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ECONOMIC RESEARCH

BNP PARIBAS

The bank for a changing world

GLOBAL: INFLATION PERSISTENCE AND WHY IT MATTERS

Elevated inflation has become widespread. It raises the risk of further price increases because companies may be more inclined to raise prices when most others are doing the same. This would make high inflation more persistent, implying that it would take more time for inflation to converge back to target. Persistently high inflation could weaken the credibility of the central bank and cause an un-anchoring of long-term inflation expectations. To pre-empt such a development, monetary authorities could decide to tighten policy aggressively. Research by the Federal Reserve shows that US inflation has become more persistent. This helps to understand the increasingly hawkish rhetoric of Federal Reserve officials and their insistence on the need to frontload monetary tightening. The ECB is also monitoring inflation persistence closely. This could mean that, depending on the data, the first rate hike could come sooner after all, even as early as July.

Elevated inflation has become widespread. In the US, different measures of core inflation have increased significantly and are all well above the Federal Reserve's 2% target (chart 1). In the Eurozone, the percentage of items of the harmonized index of consumer prices (HICP) with annual inflation above 2% has seen a spectacular increase (chart 2). There is no indication that this situation will change in the near term. The Federal Reserve's April beige book mentions that "*Inflationary pressures remained strong since the last report, with firms continuing to pass swiftly rising input costs through to customers... Firms in most Districts expected inflationary pressures to continue over the coming months*[1]." The ECB's latest monetary policy statement noted that "*Energy costs are pushing up prices across many sectors. Supply bottlenecks and the normalisation of demand as the economy reopens also continue to put upward pressure on prices*[2]". When assessing the implications of these observations, a distinction should be made between broad-based inflation and persistent inflation. The former concerns the number of items in the consumer price index that share a given inflation development. This number can be high because several shocks occur more or less simultaneously, e.g. commodity price increases alongside supply disruption. To the extent that these shocks are one-off events, their *direct* impact on inflation should be temporary, even in case of a permanent price increase[3]. However, in all likelihood, these shocks will also have *indirect* effects as they are transmitted through the supply chain. This process takes time because not all companies that are facing higher input costs will raise their sales prices at the same time. This staggered price adjustment creates inflation persistence, a phenomenon of inertia whereby the latest inflation data are highly correlated with the pace of price changes in the previous months. It is "*the tendency of inflation to converge slowly towards its long-run value following a shock which has led inflation away from its long-run value*[4]."

Several factors can explain inflation persistence[5]. A succession of shocks, persistence in the variables that underpin the inflation process –e.g. a large positive or negative output gap-, staggered price and wage adjustment[6] –a phenomenon called intrinsic inflation persistence[7] - and actions and communication by the central bank. Concerning this last point, research shows that the introduction of inflation targeting has reduced the persistence of inflation.[8]

MEASURE OF CORE INFLATION (Y/Y %) IN THE US

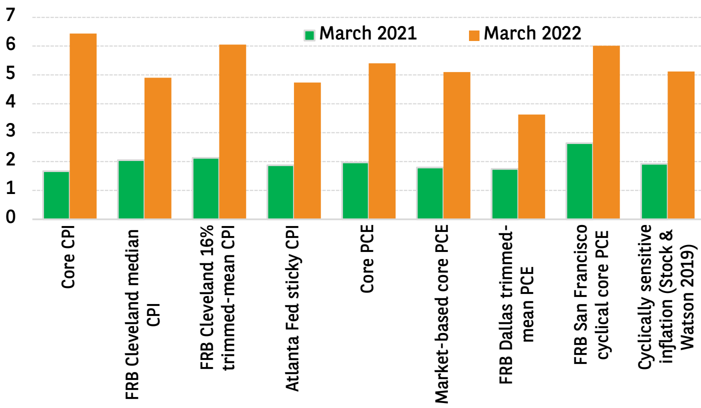

CHART 1

SOURCE: FEDERAL RESERVE BANK OF ATLANTA

1. Source: Federal Reserve, *The Beige Book,* April 2022.
2. Source: ECB, *Combined monetary policy decisions and statement,* 14 April 2022.
3. To illustrate this point, a one-off, permanent increase in the price of oil in a given month will cause an increase in the annual inflation during twelve months. Thereafter, this oil price effect disappears from the annual inflation numbers due to a base effect.
4. Source: Filippo Altissimo, Michael Ehrmann and Frank Smets, *Inflation persistence and price-setting behaviour in the euro area a summary of the IPN evidence*, ECB, Occasional Wpaper series no. 46, June 2006.
5. Source: Jeffrey C. Fuhrer, *Inflation persistence,* Working Papers, No. 09-14, 2009, Federal Reserve Bank of Boston.
6. Wage adjustments tend to be staggered because contracts at the company or sector level are renegotiated at different moments in time. Staggered price adjustment can occur because companies are reluctant to increase prices due to long-term relationships with customers or because they are concerned that their competitors will not follow. Contracts may also be expensive to renegotiate (source: see footnote 4).
7. "*Intrinsic inflation persistence refers to inflation that occurs purely as a result of past pricing decisions and cannot be explained by current and expected future fundamentals such as unit labour costs, output gaps, monetary policy, or cost-push shocks*." Source: Kevin D. Sheedy, *Intrinsic Inflation Persistence*, CEP Discussion Paper No 837, November 2007.
8. George J. Bratsiotis, Jakob Madsen, Christopher Martin, *Inflation Targeting and Inflation*

Research by the Federal Reserve shows that US inflation has become more persistent. This helps to understand the increasingly hawkish rhetoric of Federal Reserve officials and their insistence on the need to frontload monetary tightening.

What does this concretely mean in the current environment of exceptionally high inflation? Researchers at the Federal Reserve have analysed how much of recent US inflation is persistent and how much is broad-based. They found "t*hat the large ups and downs in inflation over the course of 2020 were largely the result of transitory shocks, often sector-specific. In contrast, sometime in the fall of 2021, inflation dynamics became dominated by the trend component, which is persistent and largely common across sectors.*[9]" For monetary policy, widespread inflation is important because it raises the likelihood of further price increases –companies may be more inclined to raise prices when most others are doing the same- but persistence is even more important. Persistently high inflation could weaken the credibility of the central bank and cause an un-anchoring of long-term inflation expectations. To pre-empt such a development, monetary authorities could decide to tighten policy aggressively. This helps to understand the increasingly hawkish rhetoric of Federal Reserve officials in recent months and their insistence on the need to frontload monetary tightening by moving to 50 basis rate hikes, rather than the usual 25 basis points increases. Fed Chairman Powell last week also hinted in that sense[10]. As far as the ECB is concerned, the policy approach should be more gradual but it is keeping a close eye on the risk of inflation becoming persistent. "*Two-thirds of the inflation we are suffering now is due to energy prices, so it's imported inflation. Monetary policy can do very little to deal with this kind of inflation. The main risk is that this type of inflation starts to be more and more persistent and gives rise to second-round effects. We need to monitor this very, very closely*.[11]" Reading between the lines, this means that, depending on the data, the first rate hike could come sooner after all, even as early as July.

William De Vijlder

EURO AREA INFLATION: PERCENTAGE OF ITEMS* WITH ANNUAL CHANGE OVER 2%

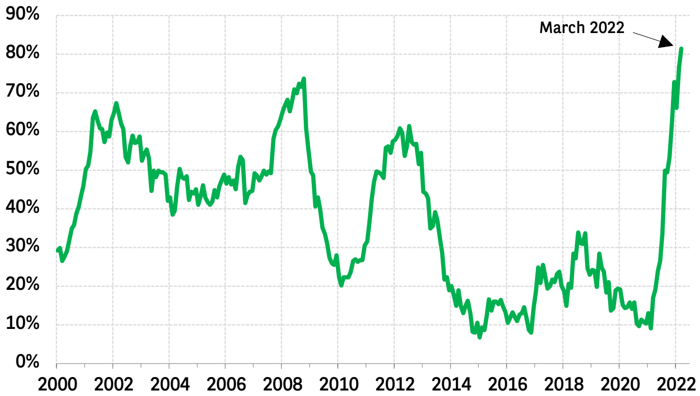

CHART 2

* SAMPLE OF 475 ITEMS

SOURCE: EUROSTAT, BNP PARIBAS

Persistence, Economic and Political Studies, Vol. 3, No. 1, January 2015.

9. Martín Almuzara and Argia Sbordone, *Inflation Persistence: How Much Is There and Where Is It Coming From?* Liberty Street Economics, 20 April 2022. The authors use a quantitative model that decomposes each sector's inflation as the sum of a common trend, a sector-specific trend, a common transitory shock, and a sector-specific transitory shock.

10.Jay Powell signals Fed is prepared to raise rates by a half-point in May, Financial Times, 21 April 2022.

11.Source: ECB, Luis de Guindos, Vice-President of the ECB, interview with Bloomberg on 20 April 2022.

MARKETS OVERVIEW

OVERVIEW

Week 15-4 22 to 22-4-22				
↘ CAC 40	6 589	▸ 6 581	-0.1	%
↘ S&P 500	4 393	▸ 4 272	-2.8	%
↗ Volatility (VIX)	22.7	▸ 28.2	+5.5	pb
↗ Euribor 3M (%)	-0.45	▸ -0.43	+2.5	bp
↗ Libor $ 3M (%)	1.06	▸ 1.21	+15.1	bp
↗ OAT 10y (%)	1.19	▸ 1.27	+8.3	bp
↗ Bund 10y (%)	0.81	▸ 0.92	+11.0	bp
↗ US Tr. 10y (%)	2.83	▸ 2.91	+7.9	bp
↘ Euro vs dollar	1.08	▸ 1.08	-0.0	%
↘ Gold (ounce, $)	1 969	▸ 1 928	-2.0	%
↘ Oil (Brent, $)	111.8	▸ 106.6	-4.6	%

MONEY & BOND MARKETS

Interest Rates		highest 22			lowest 22		
€ ECB	0.00	0.00	at	03/01	0.00	at	03/01
Eonia	-0.51	-0.51	at	03/01	-0.51	at	03/01
Euribor 3M	-0.43	-0.43	at	22/04	-0.58	at	05/01
Euribor 12M	0.08	0.08	at	22/04	-0.50	at	05/01
$ FED	0.50	0.50	at	17/03	0.25	at	03/01
Libor 3M	1.21	1.21	at	22/04	0.21	at	03/01
Libor 12M	2.61	2.61	at	22/04	0.58	at	03/01
£ BoE	0.75	0.75	at	17/03	0.25	at	03/01
Libor 3M	1.24	1.24	at	22/04	0.26	at	03/01
Libor 12M	0.81	0.81	at	03/01	0.81	at	03/01

At 22-4-22

Interest Rates		highest 22			lowest 22		
€ ECB	0.00	0.00	at	03/01	0.00	at	03/01
Eonia	-0.51	-0.51	at	03/01	-0.51	at	03/01
Euribor 3M	-0.43	-0.43	at	22/04	-0.58	at	05/01
Euribor 12M	0.08	0.08	at	22/04	-0.50	at	05/01
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Libor 3M	1.24	1.24	at	22/04	0.26	at	03/01
Libor 12M	0.81	0.81	at	03/01	0.81	at	03/01

At 22-4-22

EXCHANGE RATES

1€ =		highest 22		lowest 22			2022
USD	1.08	1.15	at 10/02	1.08	at	22/04	-5.2%
GBP	0.84	0.85	at 30/03	0.83	at	14/04	-0.1%
CHF	1.03	1.06	at 10/02	1.00	at	04/03	-0.4%
JPY	138.43	139.36	at 21/04	125.37	at	04/03	+5.7%
AUD	1.49	1.62	at 04/02	1.43	at	05/04	-5.1%
CNY	6.99	7.29	at 10/02	6.87	at	14/04	-3.6%
BRL	5.11	6.44	at 06/01	5.01	at	21/04	-19.3%
RUB	83.38	164.76	at 07/03	83.38	at	22/04	-2.3%
INR	82.42	85.96	at 11/02	82.10	at	14/04	-2.5%

At 22-4-22 *Change*

COMMODITIES

Spot price, $		highest 22			lowest 22			2022	2022(€)
Oil, Brent	106.6	128.2	at	08/03	79.0	at	03/01	+36.0%	+43.5%
Gold (ounce)	1 928	2 056	at	08/03	1 785	at	28/01	+5.8%	+11.7%
Metals, LMEX	5 061	5 506	at	07/03	4 489	at	06/01	+12.4%	+18.6%
Copper (ton)	10 113	10 702	at	04/03	9 543	at	06/01	+3.8%	+9.6%
wheat (ton)	394	4.2	at	07/03	281	at	14/01	+65.8%	+75.0%
Corn (ton)	304	3.1	at	20/04	226	at	03/01	+3.3%	+40.5%

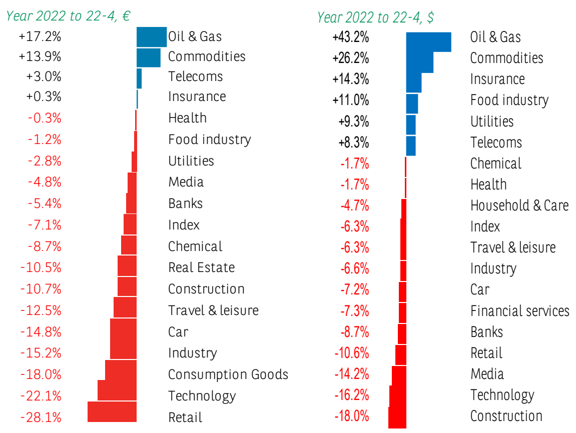
At 22-4-22 *Change*

EQUITY INDICES

	Index	highest 22			lowest 22			2022
World								
MSCI World	2 882	3 248	at	04/01	2 798	at	08/03	-10.8%
North America								
S&P500	4 272	4 797	at	03/01	4 171	at	08/03	-10.4%
Europe								
EuroStoxx50	3 840	4 392	at	05/01	3 505	at	08/03	-10.7%
CAC 40	6 581	7 376	at	05/01	5 963	at	08/03	-0.8%
DAX 30	14 142	16 272	at	05/01	12 832	at	08/03	-11.0%
IBEX 35	8 652	8 886	at	10/02	7 645	at	07/03	-0.1%
FTSE100	7 522	7 672	at	10/02	6 959	at	07/03	+0.2%
Asia								
MSCI, loc.	1 103	1 165	at	05/01	1 024	at	08/03	-0.3%
Nikkei	27 105	29 332	at	05/01	24 718	at	09/03	-5.9%
Emerging								
MSCI Emerging ($)	1 076	1 267	at	12/01	1 027	at	15/03	-1.3%
China	66	86	at	20/01	59	at	15/03	-21.0%
India	820	891	at	13/01	742	at	07/03	-0.2%
Brazil	1 762	2 003	at	04/04	1 372	at	06/01	+4.7%

At 22-4-22 *Change*

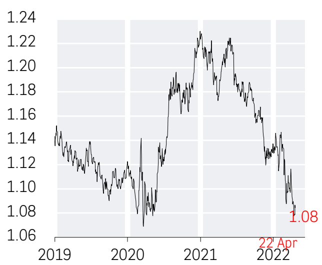
PERFORMANCE BY SECTOR (Eurostoxx50 & S&P500)



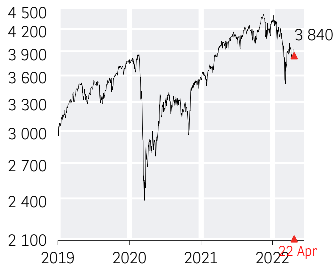
SOURCE: REFINITIV, BNP PARIBAS,

MARKETS OVERVIEW

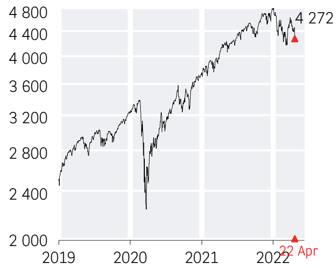
EURO-DOLLAR



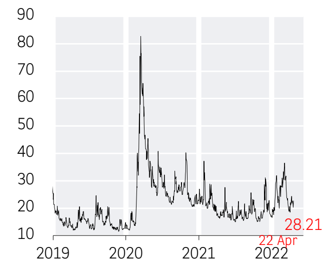
EUROSTOXX50



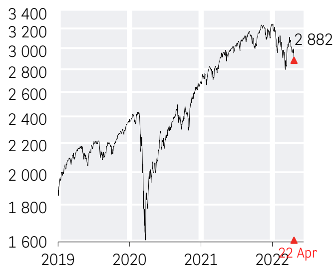
S&P500



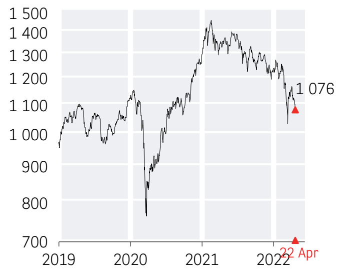
VOLATILITY (VIX, S&P500)



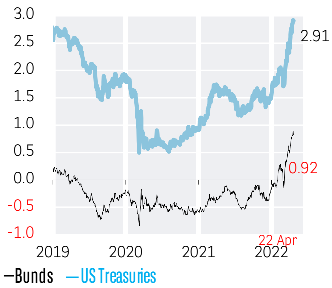
MSCI WORLD (USD)



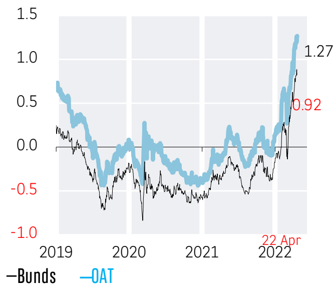
MSCI EMERGING (USD)



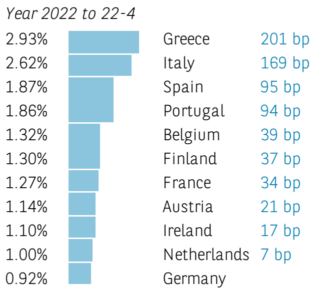
10Y BOND YIELD, TREASURIES VS BUND



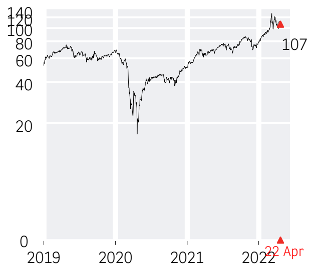
10Y BOND YIELD



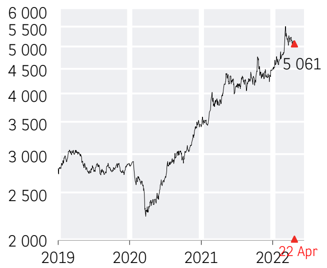
10Y BOND YIELD & SPREADS



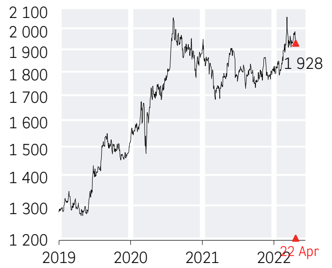
OIL (BRENT, USD)



METALS (LMEX, USD)



GOLD (OUNCE, USD)



SOURCE: REFINITIV, BNP PARIBAS

ECONOMIC PULSE

INTERNATIONAL TRADE: EXPECTATIONS DOWNGRADED SIGNIFICANTLY

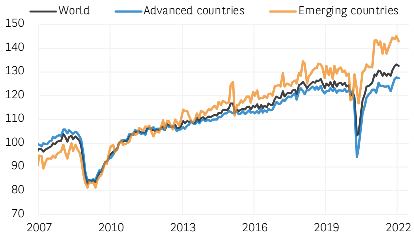
After the World Trade Organisation (WTO), the International Monetary Fund also revised significantly lower its forecast for global trade for 2022. Exports are now expected to rise by 4.4%, compared with an estimate of 6% in October. This is above the WTO's projections of 3% growth in 2022. Given the sharp rebound seen in 2021 – an increase of 9.8% – a lower rate of growth in goods exchange was expected. However, the war in Ukraine and the difficulties facing China in terms of its economy and the public health situation are important headwinds to growth. Some signs of this slowdown can already be seen: the global manufacturing PMI index for new export orders dropped sharply in March (-2.8 points to 48.2), reaching its lowest level in 18 months (chart 2). New export orders from Taiwan, often seen as a bellwether for global demand, fell in March but are holding at a very high level.

China is once again at the centre of attention. The lockdown measures imposed in Shanghai and surrounding areas have forced a number of businesses to shut down, including those in the electronics sector. This is likely to heighten global production chain disruption further and affect multiple industries. The global supply chain pressures index (chart 3), down in January and February, is likely to rebound. Manufacturing sector delivery times have increased again last month, according to the PMI report (chart 6). Shipping bottlenecks are also very unlikely to ease before 2023. Since the end of 2021, the average freight rate has stabilised at a high level (chart 5). Furthermore, container prices (Harpex index) have continued to increase in 2022 (up 19% between 1st January and 15th April), after having almost trebled in 2021.

Guillaume Derrien

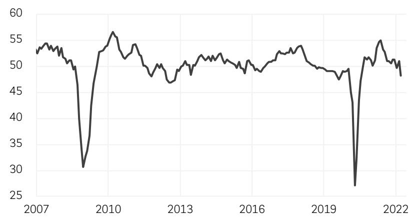
INTERNATIONAL TRADE INDICATORS

1. World exports by area, volume (index 2010 = 100)



Source: CPB, BNP Paribas

2. Global manufacturing PMI, new export orders



Source: Markit, BNP Paribas

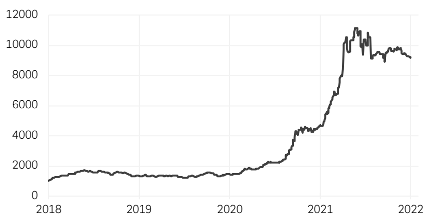
3. Global supply-chain pressures index

Source: Federal Reserve of New York

4. Baltic Exchange Dry Index

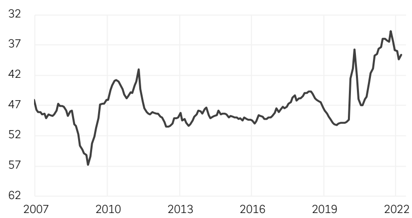
Source: Baltic Exchange, BNP Paribas

5. Freight rate index



Source: Freightos, BNP Paribas

6. Global manufacturing PMI, delivery times (Inverted line)



Source: Markit, BNP Paribas

ECONOMIC PULSE

CHINA: IN LOCKDOWN

China's economic growth reached 4.8% year-on-year (y/y) in Q1 2022. It improved slightly over the first two months of the year, both in industry and in services, but this recovery was cut short in March. Economic conditions have worsened rapidly, as our barometer shows (narrowing of the blue area relative to the dotted area). This deterioration has resulted primarily from the resurgence of Covid-19 and mobility restrictions imposed in a number of regions in the country. In addition, short-term growth prospects are also looking bleaker due to deterioration in the international climate triggered by the war in Ukraine.

Measures to contain the pandemic have been applied since early March to varying extents and for varying durations depending on the area, ranging from very strict lockdowns disrupting all activities (such as in Shanghai) to local restrictions partly affecting consumer spending (such as in Nanjing). In mid-April, cities and provinces concerned by restrictions (of any kind) represented more than 60% of China's GDP. Economic growth is therefore expected to continue to weaken until at least April as a result of the health crisis.

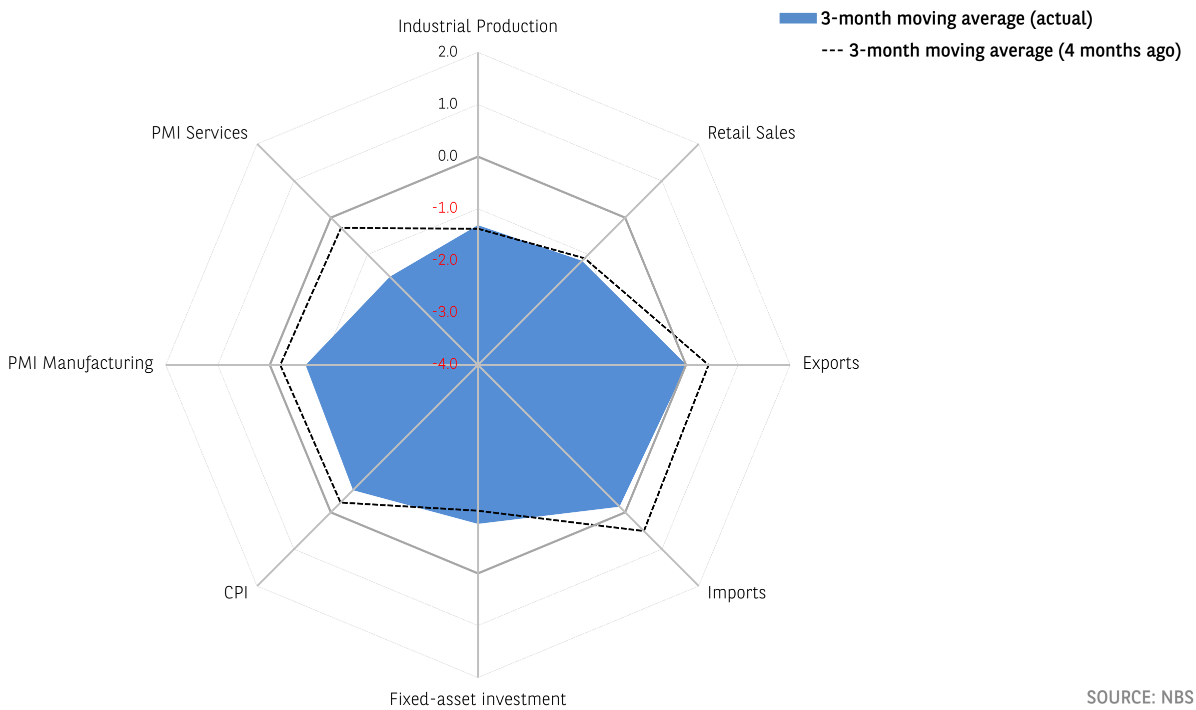
Services sector activity contracted slightly in March (-0.9% y/y in real terms vs. +4.2% in January-February), and retail sales fell by almost 5% y/y (-3.5% in nominal terms) following an increase of 4.9% in January-February. The health crisis has also severely penalised the property sector, with transaction volumes plummeting 17% y/y in March (vs. -10% in January-February). Finally, industrial growth slowed to 5% y/y in March from 7.5% in January-February, curbed by anti-Covid measures and weak domestic demand (for example, car production was down 4.9% y/y in March and cement production fell by 5.6%).

In the very short term, consumer demand will be held back by mobility restrictions and worsening labour market conditions. The unemployment rate rose from 5.1% at end-2021 to 5.8% in March, the highest level since May 2020. Meanwhile, inflationary pressure should remain moderate: firstly, consumer spending is down; secondly, the effect of higher global commodities prices on Chinese consumer prices will be mitigated by partial controls of energy and cereal prices, as well as the possibility for China to draw on its wheat stocks. Lastly, meat prices continue to fall rapidly (-25% y/y in March). CPI inflation reached 1.5% y/y in March vs. 0.9% in January and February.

Industrial activity is expected to be affected by further supply chain disruptions and the slowdown in world demand as a result of the conflict in Ukraine. Export growth, which has been normalizing over the last few months (in current dollar terms, it decelerated to 15% y/y in Q1 2022 from 23% in Q4 2021), should slow down more significantly in the short term.

Christine Peltier

CHINA: QUARTERLY CHANGES



SOURCE: NBS

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 +2. 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.

COVID-19: THE PANDEMIC IS CONTINUING TO DECLINE (ALMOST) ALL OVER THE WORLD

According to the latest figures from Johns Hopkins University, 5.9 million cases of Covid-19 were reported worldwide between 13 and 19 April (down 24% relative to the previous week), the lowest level since the end of December 2021. The number of cases continued to fall in Europe and Asia (down 26%), South America (down 24%) and Africa (down 13%), while a further increase was seen in North America (7%) for the second time in a row (chart 1). To date, the threshold of 11 billion vaccine doses has been reached, including 1.8 billion follow-up doses. This means that around 65% of the worldwide population has received at least one dose of a vaccine (chart 2).

With the decline in the number of new cases, visits to retail and recreation facilities rose between 4 and 17 April relative to the previous two weeks in most of the countries in our sample. Over these two weeks, footfall increased by 10.3% in Belgium, 10% in France, 7.4% in Spain, 7% in Italy and 6.4% in the United Kingdom. Footfall remained stable over the same period in the United States, and moved downwards again in Japan (down 5 points) (chart 3).

Lastly, the weekly proxy indicator of GDP remained positive in the United States, Japan, and Belgium, France and Spain. In Germany, the United Kingdom and Italy, a clear change of trend was seen (chart 3, black line). The OECD Tracker is based on Google Trends resulting from queries on consumption, the labour market, housing, industrial activity as well as uncertainty. The OECD calculates the tracker over a 2-year period (y/2y) to avoid the base effect of a comparison with 2020 data.

Tarik Rharrab

** Google Mobility Reports show how visits and length of stay at different places change compared to a baseline. The baseline is the median value, for the corresponding day of the week, during the 5-week period Jan 3–Feb 6, 2020. A figure of negative 30% indicates that traffic was down 30% compared to a baseline. The reports show trends over several weeks with the most recent data representing approximately 2-3 days ago—this is how long it takes to produce the reports. In order to smooth the series, we use a seven-day moving average of the raw data in the Google Mobility Reports. Source: Google.*

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

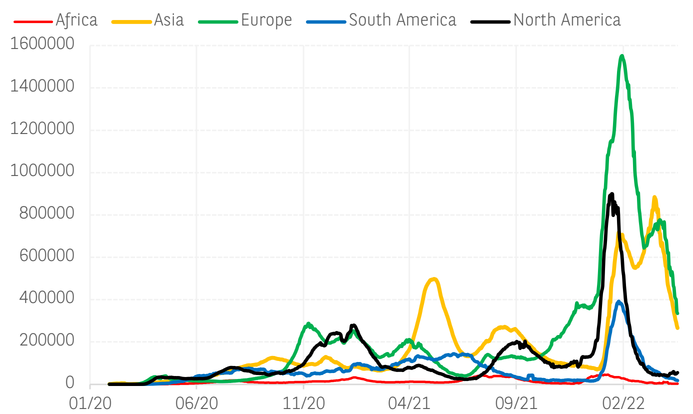


CHART 1 SOURCE: JOHNS-HOPKINS UNIVERSITY (04/21/2022), BNP PARIBAS

SHARE OF PEOPLE WHO RECEIVED AT LEAST ONE DOSE OF VACCINE

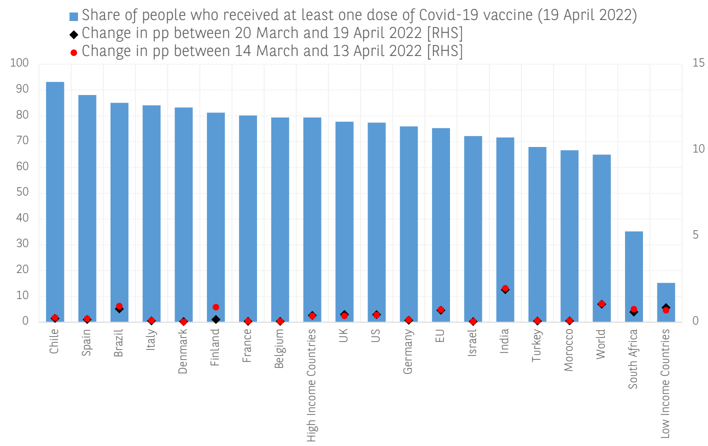
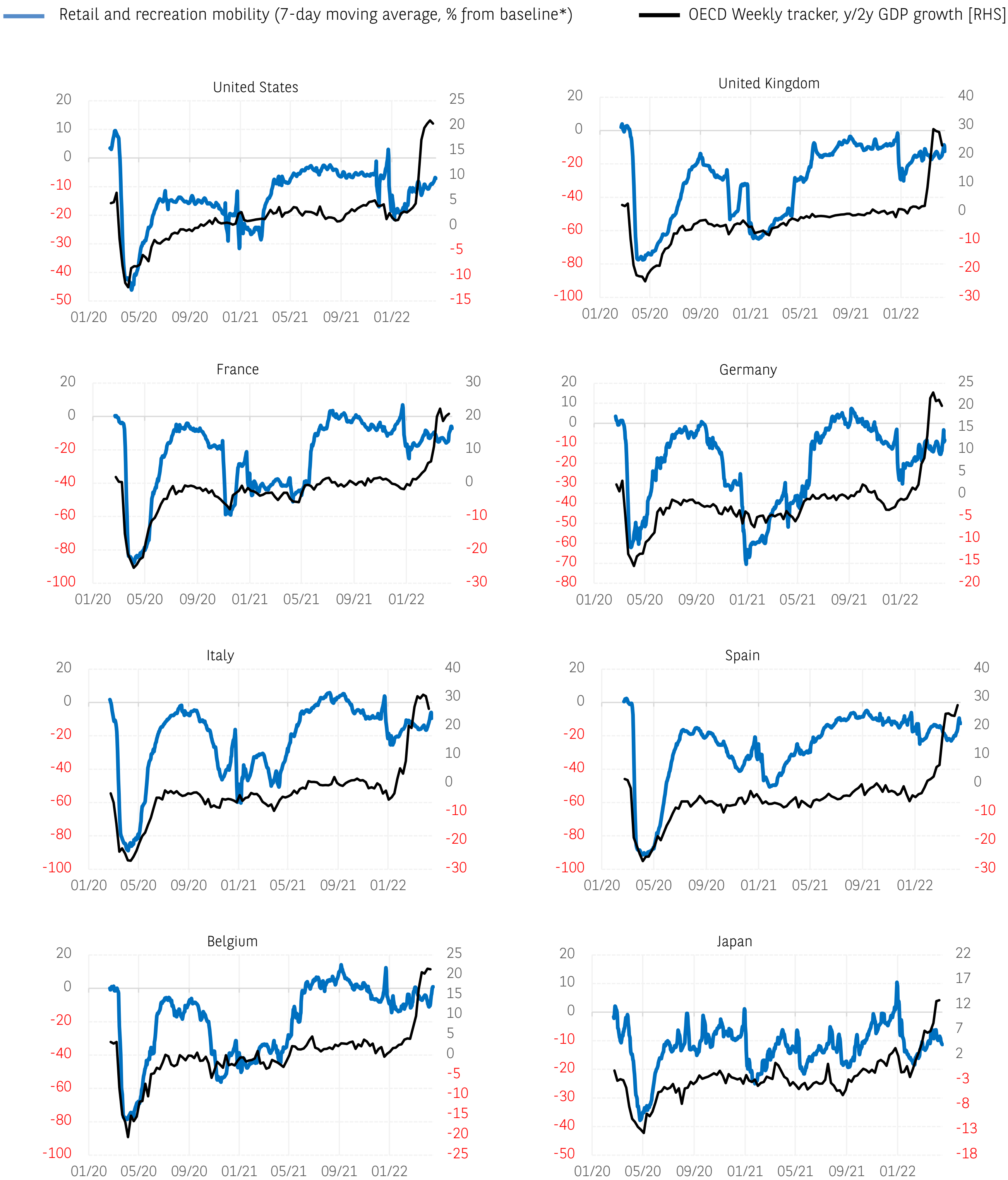


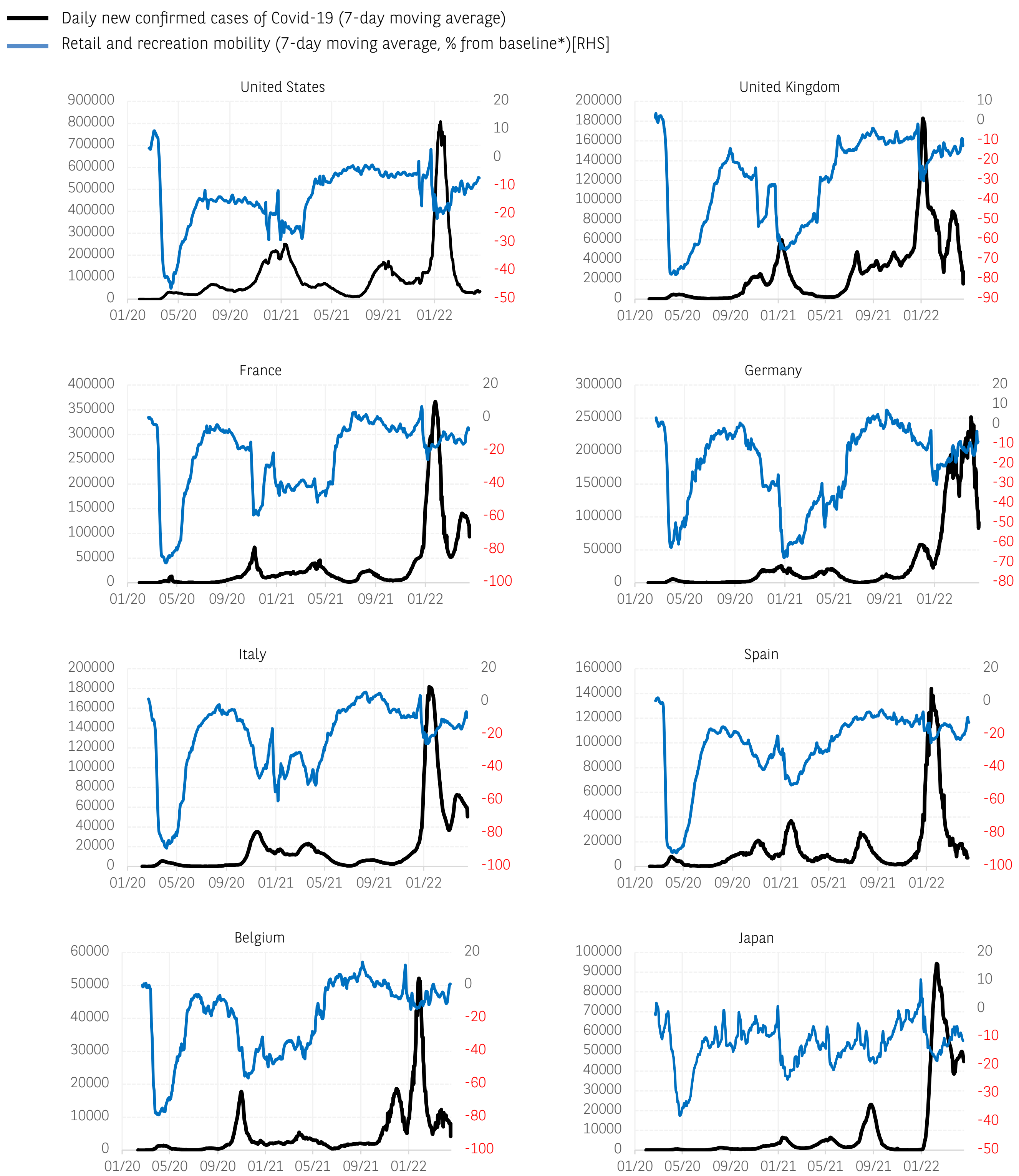
CHART 2 SOURCE: OUR WORLD IN DATA (04/21/2022), BNP PARIBAS

RETAIL AND RECREATION MOBILITY & OECD WEEKLY TRACKER



SOURCE: OECD (04/21/2022), GOOGLE (04/21/2022), BNP PARIBAS

DAILY NEW CASES & RETAIL AND RECREATION MOBILITY



SOURCE: JOHNS-HOPKINS UNIVERSITY (04/21/2022), GOOGLE (04/21/2022), BNP PARIBAS

ECONOMIC SCENARIO

UNITED STATES

The US economy has returned to its pre-pandemic trajectory, and with the unemployment rate at 4%, it is now close to potential. Inflation has risen above 7%, the highest level in forty years, and the Federal Reserve is expected to raise its key rates by at least 100 basis points in 2022. Buoyed by job creations, household consumption is however penalised by the decline in real wages. The downward revision of the government's fiscal ambitions, notably its social welfare plans, may also contribute to calm down private demand. GDP growth will slowdown at around 4%, inflation is expected to remain very high through the end of spring, before easing by the second half of 2022.

CHINA

Economic growth has slowed markedly since last summer. The crisis in the real estate and construction sectors, the authorities' zero-Covid strategy and the persisting weakness of household consumption have heavily weighed on activity. These factors are likely to persist in the short term, even though the government increases fiscal policy support and the central bank enhances monetary easing measures. At the same time, the authorities are expected to continue to act to clean up the property market and tighten the regulatory framework. The export industry, which has remained buoyant in recent months, could start to lose growth momentum in the short term.

EUROZONE

After a strong Q3, growth in Q4 2021 was, as expected, significantly weaker (+0.3% t/t according to the first Eurostat estimate). In addition to the expected normalization, headwinds have increased (supply-side problems, surging inflation and uncertainties arising from the new wave of the pandemic). However, business climate surveys continue to show some resilience. Although the downside risks have intensified, leading, mid-February, to a 0.6 ppts downward revision to our growth forecast for 2022 (to 3.6%), we continue to see the recovery as resilient. A number of tailwinds remain at work – still supportive (albeit less so) policy mix, a build-up of forced savings, scope for the service sector to catch-up, the need for companies to invest and rebuild inventories. Despite a more meaningful slowdown, growth is expected to remain well above its trend rate in 2022. Meanwhile, inflation continues to surge, postponing the expected peak. This is still mainly an energy story but more sustained and widespread factors are also gaining traction. We expect average inflation to spike at 5% in 2022 in annual average terms (after 2.6% in 2021), masking an expected decline over the course of the year.

FRANCE

What is happening at the aggregate eurozone level is representative of what is happening in France, and vice-versa. Although the figures are different, our analysis and view of the economic outlook are identical. In Germany, the headwinds are stronger, while France is less exposed. French growth surprised on the upside in Q4 2021 (0.7% q/q according to INSEE's initial estimate) and reached 7% in 2021 as a whole. In 2022, GDP growth would ease to 3,2%, against a background of higher inflation (4,7% expected in 2022 after 1.6% in 2021).

RATES AND EXCHANGE RATES

In the US, the Federal Reserve has started its tightening cycle and, based on the projections of the FOMC members, several rate hikes should follow this year and next. Over the next 15 months, we expect 275 bp of rate hikes. In addition, the reduction of the size of the balance sheet (quantitative tightening) will probably start in May. The Fed's hawkish stance is motivated by particularly elevated inflation, a strong economy and very low policy rates. These policy changes should only put limited upward pressure on long-term Treasury yields considering that the market has anticipated to a large degree the policy tightening. In addition, as the rate hike cycle continues, bond investors will start to price the prospect of slower growth and the decline of inflation.

In the euro area, the jump in uncertainty and commodity prices are weighing on the sentiment of companies and households. Despite exceptionally high inflation, the ECB insists on the need to keep its optionality, which reflects a preference to have better visibility about the inflation outlook before deciding to change policy. We expect a first hike of the deposit rate in December. Further rate hikes should follow in 2023 bringing the deposit rate to 0.50%. This should push bond yields higher but also lead to a widening of certain sovereign spreads.

The Bank of Japan is expected to maintain its current policy stance in the near term but raise its short-term policy rate from -0.10% to the 0-0.10% range in the latter part of 2023, whilst allowing the 10-year JGB yield to drift higher. These decisions would be based on an increased emphasis on the side effects of the negative interest rate policy and concern about the risk of further yen weakening and its impact on households via higher import prices.

We expect the dollar to weaken versus the euro, considering that both the Federal Reserve and the ECB will tighten policy, that the long-term interest rate differential should narrow and that the euro is undervalued versus the dollar. The increased policy divergence between the Fed and the Bank of Japan should cause an appreciation of the dollar versus the yen but in the latter part of 2023, we expect the yen to appreciate following the change in monetary policy of the Bank of Japan. y

GDP GROWTH

	GDP Growth			Inflation		
%	2021	2022 e	2023 e	2021	2022 e	2023 e
United-States	5.7	3.7	2.5	4.7	6.7	2.7
Japan	1.7	1.6	2.0	-0.2	1.5	1.1
United-Kingdom	7.5	3.6	1.7	2.5	7.0	3.2
Euro Area	5.3	2.8	2.7	2.6	6.8	3.4
Germany	2.9	2.1	3.4	3.2	6.6	3.6
France	7.0	3.2	2.5	2.1	5.3	2.5
Italy	6.6	2.8	2.2	2.0	6.4	2.6
Spain	5.0	4.8	2.7	3.0	8.1	3.5
China	7.7	4.8	5.1	0.9	2.4	2.7
India*	8.1	9.5	7.3	5.1	6.3	5.2
Brazil	5.0	-0.5	0.0	8.3	9.0	5.7
Russia	4.5	-8.5	3.1	7.0	18.2	5.0

SOURCE: BNP PARIBAS GROUP ECONOMIC RESEARCH (E: ESTIMATES & FORECASTS)
*FISCAL YEAR FROM 1ST APRIL OF YEAR N TO MARCH 31ST OF YEAR N+1
** LAST UPDATE 04/08/2022

INTEREST & EXCHANGE RATES

Interest rates, %						
End of period		Q1 2022	Q2 2022 e	Q3 2022 e	Q4 2022 e	Q4 2023 e
US	Fed Funds (upper limit)	0.50	1.00	1.50	1.75	2.50
	T-Note 10y	2.33	2.50	2.60	2.70	2.60
Ezone	Deposit rate	-0.50	-0.50	-0.50	-0.25	0.50
	Bund 10y	0.51	0.75	0.90	1.00	1.20
	OAT 10y	0.84	1.20	1.40	1.50	1.70
	BTP 10y	1.97	2.45	2.75	3.00	3.20
	BONO 10y	1.37	1.75	2.00	2.15	2.35
UK	Base rate	0.75	1.00	1.25	1.25	1.75
	Gilts 10y	1.59	1.75	1.90	2.00	2.00
Japan	BoJ Rate	-0.02	-0.10	-0.10	-0.10	0.10
	JGB 10y	0.21	0.25	0.25	0.25	0.45
Exchange Rates						
End of period		Q1 2022	Q2 2022 e	Q3 2022 e	Q4 2022 e	Q4 2023 e
USD	EUR / USD	1.11	1.11	1.13	1.14	1.20
	USD / JPY	121	125	124	123	115
	GBP / USD	1.32	1.29	1.31	1.33	1.40
EUR	EUR / GBP	0.85	0.86	0.86	0.86	0.86
	EUR / JPY	135	139	140	140	138
Brent						
End of period		Q1 2022	Q2 2022 e	Q3 2022 e	Q4 2022 e	Q4 2023 e
Brent*	USD/bbl	107	135	135	125	104

FORECASTS PRODUCED ON 31 MARCH 2022. SOURCE: BNP PARIBAS (E: ESTIMATES & FORECASTS) (MARKET ECONOMICS, INTEREST RATE STRATEGY, FX STRATEGY, COMMODITIES DESK STRATEGY)

CALENDAR

LATEST INDICATORS

In China, the recent data paint a mixed picture. In March, industrial production grew more strongly than anticipated but the decline in retail sales was larger than expected. On a year-to-date basis, industrial production in March was slightly better than expected in terms of year-on-year growth. Fixed assets investments were essentially flat and property investment growth slowed and came in below the consensus. Property sales were down strongly in March. Finally, the jobless rate increased. In Germany, monthly producer prices jumped and on an annual basis, their increase has crossed the 30.0% bar. The flash manufacturing PMI declined more than anticipated but the services PMI created a positive surprise by improving strongly. In France, business confidence edged down, but less than expected. The manufacturing as well as the services PMI improved and did far better than expected. Eurozone inflation declined slightly in March and, against expectations, consumer confidence improved somewhat. The manufacturing PMI weakened but less than expected but the services PMI created a welcome surprise by improving strongly. In the UK, consumer confidence disappointed with a strong decline. The manufacturing PMI was essentially stable whereas the services PMI declined more than expected. In Japan, the services PMI improved but the manufacturing PMI weakened. In the US, the housing market index (NAHB) declined but was in line with the consensus. The Philadelphia Fed index disappointed, dropping more than anticipated. This also applies to the services PMI, whereas the manufacturing PMI unexpectedly moved higher.

DATE	COUNTRY	INDICATOR	PERIOD	CONSENSUS	ACTUAL	PREVIOUS
04/18/2022	China	Industrial Production YoY	Mar	4.0%	5.0%	--
04/18/2022	China	GDP YTD YoY	1Q	4.2%	4.8%	8.1%
04/18/2022	China	GDP SA QoQ	1Q	0.7%	1.3%	1.6%
04/18/2022	China	GDP YoY	1Q	4.2%	4.8%	4.0%
04/18/2022	China	Retail Sales YoY	Mar	-3.0%	-3.5%	--
04/18/2022	China	Industrial Production YTD YoY	Mar	6.2%	6.5%	7.5%
04/18/2022	China	Fixed Assets Ex Rural YTD YoY	Mar	0.1	0.1	0.1
04/18/2022	China	Retail Sales YTD YoY	Mar	2.8%	3.3%	6.7%
04/18/2022	China	Surveyed Jobless Rate	Mar	5.5%	5.8%	5.5%
04/18/2022	China	Property Investment YTD YoY	Mar	1.2%	0.7%	3.7%
04/18/2022	China	Residential Property Sales YTD YoY	Mar	--	-25.6%	-22.1%
04/18/2022	United States	NAHB Housing Market Index	Apr	77.0	77.0	79.0
04/19/2022	United States	Building Permits MoM	Mar	0.0	0.0	0.0
04/19/22 14:30	United States	Housing Starts MoM	Mar	0.0	0.0	0.1
04/20/2022	Germany	PPI YoY	Mar	30.0%	30.9%	25.9%
04/20/2022	Germany	PPI MoM	Mar	2.7%	4.9%	1.4%
04/20/2022	Eurozone	EU27 New Car Registrations	Mar	--	-20.5%	-6.7%
04/20/2022	United States	U.S. Federal Reserve Releases Beige Book				
04/21/2022	France	Business Confidence	Apr	105.0	106.0	107.0

SOURCE: BLOOMBERG

DATE	COUNTRY	INDICATOR	PERIOD	CONSENSUS	ACTUAL	PREVIOUS
04/21/2022	Eurozone	CPI YoY	Mar	7.5%	7.4%	7.5%
04/21/2022	Eurozone	CPI MoM	Mar	2.5%	2.4%	2.5%
04/21/2022	Eurozone	CPI Core YoY	Mar	3.0%	2.9%	3.0%
04/21/2022	United States	Philadelphia Fed Business Outlook	Apr	21.4	17.6	27.4
04/21/2022	United States	Initial Jobless Claims	Apr	180k	184k	186k
04/21/2022	United States	Leading Index	Mar	0.3%	0.3%	0.6%
04/21/2022	Eurozone	Consumer Confidence	Apr	-20.0	-16.9	-18.7
04/22/2022	United Kingdom	GfK Consumer Confidence	Apr	-33.0	-38.0	-31.0
04/22/2022	Japan	Jibun Bank Japan PMI Services	Apr	--	50.5	49.4
04/22/2022	Japan	Jibun Bank Japan PMI Composite	Apr	--	50.9	50.3
04/22/2022	Japan	Jibun Bank Japan PMI Mfg	Apr	--	53.4	54.1
04/22/2022	United Kingdom	Retail Sales Ex Auto Fuel MoM	Apr	-0.4%	-1.1%	-0.9%
04/22/2022	France	S&P Global France Services PMI	Apr	56.5	58.8	57.4
04/22/2022	France	S&P Global France Manufacturing PMI	Apr	53.7	55.4	54.7
04/22/2022	France	S&P Global France Composite PMI	Apr	55.0	57.5	56.3
04/22/2022	Germany	S&P Global/BME Germany Manufacturing PMI	Apr	54.5	54.1	56.9
04/22/2022	Germany	S&P Global Germany Services PMI	Apr	55.3	57.9	56.1
04/22/2022	Germany	S&P Global Germany Composite PMI	Apr	54.1	54.5	55.1
04/22/2022	Eurozone	S&P Global Eurozone Manufacturing PMI	Apr	54.9	55.3	56.5
04/22/2022	Eurozone	S&P Global Eurozone Services PMI	Apr	55.0	57.7	55.6
04/22/2022	Eurozone	S&P Global Eurozone Composite PMI	Apr	53.9	55.8	54.9
04/22/2022	United Kingdom	S&P Global/CIPS UK Manufacturing PMI	Apr	54.0	55.3	55.2
04/22/2022	United Kingdom	S&P Global/CIPS UK Services PMI	Apr	60.0	58.3	62.6
04/22/2022	United Kingdom	S&P Global/CIPS UK Composite PMI	Apr	58.7	57.6	60.9
04/22/2022	United States	S&P Global US Manufacturing PMI	Apr	58.0	59.7	58.8
04/22/2022	United States	S&P Global US Services PMI	Apr	58.0	54.7	58.0
04/22/2022	United States	S&P Global US Composite PMI	Apr	57.9	55.1	57.7

SOURCE: BLOOMBERG

CALENDAR: THE WEEK AHEAD

COMING INDICATORS

The week will be rich in terms of data with first quarter GDP numbers in the US, France, Germany and the Eurozone. Important survey will be published for Germany (IFO), the Eurozone (European Commission surveys) and the US (Conference Board, University of Michigan). We will also have inflation data for the Eurozone, Germany and France. Finally, the Bank of Japan has a monetary policy committee meeting.

DATE	COUNTRY	INDICATOR	PERIOD	CONSENSUS	PREVIOUS
04/25/2022	Germany	IFO Business Climate	Apr	--	90.8
04/25/2022	Germany	IFO Current Assessment	Apr	--	97
04/25/2022	Germany	IFO Expectations	Apr	--	85.1
04/25/2022	United Kingdom	CBI Trends Total Orders	Apr	--	26
04/25/2022	United Kingdom	CBI Trends Selling Prices	Apr	--	80
04/25/2022	United Kingdom	CBI Business Optimism	Apr	--	-9
04/26/2022	United States	Cap Goods Orders Nondef Ex Air	Mar P	--	-0.20%
04/26/2022	United States	Conf. Board Consumer Confidence	Apr	106.8	107.2
04/26/2022	United States	Conf. Board Present Situation	Apr	--	153
04/26/2022	United States	Conf. Board Expectations	Apr	--	76.6
04/26/2022	United States	New Home Sales MoM	Mar	0.40%	-2.00%
04/27/2022	Germany	GfK Consumer Confidence	May	--	-15.5
04/27/2022	France	Consumer Confidence	Apr	--	91
04/27/22-05/02/22	Germany	Retail Sales MoM	Mar	--	0.30%
04/28/2022	Japan	Retail Sales MoM	Mar	2.10%	-0.80%
04/28/2022	Eurozone	ECB Publishes Economic Bulletin			
04/28/2022	Eurozone	Economic Confidence	Apr	--	108.5
04/28/2022	Eurozone	Industrial Confidence	Apr	--	10.4
04/28/2022	Eurozone	Services Confidence	Apr	--	14.4
04/28/2022	Eurozone	Consumer Confidence	Apr	--	--
04/28/2022	France	Total Jobseekers	1Q	--	3101.8k
04/28/2022	Germany	CPI EU Harmonized MoM	Apr	--	2.50%
04/28/2022	Germany	CPI EU Harmonized YoY	Apr	--	7.60%
04/28/2022	United States	GDP Annualized QoQ	1Q	1.00%	6.90%
04/28/2022	United States	Personal Consumption	1Q	3.40%	2.50%
04/28/2022	United States	GDP Price Index	1Q	7.00%	7.10%

DATE	COUNTRY	INDICATOR	PERIOD	CONSENSUS	PREVIOUS
04/28/2022	United States	Core PCE QoQ	1Q	--	5.00%
04/28/2022	United States	Initial Jobless Claims	Apr	--	--
04/28/2022	Japan	BOJ Policy Balance Rate	Apr	--	-0.10%
04/28/2022	Japan	BOJ 10-Yr Yield Target	Apr	--	0.00%
04/29/2022	France	Consumer Spending MoM	Mar	--	0.80%
04/29/2022	France	Consumer Spending YoY	Mar	--	-2.30%
04/29/2022	France	GDP QoQ	1Q	--	0.70%
04/29/2022	France	GDP YoY	1Q	--	5.40%
04/29/2022	France	CPI EU Harmonized MoM	Apr	--	1.60%
04/29/2022	France	CPI EU Harmonized YoY	Apr	--	5.10%
04/29/2022	Germany	GDP SA QoQ	1Q	--	-0.30%
04/29/2022	Germany	GDP NSA YoY	1Q	--	1.80%
04/29/2022	Germany	GDP WDA YoY	1Q	--	1.80%
04/29/2022	Eurozone	CPI Estimate YoY	Apr	--	7.50%
04/29/2022	Eurozone	CPI MoM	Apr	--	--
04/29/2022	Eurozone	CPI Core YoY	Apr	--	--
04/29/2022	Eurozone	GDP SA QoQ	1Q	--	0.30%
04/29/2022	Eurozone	GDP SA YoY	1Q	--	4.60%
04/29/2022	United States	Employment Cost Index	1Q	1.10%	1.00%
04/29/2022	United States	Personal Income	Mar	0.40%	0.50%
04/29/2022	United States	Personal Spending	Mar	0.60%	0.20%
04/29/2022	United States	Real Personal Spending	Mar	--	-0.40%
04/29/2022	United States	PCE Core Deflator MoM	Mar	0.30%	0.40%
04/29/2022	United States	PCE Core Deflator YoY	Mar	5.30%	5.40%
04/29/2022	United States	U. of Mich. Sentiment	Apr	65.7	65.7
04/29/2022	United States	U. of Mich. Current Conditions	Apr	--	68.1
04/29/2022	United States	U. of Mich. Expectations	Apr	--	64.1
04/29/2022	United States	U. of Mich. 1 Yr Inflation	Apr	--	5.40%
04/29/2022	United States	U. of Mich. 5-10 Yr Inflation	Apr	--	3.00%

SOURCE: BLOOMBERG

FURTHER READING

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GROUP ECONOMIC RESEARCH

William De Vijlder Chief Economist	+33 1 55 77 47 31	william.devijlder@bnpparibas.com

OECD ECONOMIES AND STATISTICS

Hélène Baudchon Head - Eurozone, Germany - Climate	+33 1 58 16 03 63	helene.baudchon@bnpparibas.com
Felix Berte United States, United Kingdom	+33 1 40 14 01 42	felix.berte@bnpparibas.com
Stéphane Colliac France	+33 1 42 98 43 86	stephane.colliac@bnpparibas.com
Guillaume Derrien Southern Europe, Japan - International trade	+33 1 55 77 71 89	guillaume.a.derrien@bnpparibas.com
Veary Bou, Patrick Capeillère, Tarik Rharrab Statistics		

ECONOMIC PROJECTIONS, RELATIONSHIP WITH THE FRENCH NETWORK

Jean-Luc Proutat Head	+33 1 58 16 73 32	jean-luc.proutat@bnpparibas.com

BANKING ECONOMICS

Laurent Quignon Head	+33 1 42 98 56 54	laurent.quignon@bnpparibas.com
Céline Choulet	+33 1 43 16 95 54	celine.choulet@bnpparibas.com
Thomas Humblot	+33 1 40 14 30 77	thomas.humblot@bnpparibas.com

EMERGING ECONOMIES AND COUNTRY RISK

François Faure Head – Argentina, Turkey – Methodology, Modelling	+33 1 42 98 79 82	francois.faure@bnpparibas.com
Christine Peltier Deputy Head – Greater China, Vietnam – Methodology	+33 1 42 98 56 27	christine.peltier@bnpparibas.com
Stéphane Alby Africa (French-speaking countries)	+33 1 42 98 02 04	stephane.alby@bnpparibas.com
Pascal Devaux Middle East, Balkan countries	+33 1 43 16 95 51	pascal.devaux@bnpparibas.com
Hélène Drouot South Korea, Philippines, Thailand, Andean countries	+33 1 42 98 33 00	helene.drouot@bnpparibas.com
Perrine Guérin South Africa & English/Portuguese-speaking African countries	+33 1 42 98 43 86	perrine.guerin@bnpparibas.com
Salim Hammad Latin America	+33 1 42 98 74 26	salim.hammad@bnpparibas.com
Cynthia Kalasopatan Antoine Ukraine, Central European countries		cynthia.kalasopatan@bnpparibas.com
Johanna Melka India, South Asia, Russia, Kazakhstan	+33 1 58 16 05 84	johanna.melka@bnpparibas.com

CONTACT MEDIA

Mickaelle Fils Marie-Luce	+33 1 42 98 48 59	mickaelle.filsmarie-luce@bnpparibas.com

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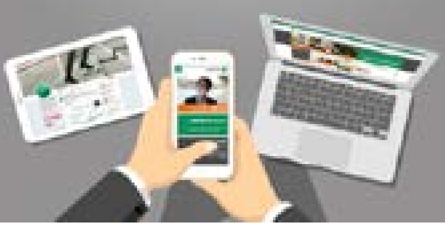

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