial Production YoY | Nov | 3.5% | 2.2% | 5.0% |
| 12/15/2022 | China | Retail Sales YoY | Nov | -4.0% | -5.9% | -0.5% |
| 12/15/2022 | China | Fixed Assets Ex Rural YTD YoY | Nov | 5.6% | 5.3% | 5.8% |

SOURCE: BLOOMBERG



| DATE | COUNTRY | INDICATOR | PERIOD | CONSENSUS | ACTUAL | PREVIOUS |
|------------|----------------|--|--------|-----------|--------|----------|
| 12/15/2022 | China | Property Investment YTD YoY | Nov | -9.2% | -9.8% | -8.8% |
| 12/15/2022 | China | Residential Property Sales YTD YoY | Nov | -- | -28.4% | -28.2% |
| 12/15/2022 | China | Surveyed Jobless Rate | Nov | 5.6% | 5.7% | 5.5% |
| 12/15/2022 | France | Business Confidence | Dec | 101,0 | 102,0 | 102,0 |
| 12/15/2022 | United Kingdom | Bank of England Bank Rate | Dec | 3,5% | 3,5% | 3,0% |
| 12/15/2022 | Eurozone | ECB Deposit Facility Rate | Dec | 2.00% | 2.00% | 1.50% |
| 12/15/2022 | United States | Retail Sales Advance MoM | Nov | -0.2% | -0.6% | 1.3% |
| 12/15/2022 | United States | Initial Jobless Claims | Dec | 232k | 211k | 231k |
| 12/16/2022 | United Kingdom | GfK Consumer Confidence | Dec | -43,0 | -42,0 | -44,0 |
| 12/16/2022 | Japan | Jibun Bank Japan PMI Mfg | Dec | -- | 48.8 | 49.0 |
| 12/16/2022 | Japan | Jibun Bank Japan PMI Services | Dec | -- | 51.7 | 50.3 |
| 12/16/2022 | United Kingdom | Retail Sales Ex Auto Fuel MoM | Nov | 0.3% | -0.3% | 0.7% |
| 12/16/2022 | United Kingdom | Retail Sales Ex Auto Fuel YoY | Nov | -5.8% | -5.9% | -6.4% |
| 12/16/2022 | France | S&P Global France Composite PMI | Dec | 48.7 | 48.0 | 48.7 |
| 12/16/2022 | France | S&P Global France Manufacturing PMI | Dec | 48.0 | 48.9 | 48.3 |
| 12/16/2022 | France | S&P Global France Services PMI | Dec | 49.0 | 48.1 | 49.3 |
| 12/16/2022 | Germany | S&P Global/BME Germany Manufacturing PMI | Dec | 46.3 | 47.4 | 46.2 |
| 12/16/2022 | Germany | S&P Global Germany Services PMI | Dec | 46.3 | 49.0 | 46.1 |
| 12/16/2022 | Eurozone | S&P Global Eurozone Manufacturing PMI | Dec | 47.1 | 47.8 | 47.1 |
| 12/16/2022 | Eurozone | S&P Global Eurozone Services PMI | Dec | 48.5 | 49.1 | 48.5 |
| 12/16/2022 | United Kingdom | S&P Global/CIPS UK Manufacturing PMI | Dec | 46.5 | 44.7 | 46.5 |
| 12/16/2022 | United Kingdom | S&P Global/CIPS UK Services PMI | Dec | 48.5 | 50.0 | 48.8 |
| 12/16/2022 | Eurozone | CPI YoY | Nov | 10.0% | 10.1% | 10.0% |
| 12/16/2022 | Eurozone | CPI Core YoY | Nov | 5.0% | 5.0% | 5.0% |
| 12/16/2022 | United States | S&P Global US Manufacturing PMI | Dec | 47.8 | 46.2 | 47.7 |
| 12/16/2022 | United States | S&P Global US Services PMI | Dec | 46.5 | 44.4 | 46.2 |

SOURCE: BLOOMBERG



CALENDAR: THE WEEK AHEAD

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COMING INDICATORS

Several survey will be released: IFO survey in Germany, consumer confidence for the Eurozone and Germany. In the US we will have the Conference Board consumer confidence and the University of Michigan survey. We will also have several releases concerning the housing market as well as data on personal income and spending. On the last day of the year, PMI data will be published in China.

| DATE | COUNTRY | INDICATOR | PERIOD | CONSENSUS | PREVIOUS |
|------------|---------------|------------------------------------|--------|-----------|----------|
| 12/19/2022 | Germany | IFO Business Climate | Dec | 87.4 | 86.3 |
| 12/19/2022 | Germany | IFO Current Assessment | Dec | 93.5 | 93.1 |
| 12/19/2022 | Germany | IFO Expectations | Dec | 82.0 | 80.0 |
| 12/19/2022 | Eurozone | Labour Costs YoY | 3Q | -- | 4.0% |
| 12/19/2022 | United States | NAHB Housing Market Index | Dec | 34 | 33 |
| 12/20/2022 | United States | Housing Starts MoM | Nov | -1.8% | -4.2% |
| 12/20/2022 | United States | Building Permits MoM | Nov | -1.4% | -2.4% |
| 12/20/2022 | Eurozone | Consumer Confidence | Dec | -22.0 | -23.9 |
| 12/20/2022 | Japan | BOJ Policy Balance Rate | Dec | -0.100% | -0.100% |
| 12/21/2022 | Germany | GfK Consumer Confidence | Jan | -38.0 | -40.2 |
| 12/21/2022 | United States | Conf. Board Consumer Confidence | Dec | 101.0 | 100.2 |
| 12/21/2022 | United States | Conf. Board Present Situation | Dec | -- | 137.4 |
| 12/21/2022 | United States | Conf. Board Expectations | Dec | -- | 75.4 |
| 12/22/2022 | United States | GDP Annualized QoQ | 3Q | 2.9% | 2.9% |
| 12/22/2022 | United States | Initial Jobless Claims | Dec | 225k | 211k |
| 12/22/2022 | United States | Leading Index | Nov | -0.4% | -0.8% |
| 12/22/2022 | France | Retail Sales SA YoY | Nov | -- | -- |
| 12/23/2022 | Japan | Natl CPI Ex Fresh Food, Energy YoY | Nov | 2.8% | 2.5% |
| 12/23/2022 | United States | Personal Income | Nov | 0.3% | 0.7% |
| 12/23/2022 | United States | Personal Spending | Nov | 0.2% | 0.8% |
| 12/23/2022 | United States | PCE Core Deflator MoM | Nov | 0.2% | 0.2% |
| 12/23/2022 | United States | Cap Goods Orders Nondef Ex Air | Nov P | 0.1% | 0.6% |
| 12/23/2022 | United States | U. of Mich. Sentiment | Dec | 59.1 | 59.1 |
| 12/23/2022 | United States | U. of Mich. Current Conditions | Dec | -- | 60.2 |
| 12/23/2022 | United States | U. of Mich. Expectations | Dec | -- | 58.4 |
| 12/23/2022 | United States | U. of Mich. 1 Yr Inflation | Dec | -- | 4.6% |
| 12/23/2022 | United States | U. of Mich. 5-10 Yr Inflation | Dec | -- | 3.0% |
| 12/23/2022 | United States | New Home Sales MoM | Nov | -5.1% | 7.5% |
| 12/31/2022 | China | Composite PMI | Dec | -- | 47.1 |
| 12/31/2022 | China | Manufacturing PMI | Dec | 47.8 | 48.0 |
| 12/31/2022 | China | Non-manufacturing PMI | Dec | -- | 46.7 |

SOURCE: BLOOMBERG



FURTHER READING

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| | | |
|---|-------------------|------------------|
| US disinflation: surely, but slowly | EcoTVWeek | 16 December 2022 |
| France: Bottlenecks at a historically high level in construction | Chart of the Week | 14 December 2022 |
| European Union: Will the energy transition cause an increase in interest rates? | EcoWeek | 12 December 2022 |
| Malaysia: A new prime minister but still high political instability | EcoTVWeek | 9 December 2022 |
| Turkey: consumption on credit | Chart of the Week | 7 December 2022 |
| Labour hoarding: a source of resilience during a recession | EcoWeek | 5 December 2022 |
| A 2023 budget facing moderate uncertainties | EcoFlash | 2 December 2022 |
| United States: Expanding US federal debt will require raising more foreign capital | EcoTVWeek | 2 December 2022 |
| UK: Foreign trade declines due to Brexit | EcoFlash | 30 November 2022 |
| The end of wage bargaining power? | Chart of the Week | 30 November 2022 |
| The sobering record of real gdp forecasts during recessions | EcoWeek | 28 November 2022 |
| Can Germany escape the recession? | EcoTVWeek | 25 November 2022 |
| US: The end of wage bargaining power? | Chart of the Week | 23 November 2022 |
| Eurozone: the surprising resilience of the labour market, will it last? | EcoWeek | 21 November 2022 |
| Gone with the wind: the erosion of real household wealth | EcoTVWeek | 18 November 2022 |
| Romania: a widening current account deficit in 2022 | Chart of the Week | 16 November 2022 |
| US: Disinflation has started | EcoWeek | 14 November 2022 |
| Spain: national recovery plan, contrasted progresses | EcoTVWeek | 10 November 2022 |
| Italy: The increase in fixed rates for house purchase loans is favouring floating rates | Chart of the Week | 9 November 2022 |
| US : Federal Reserve: how much is enough? | EcoWeek | 7 November 2022 |



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