ECOWEEK

Issue n° 23.04 23 January 2023

IN THE ABSENCE OF A RECESSION, A SLOWDOWN OF WAGE GROWTH AND, MORE BROADLY, A DECLINE OF CORE INFLATION, MIGHT TAKE MORE TIME THAN EXPECTED, FORCING THE FEDERAL RESERVE TO KEEP POLICY RATES HIGH FOR LONGER. THIS IS NOT EXACTLY WHAT IS BEING PRICED BY FINANCIAL MARKETS.

ECONOMIC RESEARCH



TABLE OF CONTENT

3

EDITORIAL

US: job creation and the unemployment rate

5

MARKETS OVERVIEW

Recent market developments (foreign exchange, stock markets, interest rates, commodities, etc.)

ECONOMIC PULSE

Analysis of the recent economic data of China

ECONOMIC SCENARIO Main economic and financial forecasts



CALENDARS

Last week's main economic data and key releases for the week ahead

<u>11</u>

FURTHER READING

Latest articles, charts, videos and podcasts of Economic Research



EDITORIAL

UNITED STATES: JOB CREATION AND THE UNEMPLOYMENT RATE

The state of the labour market occupies a central role in the analysis of the business cycle. Historically, the percentage of months over the past 12 months with nonfarm payrolls below the 200K threshold increases in the run-up to a recession. Today, this indicator stands at 0 percent. Although there have been many false signals, a significant increase in this percentage calls for vigilance, necessitating closer monitoring of other data as well to assess the risk of recession. An alternative approach consists of making the link between monthly payrolls and the unemployment rate. However, given the latest data on job creations, a swift increase in the unemployment rate sufficient to trigger a recession signal seems unlikely. This means that the slowdown of wage growth and, more broadly, the decline of core inflation, might take more time than expected, forcing the Federal Reserve to keep policy rates high for longer. This is not exactly what is being priced by financial markets.

The state of the labour market occupies a central role in the analysis of the business cycle because it reflects the state of health of firms -are they creating jobs or shedding labour?- and it drives household income and confidence. It is even more closely scrutinized around cyclical turnarounds.

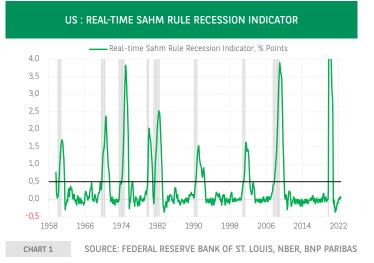
In the US, of the six indicators that the NBER business cycle dating committee uses to determine cyclical peak and trough dates, two relate to the labour market: nonfarm payroll employment and employment as measured by the household survey¹. According to the Sahm rule, the US economy enters a recession when the three-month moving average of the national unemployment rate (U3) rises by 0.50 percentage points or more relative to its low during the previous 12 months².

As shown by chart 1, the recent evolution of this indicator causes concern -it has increased- but also brings some relief because we are still below the critical threshold. These different indicators imply that in coming months, the pace of job creation will be particularly important in the assessment of the recession risk, either directly -in the NBER's set of indicators- or indirectly, through the influence on the unemployment rate.

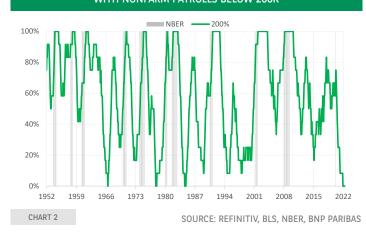
Establishing a link between the monthly nonfarm payrolls and the likelihood of entering recession is not straightforward. In what follows, two approaches will be discussed. The first one looks at the frequency of low job creation numbers, based on the rationale that one bad number could be considered as a one-off, whereas several low numbers could fuel recession fears.

Chart 2 shows the percentage of months over the past 12 months with nonfarm payrolls below the 200.000 threshold³. Historically, this percentage has increased in the run-up to a recession but there have also been false signals, whereby a significant increase in the indicator was not followed by a recession. This was, amongst others, the case in 1986, 1996, 2013 and 2018.

Table 1 focuses specifically on the 12 months in the run-up to a recession and shows a great diversity across cycles. The recession that started in November 1973 was preceded by a low percentage of payrolls below 200K. The one starting in December 2007 already had a high percentage of job creations below 200K 12 months earlier. For the current situation -no payrolls below 200K in the past 12 months-, the months leading to the January 1980 and March 2001 recessions should be kept in mind: starting from a very low level, the percentage of below 200K job creations increased steadily and eventually the economy entered a recession.



US: PERCENTAGE OF MONTHS (OVER THE PAST 12 MONTHS) WITH NONFARM PAYROLLS BELOW 200K



To conclude on this point, given the diversity of situations seen in the past, this indicator should be used with caution. However, a significant increase in its value calls for vigilance, necessitating closer monitoring of other data as well to assess the risk of recession.

1 The other indicators are: real personal income less transfers, real personal consumption expenditures, wholesale-retail sales adjusted for price changes, industrial production. Source: NBER. 2. Source: EPED. Federal Reserve of St. Louis

Source: NBER. 2 Source: FRED, Federal Reserve of St Louis. 3 This threshold was chosen because it is close to the December number (223K jobs were created outside the agricultural sector). Charts with lower thresholds are available from the author upon request.



EDITORIAL

An alternative approach consists of making the link between monthly payrolls and the unemployment rate, the idea being that a lasting increase of the latter would, based on the Sahm rule, signal a recession.

Table 2 shows the employment status of the US civilian population of working age. According to US Census data, the civilian noninstitutional population⁴ is expected to increase 0.51 % between December 2022 and December 2023⁵. Assuming a constant labour force participation rate of 62.3%, this would imply a labour force of 165,812 million (table 3). An increase of the unemployment rate with 0.5 percentage points to 4.0% by December 2023, would correspond to an employment level of 159,180 million, i.e. a decrease of 63 thousand jobs compared with December 2022.

One should keep in mind that the employment level that is used to calculate the unemployment rate is based on the household survey, whereas the nonfarm payrolls report is based on a different survey, the establishment survey⁶.

The monthly changes in the two employment series are highly correlated, although in the short run there may be large differences. Based on a linear regression, a decrease of 63 thousand jobs in the household survey is expected to correspond to a decrease in the level of nonfarm payrolls with 21 thousand.

This analysis leads to two important conclusions. One, given the latest data on job creations -223 thousand new jobs in December-, a swift increase in the unemployment rate sufficient to trigger a recession signal based on the Sahm rule seems unlikely. It would require a significant slowdown in activity with a very negative impact on monthly payroll numbers⁷. Two, in the absence of a recession, a slowdown of wage growth and, more broadly, a decline of core inflation, might take more time than expected, forcing the Federal Reserve to keep policy rates high for longer. This is not exactly what is being priced by financial markets.

William De Vijlder

4 Civilian noninstitutional population: Persons 16 years of age and older residing in the 50 states and the District of Columbia, who are not inmates of institutions (e.g., penal and mental facilities, homes for the aged), and who are not on active duty in the Armed Forces (source: US Department of Labor). 5 Source : Monthly Population Estimates for the United States: April 1, 2020 to December 1, 2023 (NA-EST2022-POP) (source: U.S. Census Bureau). 6 The household survey is based on a sample of about 60,000 households conducted by the US Census Bureau. It collects information on the labour force, employment, and unemployment. The establishment survey provides information on employment, hours, and earnings of employees on nonfarm payrolls. It is based on a sample of about 131000 businesses and government agencies. Source: US Bureau of Labor Statistics, Employment situation technical note. 7 Considering that an unemployment at of 3.5% would correspond to a reduction of the level of nonfarm payrolls of 21K, any positive change in monthly payrolls would need to be compensated by negative numbers at a later stage.

US: PERCENTAGE OF MONTHS (OVER THE PAST 12 MONTHS) WITH NONFARM PAYROLLS BELOW 200K

| Month before start of recession | START OF RECESSION | | | | | | | | | | |
|------------------------------------|--------------------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| (= month 0) | July 19 53 | Aug. 1957 | April 1960 | Dec. 1969 | Nov. 1973 | Jan. 1980 | July 1981 | July 1990 | Mar. 2001 | Dec. 2007 | Feb. 2020 |
| -12 | 92% | 83% | 50% | 33% | 17% | 17% | 100% | 50% | 17% | 67% | 58% |
| -11 | 83% | 83% | 42% | 33% | 17% | 17% | 92% | 50% | 17% | 67% | 58% |
| -10 | 75% | 83% | 42% | 33% | 17% | 17% | 92% | 50% | 17% | 75% | 50% |
| -9 | 67% | 83% | 42% | 25% | 17% | 25% | 83% | 58% | 25% | 75% | 58% |
| -8 | 58% | 92% | 42% | 33% | 17% | 25% | 75% | 58% | 33% | 75% | 58% |
| -7 | 50% | 92% | 50% | 25% | 25% | 25% | 75% | 67% | 33% | 75% | 58% |
| -6 | 50% | 83% | 50% | 25% | 33% | 33% | 75% | 67% | 42% | 75% | 67% |
| -5 | 58% | 83% | 50% | 33% | 33% | 42% | 75% | 67% | 50% | 75% | 67% |
| -4 | 58% | 83% | 42% | 33% | 33% | 42% | 75% | 58% | 50% | 75% | 67% |
| -3 | 58% | 83% | 50% | 33% | 33% | 50% | 75% | 58% | 58% | 75% | 58% |
| -2 | 58% | 83% | 50% | 33% | 33% | 58% | 75% | 58% | 67% | 75% | 67% |
| -1 | 58% | 83% | 58% | 42% | 33% | 67% | 75% | 58% | 67% | 83% | 67% |
| 0 | 58% | 92% | 58% | 50% | 33% | 67% | 75% | 58% | 75% | 83% | 58% |

TABLE 1

US CIVILIAN POPULATION: EMPLOYMENT STATUS

| Numbers in thousands | December 2022 | Nu | |
|---------------------------------------|--------------------------|----------------|-----|
| Civilian non institutional population | а | 264844 | Civ |
| Civilian labor force | b | 164966 | Civ |
| Participation rate | c=b/a | 62,3% | Par |
| Employed | d | 159244 | Em |
| Unemployed | е | 5722 | Un |
| Unemployment rate | f=e/b | 3,5% | Un |
| TABLE 2 | SOURCE: US BUREAU OF LAB | BOR STATISTICS | |





SOURCE: REFINITIV, BLS, NBER, BNP PARIBAS

US: SIMULATION OF EMPLOYMENT LEVEL FOR A GIVEN INCREASE IN THE UNEMPLOYMENT RATE

| Numbers in thousands | | December 2023 | Source | | | | | |
|---------------------------------------|----------------------------------|---------------|------------|--|--|--|--|--|
| Civilian non institutional population | а | 266.204 | US Census | | | | | |
| Civilian labor force | b | 165.813 | b=c*a | | | | | |
| Participation rate | С | 62.3% | assumption | | | | | |
| Employed | d | 159.180 | d=b-e | | | | | |
| Unemployed | е | 6.633 | e=f*b | | | | | |
| Unemployment rate | f | 4% | assumption | | | | | |
| TABLE 3 | SOURCE: BNP PARIBAS CALCULATIONS | | | | | | | |

MARKETS OVERVIEW

OVERVIEW

| Week 13-1 23 to 2 | 20-1-23 | | | |
|---------------------------|---------|---------|------|----|
| ¥ CAC 40 | 7 024 | ▶ 6 996 | -0.4 | % |
| ¥ S&P 500 | 3 999 | ▶ 3 973 | -0.7 | % |
| オ Volatility (VIX) | 18.4 | ▶ 19.9 | +1.5 | рb |
| 켜 Euribor 3M (%) | 2.33 | ▶ 2.42 | +8.9 | bp |
| ⊅ Libor \$ 3M (%) | 4.79 | ▶ 4.82 | +2.3 | bp |
| u OAT 10y (%) | 2.61 | ▶ 2.61 | -0.7 | bp |
| ⊅ Bund 10y (%) | 2.13 | ▶ 2.13 | +0.8 | bp |
| 🔰 US Tr. 10y (%) | 3.51 | ▶ 3.49 | -2.7 | bp |
| ⊅ Euro vs dollar | 1.08 | ▶ 1.08 | +0.0 | % |
| ⊅ Gold (ounce, \$) | 1 911 | ▶ 1 929 | +0.9 | % |
| ↗ Oil (Brent, \$) | 85.3 | ▶ 87.7 | +2.7 | % |

| Interest Rates | highest 23 lowest | | | 23 | | | |
|----------------|-------------------|-------|----|-------|-------|----|-------|
| €ECB | 2.50 | 2.50 | at | 02/01 | 2.50 | at | 02/01 |
| Eonia | -0.51 | -0.51 | at | 02/01 | -0.51 | at | 02/01 |
| Euribor 3M | 2.42 | 2.42 | at | 20/01 | 2.16 | at | 02/01 |
| Euribor 12M | 3.33 | 3.37 | at | 11/01 | 3.30 | at | 19/01 |
| \$ FED | 4.50 | 4.50 | at | 02/01 | 4.50 | at | 02/01 |
| Libor 3M | 4.82 | 4.83 | at | 12/01 | 4.77 | at | 02/01 |
| Libor 12M | 5.35 | 5.56 | at | 06/01 | 5.30 | at | 19/01 |
| £ BoE | 3.50 | 3.50 | at | 02/01 | 3.50 | at | 02/01 |
| Libor 3M | 4.06 | 4.06 | at | 20/01 | 3.87 | at | 02/01 |
| Libor 12M | 0.81 | 0.81 | at | 02/01 | 0.81 | at | 02/01 |

MONEY & BOND MARKETS

| Yield (%) | | highest 23 | lowest 23 |
|--------------|------|-------------|------------------|
| € AVG 5-7y | 2.64 | 2.64 at 02/ | 01 2.64 at 02/01 |
| Bund 2y | 2.58 | 2.69 at 02/ | 01 2.46 at 17/01 |
| Bund 10y | 2.13 | 2.44 at 02/ | 01 1.98 at 18/01 |
| OAT 10y | 2.61 | 2.99 at 02/ | 01 2.42 at 18/01 |
| Corp. BBB | 4.19 | 4.63 at 02/ | 01 4.05 at 18/01 |
| \$ Treas. 2y | 4.19 | 4.46 at 05/ | 01 4.08 at 18/01 |
| Treas. 10y | 3.49 | 3.83 at 02/ | 01 3.38 at 18/01 |
| High Yield | 8.26 | 9.01 at 02/ | 01 8.15 at 18/01 |
| £ gilt. 2y | 3.46 | 3.69 at 02/ | 01 3.44 at 12/01 |
| gilt. 10y | 3.38 | 3.67 at 02/ | 01 3.28 at 19/01 |

EXCHANGE RATES

| 1€ = | | high | est 23 | low | 23 | 2023 | |
|--------|--------|--------|----------|--------|----|-------|--------|
| USD | 1.08 | 1.08 | at 18/01 | 1.05 | at | 05/01 | +1.5% |
| GBP | 0.88 | 0.89 | at 12/01 | 0.87 | at | 19/01 | -1.3% |
| CHF | 1.00 | 1.00 | at 12/01 | 0.99 | at | 04/01 | +1.0% |
| JPY | 140.72 | 142.58 | at 11/01 | 138.02 | at | 03/01 | -0.1% |
| AUD | 1.56 | 1.57 | at 02/01 | 1.54 | at | 17/01 | -1.0% |
| CNY | 7.34 | 7.42 | at 02/01 | 7.23 | at | 05/01 | -1.1% |
| BRL | 5.63 | 5.79 | at 04/01 | 5.52 | at | 13/01 | -0.0% |
| RUB | 74.60 | 77.91 | at 02/01 | 73.32 | at | 12/01 | -4.2% |
| INR | 87.87 | 88.47 | at 09/01 | 86.85 | at | 05/01 | -0.5% |
| At 20- | 1-23 | | | | | | Change |

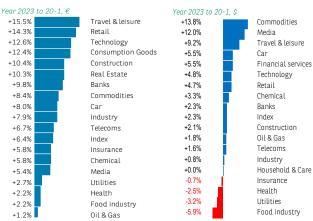
COMMODITIES

| Spot price, \$ | high | highest 23 | | | lowest 23 | | | 2023 2023(€) | | |
|----------------|-------|------------|----|-------|-----------|----|-------|--------------|--------|--|
| Oil, Brent | 87.7 | 87.7 | at | 20/01 | 78.0 | at | 04/01 | +3.2% | +1.7% | |
| Gold (ounce) | 1 929 | 1 929 | at | 20/01 | 1 824 | at | 02/01 | +6.2% | +4.7% | |
| Metals, LMEX | 4 349 | 4 349 | at | 20/01 | 3 905 | at | 05/01 | +9.2% | +7.6% | |
| Copper (ton) | 9 308 | 9 326 | at | 18/01 | 8 2 3 6 | at | 04/01 | +11.3% | +9.6% | |
| wheat (ton) | 276 | 2.9 | at | 02/01 | 272 | at | 10/01 | -3.3% | -4.8% | |
| Corn (ton) | 262 | 2.7 | at | 17/01 | 251 | at | 04/01 | +0.1% | -0.7% | |
| At 20-1-23 | - | | | | | | | | Change | |

EQUITY INDICES

| | Index | highest 2 | 23 | low | est | 23 | 2023 |
|--------------------|--------|-------------|-------|--------|-----|-------|--------|
| World | | | | | | | |
| MSCI World | 2 725 | 2 736 at 3 | 17/01 | 2 595 | at | 05/01 | +4.7% |
| North America | | | | | | | |
| S&P500 | 3 973 | 3 999 at 3 | 13/01 | 3 808 | at | 05/01 | +3.5% |
| Europe | | | | | | | |
| EuroStoxx50 | 4 120 | 4 174 at 2 | 18/01 | 3 856 | at | 02/01 | +8.6% |
| CAC 40 | 6 996 | 7 083 at 2 | 18/01 | 6 595 | at | 02/01 | +0.8% |
| DAX 30 | 15 034 | 15 187 at 3 | 17/01 | 14 069 | at | 02/01 | +8.0% |
| IBEX 35 | 8 918 | 8 933 at 2 | 18/01 | 8 370 | at | 02/01 | +0.8% |
| FTSE100 | 7 771 | 7 860 at 3 | 16/01 | 7 452 | at | 02/01 | +0.4% |
| Asia | | | | | | | |
| MSCI, loc. | 1 104 | 1 105 at 3 | 18/01 | 1 065 | at | 04/01 | +0.3% |
| Nikkei | 26 554 | 26 791 at 3 | 18/01 | 25 717 | at | 04/01 | +1.8% |
| Emerging | | | | | | | |
| MSCI Emerging (\$) | 1 036 | 1 036 at 2 | 20/01 | 956 | at | 02/01 | +0.8% |
| China | 73 | 73 at 2 | 20/01 | 64 | at | 02/01 | +13.4% |
| India | 780 | 786 at 3 | 18/01 | 761 | at | 06/01 | -0.8% |
| Brazil | 1 507 | 1 540 at 3 | 18/01 | 1 357 | at | 04/01 | +1.8% |
| At 20-1-23 | _ | | | | | - | Change |

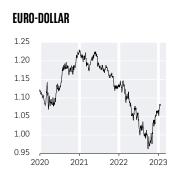
PERFORMANCE BY SECTOR (Eurostoxx50 & S&P500)



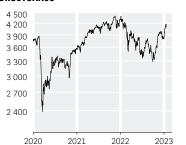
SOURCE: REFINITIV, BNP PARIBAS,

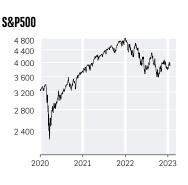


MARKETS OVERVIEW

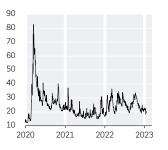


EUROSTOXX50

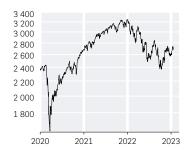




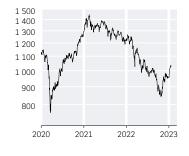
VOLATILITY (VIX, S&P500)



MSCI WORLD (USD)



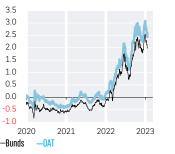
MSCI EMERGING (USD)



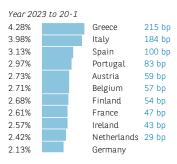
10Y BOND YIELD, TREASURIES VS BUND



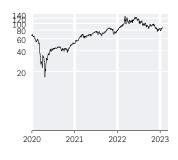
10Y BOND YIELD



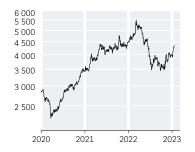
10Y BOND YIELD & SPREADS



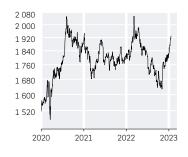
OIL (BRENT, USD)



METALS (LMEX, USD)



GOLD (OUNCE, USD)



SOURCE: REFINITIV, BNP PARIBAS,



ECONOMIC PULSE

CHINA: PENDING THE ECONOMIC REBOUND

In Q4 2022, China's economic growth slowed to 2.9% year-on-year (y/y) from 3.9% in Q3. In quarter-on-quarter terms, activity stagnated. Our Pulse below highlights a broad-based weakening in economic activity during the last quarter of 2022.

Growth in exports and industrial production has worsened significantly. Exports in value terms contracted by -6.6% y/y in Q4 2022, after an increase of +10.1% in Q3. Industrial production growth slowed to +2.8% y/y in real terms in Q4 2022, after having picked up to +4.8% in Q3. The manufacturing sector has been hurt by the slowdown in world demand and by the weakness of domestic demand – which has resulted, in particular, from lower auto sales (due to the lessening impact of tax incentives, from the persisting crisis in the property and construction sector, and from new significant disruptions due to the Covid-19 pandemic.

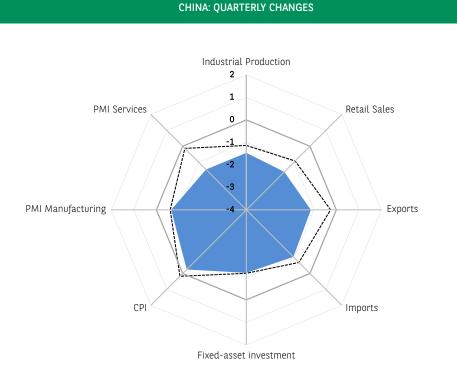
Until the beginning of December, this disruption resulted from the mobility restrictions imposed in various regions as part of the zero-Covid policy. Since December 7th, the very sudden and ill-prepared abandonment of this strict policy has plunged the country into further turbulence. The spike in the number of Covid-19 cases has resulted in new disruptions in factories (due to absenteeism). It has also weighed on household consumption and activity in the services sector during several weeks. In Q4 2022, services production fell by -0.9% y/y and retail sales volumes by -4%.

From the demand standpoint, data for 2022 as a whole show that economic activity has been firstly driven by investment. Its contribution to GDP growth reached 1.5 percentage point (pp) mostly thanks to public investment. The contribution of consumption was smaller (only 1.1 pp) and that of net exports was positive, standing at 0.5 pp. Real GDP growth reached 3% in 2022.

The epidemic wave and its effects on activity should ease from February 2023. This scenario assumes that the epidemic remains under control during the Chinese New Year period in the coming days, including in rural areas that have fewer hospitals and medical equipment.

Activity driven by domestic demand should then rebound, notably supported by a catch-up effect The authorities are also considering a further strengthening of fiscal and monetary support policies, especially aimed at supporting the property sector. With these support measures, and assuming that the health situation improves, the property sector should, at best, stabilise over the course of 2023. Meanwhile, export growth should remain constrained by the slowdown in global growth.

Christine Peltier



SOURCE: NBS, 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-research.bnpparibas.com

8

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 in Chinese economic growth since its Q2 2022 contraction has been sluggish and unbalanced. Industrial production has been the main growth driver, but it has lost steam since last October, largely due to the weakening in external demand and slower export growth. Meanwhile, activity driven by the domestic market and the services sector remains constrained by powerful drags, including the crisis in the property sector, the deterioration in the labour market, weak household confidence, and the Covid policy. Since early December 2022, the very sudden and ill-prepared abandonment of the strict zero Covid policy has plunged the country into new turbulence. However, domestic demand should rebound when the epidemic wave starts to ease. The authorities are enhancing again fiscal and monetary support measures, which are notably aimed at stabilizing the property sector.

EUROZONE

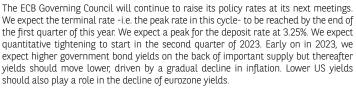
Growth in the euro zone in the third quarter was weak, but at least it remained positive, while the survey data (business and consumer confidence) seemed to be clearly pointing to a decline. Although a contraction was avoided in the third quarter, the euro zone is unlikely to avoid recession. The combination 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 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 3.4% in 2022 and 0.2% in 2023. The subsequent recovery is likely to be weak. Inflation is likely to remain elevated, well above the 2% target at the end of this 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 (from 5.9% y/y in December towards 6.5% 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 this 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 Bank of Japan has increased the upper end of its target range for the 10year JGB yield to 0.5% and further adjustments to the yield curve control policy cannot be excluded. Nevertheless, we do not expect the BoJ to proceed with 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 AND INFLATION | | | | | | | | | | |
|--------------------------|------|------------|--------|--------|--|-----------|--------|--------|--------|--|
| | | GDP Growth | | | | Inflation | | | | |
| % | 2021 | 2022 e | 2023 e | 2024 e | | 2021 | 2022 e | 2023 e | 2024 e | |
| United-States | 5.7 | 2.1 | 0.3 | -0.2 | | 4.7 | 8.1 | 4.2 | 2.4 | |
| Japan | 1.7 | 1.2 | 0.9 | 0.3 | | -0.2 | 2.5 | 2.2 | 1.2 | |
| United-Kingdom | 7.4 | 4.4 | -0.9 | 0.8 | | 2.6 | 9.0 | 6.8 | 2.1 | |
| Euro Area | 5.3 | 3.4 | 0.2 | 1.3 | | 2.6 | 8.4 | 5.0 | 2.4 | |
| Germany | 2.6 | 1.9 | -0.2 | 1.2 | | 3.2 | 8.6 | 4.6 | 2.1 | |
| France | 6.8 | 2.5 | 0.0 | 1.0 | | 2.1 | 5.9 | 5.8 | 2.9 | |
| Italy | 6.6 | 3.9 | 0.2 | 1.2 | | 1.9 | 8.7 | 6.7 | 2.3 | |
| Spain | 5.1 | 5.3 | 0.6 | 1.4 | | 3.0 | 8.3 | 1.8 | 1.7 | |
| China | 8.1 | 2.6 | 5.1 | 5.3 | | 0.9 | 2.0 | 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, % End of period | | Q1 2023 | Q2 2023 | Q3 2023 | Q4 2023 | Q4 2024 |
|------------------------------------|----------------------------|---------|---------|---------|---------|---------|
| US | Fed Funds (upper limit) | 5.00 | 5.25 | 5.25 | 5.25 | 3.25 |
| | T-Note 10y | 4.30 | 4.00 | 3.75 | 3.50 | 3.25 |
| Eurozone | deposite rate | 3.00 | 3.25 | 3.25 | 3.25 | 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 |
| | BONO 10y | 4.05 | 3.90 | 3.75 | 3.55 | 2.90 |
| UK | Base rate | 4.25 | 4.25 | 4.25 | 4.25 | 3.50 |
| | Gilts 10y | 4.00 | 3.75 | 3.60 | 3.35 | 3.15 |
| Japan | BoJ Rate | -0.10 | -0.10 | -0.10 | -0.10 | -0.10 |
| | JGB 10y | 0.90 | 0.95 | 0.95 | 0.90 | 0.90 |
| Exchange Rates | | | | | | |
| End of period | | Q1 2023 | Q2 2023 | Q3 2023 | Q4 2023 | Q4 202 |
| 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 | | Q1 2023 | Q2 2023 | Q3 2023 | Q4 2023 | Q4 202 |
| 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

LATEST INDICATORS

In China several data covering the month of December brought some relief. Annual growth of industrial production slowed compared to November but less than expected. The contraction of retail sales was smaller than the previous month. The consensus had expected a far bigger decline. The jobless rate declined, which represents another positive surprise. Finally, 4th quarter GDP showed a stable GDP, whereas analysts had expected a decline. In the Eurozone, the ZEW expectations survey jumped in January. The final inflation numbers (y/y) were in line with the preliminary estimate. In Germany, the ZEW expectations survey also jumped, beating the consensus by a wide margin. In the UK, retail sales and consumer confidence disappointed. In the US, retail sales (m/m) contracted more in December than the previous month and also more than anticipated. Housing starts declined less than expected but building permits disappointed versus the consensus although declining far less than in November. Initial unemployment claims were also down. The NAHB housing market index improved slightly.

| DATE | COUNTRY | INDICATOR | PERIOD | SURVEY | ACTUAL | PREVIOUS |
|----------|----------------|-------------------------------------|--------|--------|--------|-----------------|
| 01/16/23 | China | New Home Prices MoM | Dec | | -0.25% | -0.25% |
| 01/17/23 | China | Industrial Production YoY | Dec | 0.1% | 1.3% | 2.2% |
| 01/17/23 | China | Retail Sales YoY | Dec | -9.0% | -1.8% | -5.9% |
| 01/17/23 | China | Fixed Assets Ex Rural YTD YoY | Dec | 5.0% | 5.1% | 5.3% |
| 01/17/23 | China | Property Investment YTD YoY | Dec | -10.5% | -10.0% | -9.8% |
| 01/17/23 | China | Residential Property Sales YTD YoY | Dec | | -28.3% | -28.4% |
| 01/17/23 | China | Surveyed Jobless Rate | Dec | 5.8% | 5.5% | 5.7% |
| 01/17/23 | China | GDP SA QoQ | 4Q | -1.1% | 0.0% | 3.9% |
| 01/17/23 | United Kingdom | Employment Change 3M/3M | Nov | Ok | 27k | 27k |
| 01/17/23 | Germany | ZEW Survey Expectations | Jan | -15.0 | 16.9 | -23.3 |
| 01/17/23 | Germany | ZEW Survey Current Situation | Jan | -57.0 | -58.6 | -61.4 |
| 01/17/23 | Eurozone | ZEW Survey Expectations | Jan | | 16.7 | -23.6 |
| 01/18/23 | United Kingdom | CPIH YoY | Dec | 9.2% | 9.2% | 9.3% |
| 01/18/23 | Eurozone | EU27 New Car Registrations | Dec | | 12.8% | 16.3% |
| 01/18/23 | United Kingdom | House Price Index YoY | Nov | 10.3% | 10.3% | 12.4% |
| 01/18/23 | Eurozone | CPI MoM | Dec | -0.3% | -0.4% | -0.3% |
| 01/18/23 | Eurozone | CPI YoY | Dec | 9.2% | 9.2% | 9.2% |
| 01/18/23 | Eurozone | CPI Core YoY | Dec | 5.2% | 5.2% | 5.2% |
| 01/18/23 | United States | Retail Sales Advance MoM | Dec | -0.9% | -1.1% | -1.0% |
| 01/18/23 | United States | Retail Sales Ex Auto and Gas | Dec | 0.0% | -0.7% | -0.5% |
| 01/18/23 | United States | PPI Final Demand MoM | Dec | -0.1% | -0.5% | 0.2% |
| 01/18/23 | United States | PPI Ex Food and Energy MoM | Dec | 0.1% | 0.1% | 0.2% |
| 01/18/23 | United States | NAHB Housing Market Index | Jan | 31.0 | 35.0 | 31.0 |
| 01/18/23 | United States | Federal Reserve Releases Beige Book | | | | |
| 01/18/23 | Japan | BOJ 10-Yr Yield Target | jan | 0.0% | 0.0% | 0.0% |
| 01/19/23 | United States | Building Permits MoM | Dec | 1.0% | -1.6% | -10.6% |
| 01/19/23 | United States | Housing Starts MoM | Dec | -4.8% | -1.4% | -1.8% |
| 01/19/23 | United States | Initial Jobless Claims | jan | 214k | 190k | 205k |
| 01/20/23 | Japan | Natl CPI Ex Fresh Food, Energy YoY | Dec | 3.1% | 3.0% | 2.8% |
| 01/20/23 | United Kingdom | GfK Consumer Confidence | Jan | -40.0 | -45.0 | -42.0 |
| 01/20/23 | United Kingdom | Retail Sales Ex Auto Fuel MoM | Dec | 0.4% | -1.1% | -0.3% |
| 01/20/23 | France | Retail Sales SA YoY | Dec | | -5.0% | -3.9% |
| | | | | | SOL | JRCE: BLOOMBERG |



CALENDAR: THE WEEK AHEAD

COMING INDICATORS

This week sees the publication of several surveys covering the month of January: flash PMIs in several countries, consumer confidence (Eurozone, France, Germany), business confidence in France, the IFO survey in Germany. In the US the focus will be on 4th quarter GDP growth and the University of Michigan survey.

| DATE | COUNTRY | INDICATOR | PERIOD | SURVEY | PREVIOUS |
|------------|----------------|--|--------|--------|----------|
| 01/23/2023 | United States | Leading Index | Dec | -0.7% | -1.0% |
| 01/23/2023 | Eurozone | Consumer Confidence | Jan | -20.0 | -22.2 |
| 01/24/2023 | Japan | Jibun Bank Japan PMI Mfg | Jan | | 48.9 |
| 01/24/2023 | Japan | Jibun Bank Japan PMI Services | Jan | | 51.1 |
| 01/24/2023 | Germany | GfK Consumer Confidence | Feb | -33.0 | -37.8 |
| 01/24/2023 | France | Business Confidence | Jan | 103 | 102 |
| 01/24/2023 | France | S&P Global France Manufacturing PMI | Jan | 49.7 | 49.2 |
| 01/24/2023 | France | S&P Global France Services PMI | Jan | 49.7 | 49.5 |
| 01/24/2023 | Germany | S&P Global/BME Germany Manufacturing PMI | Jan | 48.0 | 47.1 |
| 01/24/2023 | Germany | S&P Global Germany Services PMI | Jan | 49.7 | 49.2 |
| 01/24/2023 | Eurozone | S&P Global Eurozone Manufacturing PMI | Jan | 48.5 | 47.8 |
| 01/24/2023 | Eurozone | S&P Global Eurozone Services PMI | Jan | 50.2 | 49.8 |
| 01/24/2023 | United Kingdom | S&P Global/CIPS UK Manufacturing PMI | Jan | 45.7 | 45.3 |
| 01/24/2023 | United Kingdom | S&P Global/CIPS UK Services PMI | Jan | 49.7 | 49.9 |
| 01/24/2023 | United Kingdom | CBI Business Optimism | Jan | | -48 |
| 01/24/2023 | United States | S&P Global US Manufacturing PMI | Jan | 46.5 | 46.2 |
| 01/24/2023 | United States | S&P Global US Services PMI | Jan | 46.0 | 44.7 |
| 01/25/2023 | Germany | IFO Business Climate | Jan | 90.1 | 88.6 |
| 01/25/2023 | Germany | IFO Current Assessment | Jan | 95.0 | 94.4 |
| 01/25/2023 | Germany | IFO Expectations | Jan | 85.0 | 83.2 |
| 01/25/2023 | France | Total Jobseekers | 4Q | | 2946.1k |
| 01/26/2023 | United States | GDP Annualized QoQ | 4Q | 2.6% | 3.2% |
| 01/26/2023 | United States | Initial Jobless Claims | Jan | | 190k |
| 01/26/2023 | United States | Cap Goods Orders Nondef Ex Air | Dec | -0.2% | 0.1% |
| 01/26/2023 | United States | New Home Sales MoM | Dec | -4.1% | 5.8% |
| 01/27/2023 | France | Consumer Confidence | Jan | 83 | 82 |
| 01/27/2023 | United States | Personal Income | Dec | 0.2% | 0.4% |
| 01/27/2023 | United States | Personal Spending | Dec | -0.1% | 0.1% |
| 01/27/2023 | United States | PCE Core Deflator MoM | Dec | 0.3% | 0.2% |
| 01/27/2023 | United States | U. of Mich. Sentiment | Jan | 64.6 | 64.6 |
| 01/27/2023 | United States | U. of Mich. Current Conditions | Jan | | 68.6 |
| 01/27/2023 | United States | U. of Mich. Expectations | Jan | | 62.0 |
| 01/27/2023 | United States | U. of Mich. 1 Yr Inflation | Jan | | 4.0% |
| 01/27/2023 | United States | U. of Mich. 5-10 Yr Inflation | Jan | | 3.0% |



FURTHER READING

| Chinese-German trade: increasing dependence | EcoFlash | 12 January 2023 |
|---|--|--|
| 2023, electric atmosphere | EcoTVWeek | 12 January 2023 |
| Euro adoption strengthens Croatia's economy | Chart of the Week | 11 January 2023 |
| Eurozone: starting the year on an upbeat note | EcoWeek | 9 January 2023 |
| Economic outlook 2023: three "certainties", many uncertainties | EcoTVWeek | 6 January 2023 |
| GDP and carbon, a united couple | Chart of the Week | 4 January 2023 |
| 2023: a year of transition, to what? | EcoWeek | 2 January 2023 |
| France: Nearly a third of housing loans are still guaranteed by mortgage | Chart of the Week | 21 December 2022 |
| Three «certainties», many uncertainties | EcoPerspectives | 20 December 2022 |
| ECB: tough talk and puzzling projections | EcoWeek | 19 December 2022 |
| <u>US disinflation: surely, but slowly</u> | EcoTVWeek | 16 December 2022 |
| | | |
| France: Bottlenecks at a historically high level in construction | Chart of the Week | 14 December 2022 |
| | Chart of the Week EcoWeek | 14 December 2022 12 December 2022 |
| France: Bottlenecks at a historically high level in construction | | |
| European Union: Will the energy transition cause an increase in interest rates? | EcoWeek | 12 December 2022 |
| France: Bottlenecks at a historically high level in construction European Union: Will the energy transition cause an increase in interest rates? Malaysia: A new prime minister but still high political instability. | EcoWeek EcoTVWeek | 12 December 2022 9 December 2022 |
| France: Bottlenecks at a historically high level in construction European Union: Will the energy transition cause an increase in interest rates? Malaysia: A new prime minister but still high political instability Turkey: consumption on credit | EcoWeek EcoTVWeek Chart of the Week | 12 December 2022 9 December 2022 7 December 2022 |
| France: Bottlenecks at a historically high level in construction European Union: Will the energy transition cause an increase in interest rates? Malaysia: A new prime minister but still high political instability. Turkey: consumption on credit Labour hoarding: a source of resilience during a recession | EcoWeek EcoTVWeek Chart of the Week EcoWeek | 12 December 2022 9 December 2022 7 December 2022 5 December 2022 |
| France: Bottlenecks at a historically high level in construction European Union: Will the energy transition cause an increase in interest rates? Malaysia: A new prime minister but still high political instability. Turkey: consumption on credit Labour hoarding: a source of resilience during a recession A 2023 budget facing moderate uncertainties | EcoWeek EcoTVWeek Chart of the Week EcoWeek EcoFlash | 12 December 20229 December 20227 December 20225 December 20222 December 2022 |



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 - 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, Tarik Rharrab Statistics | | |
| ECONOMIC PROJECTIONS, RELATIONSHIP WITH THE F | RENCH 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 |
| Marianne Mueller | +33 1 40 14 48 11 | marianne.mueller@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 |
| Salim Hammad Latin America | +33 1 42 98 74 26 | salim.hammad@bnpparibas.com |
| Cynthia Kalasopatan Antoine Ukraine, Central European countries | +33 1 53 31 59 32 | cynthia.kalasopatan.antoine@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 |
| | | |



GROUP ECONOMIC RESEARCH

ECOCONJONCTURE

Structural or thematic topics

ECOFMFRGING

Analyses and forecasts for a selection of emerging economies.

ECOPERSPECTIVES

Analyses and forecasts with a focus on developed countries.

ECOFLASH

Data releases, major economic events.

ECOWFFK

Recent economic and policy developments, data comments, economic calendar, forecasts

ECOTV WFFK

A weekly video discussing the main event of the week.

MACROWAVES

Our economic podcast.



Head office: 16 boulevard des Italiens – 75009 Paris France / Phone : +33 (0) 1.42.98.12.34 Internet: www.group.bnpparibas.com - www.economic-research.bnpparibas.com Head of publication : Jean Lemierre / Chief editor: William De Vijlder

Copyright : Benoît Daoust



The information and opinions contained in this report have been obtained from, or are based on, public sources believed to be reliable, but no representation or warranty, express or implied, is made that such information is accurate, complete or up to date and it should not be relied upon as such. This report does not constitute an offer or solicitation to buy or sell any securities or other investment. It does not constitute investment advice, nor financial research or analysis. as such. This report does not constitute an offer or solicitation to buy or sell any securities or other investment. It does not constitute investment advice, nor financial research or analysis. Information and opinions contained in the report are not to be relied upon as authoritative or taken in substitution for the exercise of judgement by any recipient; they are subject to change without notice and not intended to provide the sole basis of any evaluation of the instruments discussed herein. Any reference to past performance should not be taken as an indication of future performance. To the fullest extent permitted by law, no BNP Paribas group company accepts any liability whatsoever (including in negligence) for any direct or consequential loss arising from any use of or reliance on material contained in this report. All estimates and opinions included in this report are made as of the date of this report. Unless otherwise indicated in this report there is no intention to update this report. BNP Paribas SA and its affiliates (collectively "BNP Paribas") may make a market in, or may, as principal or agent, buy or sell securities of any issuer or person mentioned in this report are included for options, futures or other derivative instruments based thereon. Prices, yields and other similar information included in this report are included for information purposes. Numerous factors will affect market pricing and there is no ertainty that transactions could be executed at these prices. BNP Paribas, including its officers and employees may serve or have served as an officer, director or in an advisory capacity for any person mentioned in this report. BNP Paribas may, from time to time, solicit, perform or have performed investment banking, underwriting or other services (including atting a long or thest market thereing and there is no ertainty that transactions could be executed at these prices. BNP Paribas, including to fficers and employees may serve or have served as an officer, director or in an advisory capa to verify its factual accuracy.

BNP Paribas is incorporated in France with limited liability. Registered Office 16 Boulevard des Italiens, 75009 Paris. This report was produced by a BNP Paribas group company. This report is for the use of intended recipients and may not be reproduced (in whole or in part) or delivered or transmitted to any other person without the prior written consent of BNP Paribas. By accep-ting this document you agree to be bound by the foregoing limitations.

Certain countries within the European Economic Area This report has been approved for publication in the United Kingdom by BNP Paribas London Branch. BNP Paribas London Branch is authorised and supervised by the Autorité de Contrôle Prudentiel and authorised and subject to limited regulation by the Financial Services Authority. Details of the extent of our authorisation and regulation by the Financial Services Authority are available from us on request.

This report has been approved for publication in France by BNP Paribas SA. BNP Paribas SA is incorporated in France with Limited Liability and is authorised by the Autorité de Contrôle Prudentiel (ACP) and regulated by the Autorité des Marchés Financiers (AMF). Its head office is 16, boulevard des Italiens 75009 Paris, France.

16, boulevard des Italiens /SUUS Paris, France.
This report is being distributed in Germany either by BNP Paribas London Branch or by BNP Paribas Niederlassung Frankfurt am Main, a branch of BNP Paribas S.A. whose head office is in Paris, France. BNP Paribas S.A. - Niederlassung Frankfurt am Main, Europa Allee 12, 60327 Frankfurt is authorised and supervised by the Autorité de Contrôle Prudentiel and it is authorised and subject to limited regulation by the Bundesanstalt für Finanzdienstelistungsagisicht (BaFin).

Subject to inflicted regulation by the bundesanstalit for Final/2diensite/subjects (Barin). United States: This report is being distributed to US persons by BNP Paribas Securities Corp., or by a subsidiary or affiliate of BNP Paribas that is not registered as a US broker-dealer BNP Paribas Securities Corp., a subsidiary of BNP Paribas, is a broker-dealer registered with the U.S. Securities and Exchange Commission and a member of the Financial Industry Regulatory Autho-rity and other principal exchanges. BNP Paribas Securities Corp. accepts responsibility for the content of a report prepared by another non-U.S. affiliate only when distributed to U.S. persons by BNP Paribas Securities Corp.

by BNP Paribas Securities Corp. Japan: This report is being distributed in Japan by BNP Paribas Securities (Japan) Limited or by a subsidiary or affiliate of BNP Paribas not registered as a financial instruments firm in Japan, to certain financial institutions defined by article 17-3, item 1 of the Financial Instruments and Exchange Law Enforcement Order. BNP Paribas Securities (Japan) Limited is a financial instru-ments firm registered according to the Financial Instruments and Exchange Law of Japan and a member of the Japan Securities Dealers Association and the Financial Futures Association of Japan. BNP Paribas Securities (Japan) Limited accepts responsibility for the content of a report response they another non-Japan affiliate only when distributed to Japanese based firms by BNP Japan. BMP Parloas Securities (Japan) Limited accepts responsibility for the content of a report prepared by another non-Japan affiliate only when distributed to Japanese based firms by BNP Paribas Securities (Japan) Limited. Some of the foreign securities stated on this report are not disclosed according to the Financial Instruments and Exchange Law of Japan. Hong Kong: This report is being distributed in Hong Kong by BNP Paribas Hong Kong Branch, a branch of BNP Paribas whose head office is in Paris, France. BNP Paribas Hong Kong Branch is registered as a Licensed Bank under the Banking Ordinance and regulated by the Hong Kong Monstary (utbotiv, PNIP Paribas Hong Kong Branch)

Monetary Authority. BNP Paribas Hong Kong Branch is also a Registered Institution regulated by the Securities and Futures Commission for the conduct of Regulated Activity Types 1, 4 and 6 under the Securities and Futures Ordinance

Some or all the information reported in this document may already have been published on https://globalmarkets.bnpparibas.com

© BNP Paribas (2015). All rights reserved