ECOWEEK



13 December 2021 N°21-45

2-3

EDITORIAL

"Fiscal policy to continue to support euro area growth next year"

4-5

MARKETS OVERVIEW

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

6-11

ECONOMIC PULSE

Analysis of the recent economic data: uncertainty, US, eurozone, mobility & vaccination

12

ECONOMIC SCENARIO

Main economic and financial forecasts.

13-15 16

CALENDARS

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

FURTHER READING

Latest articles, charts, videos and podcasts of Economic Research

ECONOMIC RESEARCH



The bank for a changing world **EDITORIAL**

2

FISCAL POLICY TO CONTINUE TO SUPPORT EURO AREA GROWTH NEXT YEAR

In most European countries, the structural primary deficit should shrink next year. This reduction represents a negative fiscal impulse, raising concern that it would act as a headwind to growth. However, the level of the primary deficit is such that it still corresponds to an accommodative fiscal stance. Taking into account national fiscal policies as well as expenditures financed by the Recovery and Resilience Facility and other EU grants, fiscal policy in the euro area should have a significant positive impact on GDP growth next year, thereby accompanying and strengthening the ongoing recovery. In addition, it should enhance the effectiveness of the ECB's accommodative policy.

A recent working paper of the ECB concludes that "in the current macroeconomic situation, fiscal and monetary policies reinforce each other and mutually create space for each other. This provides a strong case for coordination of the two policies in this situation."

1. **This provides a strong case for coordination of the two policies in this situation."
1. **This provides a strong case for coordination of the two policies in this situation."
1. **This provides a strong case for coordination of the two policies in this situation."
1. **This provides a strong case for coordination of the two policies in this situation."
1. **This provides a strong case for coordination of the two policies in this situation."
1. **This provides a strong case for coordination of the two policies in this situation."
1. **This provides a strong case for coordination of the two policies in this situation."
1. **This provides a strong case for coordination of the two policies in this situation."
1. **This provides a strong case for coordination of the two policies in this situation."
1. **This provides a strong case for cas

Fiscal expansion enhances the effectiveness of monetary policy when interest rates are very low, whereas an accommodating monetary policy eases the financing constraint of the public sector. The conclusion of the research paper also reminds us that, in gauging the outlook for central bank policy, attention should be paid to fiscal policy considering its influence on growth and, indirectly, inflation.

One can argue that, in normal times, this matters less because the contribution of public consumption to real GDP growth tends to be relatively stable and rather small. In the euro area, between 2016 and 2019, it has fluctuated between 0.2 and 0.4 percentage points². Attention to fiscal policy matters more in times of huge fluctuations. The year 2021 has been exceptional in this respect with public consumption expected to contribute 0.8 percentage points to the growth of GDP³. However, next year it is forecast to drop to 0.2 percentage points, which will put the onus on private demand to keep the expansion going.

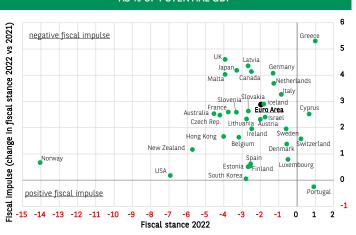
Analysing the role of fiscal policy is a complex issue and goes well beyond looking at public consumption. There is also public investment, transfers, tax revenues, etc. Interest charges are also an important factor. When debt that is maturing is refinanced at significantly lower interest rates, it may cause a decline in the overall budget deficit that is not related to any changes in terms of other expenditures or taxation,

so this calls for focusing on the primary balance, the budget balance excluding interest charges. However, this is influenced by cyclical developments, due to the role of automatic stabilisers – such as lower unemployment benefits when activity picks up – so it is recommended to focus on the structural – i.e. cyclically-adjusted – primary balance.

This concept, expressed as a percentage of potential GDP, is used by the IMF and the European Fiscal Board (EFB) as the discretionary fiscal stance. The fiscal impulse then corresponds to the year-on-year change in the structural primary balance. In explaining the difference between stance and impulse, the EFB makes the analogy with central

4. Source: European Fiscal Board, Assessment of the fiscal stance appropriate for the euro area in 2022, 16 June 2021. 'Discretionary' is used to emphasize the difference with cyclically-related fluctuations on the fiscal balance.

GENERAL GOVERNMENT CYCLICALLY ADJUSTED PRIMARY BALANCE AS % OF POTENTIAL GDP



SOURCE: IMF (FISCAL MONITOR DATABASE, OCTOBER 2021), BNP PARIBAS

1. Krzysztof Bańkowski, Kai Christoffel and Thomas Faria, Assessing the fiscal-monetary policy mix in the euro area, ECB working paper 2623, December 2021.

^{3.} In 2020, public consumption acted as a shock absorber in an economy hit by the pandemic. It contributed 0.3 percentage points to the change in real GDP whereas the other components all had negative contributions and real GDP contracted -5.9%. 2021 is exceptional. Real GDP is expected to expand 5.0%, on the back of a strong rebound in final demand, with an estimated contribution of public consumption 0.8 percentage points.



Taking into account national fiscal policies as well as expenditures financed by the Recovery and Resilience Facility and other EU grants, fiscal policy in the euro area should have a significant positive impact on GDP growth next year, thereby accompanying and strengthening the ongoing recovery. In addition, it should enhance the effectiveness of the ECB's accommodative policy.



^{2.} On average, this corresponded to 14% of growth in GDP. As a reference, in 2019, in level terms, public consumption represented 20.6% of GDP. All numbers in this text are from the European Commission's Autumn Forecast (November 2021), unless stated otherwise.



bank policy: "a contractionary measure such as an increase in the main refinancing rate can still be consistent with an accommodative or very accommodative monetary policy depending on the starting point." Another way to put it is that an accommodative fiscal stance a sizeable structural primary deficit- implies that at some point in the past, the fiscal impulse has been very positive, leading to favourable second-round effects, the so-called multiplier effect of fiscal policy. To the extent that this impulse is of a rather recent nature, it makes sense to also focus on the level of the primary balance (the fiscal stance) in assessing how past and expected policy influences the economic outlook. It can also be argued that a primary deficit implies that part of the public expenditures are financed by debt, which should be growth-supportive in comparison to running a primary surplus⁵. These considerations matter when interpreting the chart. It shows that for 2022, the fiscal stance should remain very supportive for economic activity -most countries are forecasted to have sizeable structural primary deficits- whereas the fiscal impulse is expected to be negative in most countries, thereby acting as a headwind.

However, the European Commission quite rightly emphasizes that "in view of the exceptional circumstances triggered by the COVID-19 pandemic, the presence of sizeable transfers from the EU budget (such as those from the (RRF⁶ or other EU grants), and the significant uncertainty surrounding the output gap estimates, conventional indicators such as the change in the structural budget balance or the 'expenditure benchmark' are not deemed suitable to measure the fiscal stance in the current context." For these reasons, the European Commission has developed a new measure of the fiscal stance, which includes expenditures financed at the national level as well as those financed by the RRF and other EU grants.8 "The difference between the change in net primary expenditure (as defined above) relative to the 10-year average potential GDP growth can then be interpreted as a measure for the overall fiscal stance." For 2022, it expects a positive impact of nearly 1% of GDP. This is a positive development because it accompanies and strengthens the ongoing recovery. In addition, it enhances the effectiveness of the ECB's accommodative policy.

William De Vijlder

^{8.} In this calculation, the impact of crisis-related temporary emergency measures is excluded.



^{5.} This supposes that the public deficit is not causing an increase in interest rates (absence of a crowding-out effect) and that households do not associate the public deficit with a future increase in taxes (absence of Ricardian equivalence).

^{6.} RRF stands for Recovery and Resilience Facility.

^{7.} Source: European Commission, Communication from the Commission to the European Parliament, the Council, and the European Central Bank on the 2022 Draft Budgetary Plans: Overall Assessment, COM(2021) 900 final, 24 November 2021.



MARKETS OVERVIEW

OVERVIEW

MONEY & BOND MARKETS

Week 3-12.21 to 1	10-12-21		Interest Rates		highest 21	lowest 21	Yield (%)		highest 21	lowest 21
		0.0.0/	€ECB	0.00	0.00 at 01/01	0.00 at 01/01	€ AVG 5-7y	-0.19	0.03 at 29/10	-0.46 at 04/01
7 CAC 40	6 766 ▶ 6 992	+3.3 %	Eonia	-0.49	-0.47 at 26/01	-0.50 at 01/01	Bund 2y	-0.71	-0.58 at 29/10	-0.82 at 19/11
⊅ S&P 500	4 538 🕨 4 712	+3.8 %	Euribor 3M	-0.59	-0.53 at 07/05	-0.59 at 10/12	Bund 10y	-0.35	-0.09 at 22/10	-0.60 at 04/01
yolatility (VIX) younger younger	30.7 ▶ 18.7	-12.0 pb	Euribor 12M	-0.50	-0.44 at 01/11	-0.52 at 02/02	OAT 10y	-0.08	0.23 at 17/05	-0.41 at 04/01
¥ Euribor 3M (%)	-0.56 ▶ -0.59	-2.5 bp	\$ FED	0.25	0.25 at 01/01	0.25 at 01/01	Corp. BBB	0.75	0.87 at 29/11	0.43 at 05/08
. ,			Libor 3M	0.20	0.24 at 13/01	0.11 at 09/09	\$ Treas. 2y	0.62	0.65 at 09/12	0.11 at 05/02
7 Libor \$ 3M (%)	0.19 • 0.20	+1.1 bp	Libor 12M	0.51	0.51 at 10/12	0.22 at 06/09	Treas. 10y	1.47	1.75 at 31/03	0.91 at 01/01
7 OAT 10y (%)	-0.08 • -0.08	+0.3 bp	£ BoE	0.10	0.10 at 01/01	0.10 at 01/01	High Yield	5.22	5.45 at 30/11	4.52 at 29/06
7 Bund 10y (%)	-0.38 ▶ -0.35	+3.1 bp	Libor 3M	0.08	0.25 at 28/10	0.03 at 01/01	£ gilt. 2y	0.43	0.70 at 03/11	-0.08 at 04/01
⊅ US Tr. 10y (%)	1.33 ▶ 1.47	+14.3 bp	Libor 12M	0.63	0.85 at 28/10	0.07 at 11/01	gilt. 10y At 10-12-21	0.74	1.20 at 21/10	0.21 at 04/01
⊅ Euro vs dollar	1.13 1.13	+0.2 %	At 10-12-21				AL 10-12-21			
对 Gold (ounce, \$)	1 775 ▶ 1 785	+0.6 %								
⊅ Oil (Brent, \$)	70.1 > 75.3	+7.5 %								

EXCHANGE RATES

1€=		high	est 21	low	est/	21	2021
USD	1.13	1.23	at 06/01	1.12	at	24/11	-7.6%
GBP	0.85	0.91	at 06/01	0.84	at	22/11	-4.5%
CHF	1.04	1.11	at 04/03	1.04	at	03/12	-3.7%
JPY	128.22	133.97	at 28/05	125.22	at	18/01	+1.5%
AUD	1.58	1.64	at 20/08	1.53	at	18/03	-0.6%
CNY	7.20	8.00	at 01/01	7.15	at	24/11	-10.0%
BRL	6.33	6.95	at 03/03	5.88	at	24/06	-0.3%
RUB	83.06	92.47	at 20/04	80.71	at	26/10	-8.2%
INR	85.66	90.39	at 23/04	83.30	at	24/11	-4.2%
At 10-	12-21						Change

COMMODITIES

Spot price, \$		high	est	21	lov	vest	21	2021	2021(€)
Oil, Brent	75.3	86.5	at	26/10	51.2	at	04/01	+45.2%	+57.1%
Gold (ounce)	1 785	1 947	at	05/01	1 682	at	08/03	-5.9%	+1.8%
Metals, LMEX	4 336	4 763	at	15/10	3 415	at	01/01	+27.0%	+37.5%
Copper (ton)	9 507	11 300	at	18/10	7 749	at	01/01	+22.7%	+32.8%
wheat (ton)	238	2.9	at	07/05	223	at	10/09	-3.9%	+4.1%
Corn (ton)	228	2.9	at	07/05	188	at	04/01	+2.1%	+30.6%
At 10-12-21									Change

EQUITY INDICES

PERFORMANCE BY SECTOR (Eurostoxx50 & S&P500)



SOURCE: REFINITIV, BNP PARIBAS





MARKETS OVERVIEW

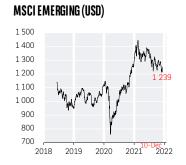


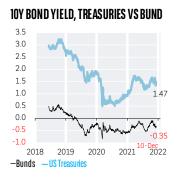


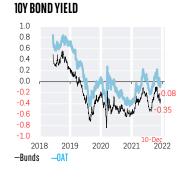


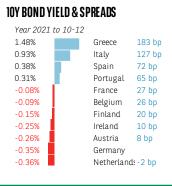
VOLATILITY (VIX, S&P500) 90 80 70 60 50 40 30 20 10 2018 2019 2020 2021 2022

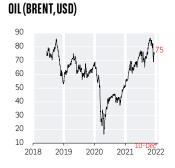


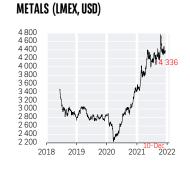


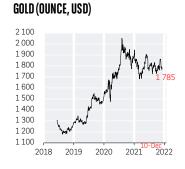












SOURCE: REFINITIV, BNP PARIBAS



6

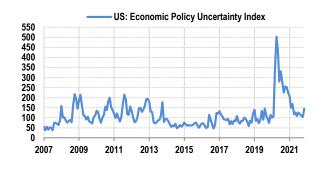
UNCERTAINTY: SLIGHT INCREASE

Our different uncertainty gauges are complementary, in terms of scope and methodology. Based on the latest readings, several indicators show a slight increase. This reflects a combination of ongoing supply disruption and bottlenecks but also and in particular, renewed concern about the pandemic, considering the significant rise in several countries of infections with the Delta variant and concern about the Omicron variant.

Starting top left and continuing clockwise, US economic policy uncertainty based on media coverage has rebounded, which reflects the more hawkish tone of Jerome Powell in recent statements. Uncertainty based on business surveys is rising slowly in the euro area and in the US as well, as far as sales-related uncertainty is concerned. This reflects the issue of supply bottlenecks and long delivery lags. In the US, uncertainty with respect to employment growth has eased but remains high, reflecting the difficulty of finding staff. Geopolitical risk – based on media coverage – has edged slightly higher in recent months but stays at a low level. Finally, the cross-sectional standard deviation of daily stock market returns of individual companies – a measure of financial uncertainty – is not showing any clear direction.

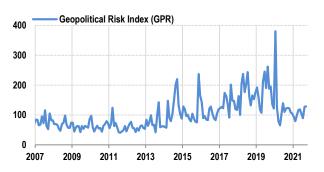
William De Vijlder

CHANGES IN UNCERTAINTY









^{*} volatility = 60-day moving average of the cross-sectional standard deviation of daily returns of the index constituents

SOURCE: REFINITIV, ECONOMIC POLICY UNCERTAINTY, IFO, ATLANTA FED, BNP PARIBAS



UNITED STATES: A NEW INFLATION RECORD

The rising trend in prices in the USA is far from over and has become a real focus of attention. In November 2021, inflation was 6.8% year-on-year (y/y), its highest level since June 1982. Although soaring energy prices (up 33% y/y) contributed to the increase in the cost of living, as in previous months, these were no longer the sole cause. Even stripping out energy and food, inflation was still 4.9% in November, another record. Having risen by 3.9% y/y, rents, which represent the main item of expenditure for households (33% of the index), are beginning to have a significant effect. Far from being anecdotal, their increase has accelerated month after month in the wake of the surge in real estate prices. Relative to median wages, the average price for houses has returned to its 2006 peak; in the 20 biggest cities, it is up 20% y/y, a record.

Inflation has been overshooting the 2% official gal for more than 8 months now, prompting the Federal Reserve to adopt a less accommodative stance. In his recent testimony to the Senate, the Fed's Chairman, Jerome Powell, indicated that rising prices could no longer be described as "transitory". He also gave some credence to the likeliness of a swifter end to quantitative easing, opening the possibility of a rate increase, perhaps in the summer of 2022. It goes without saying that the next meeting of the Open Market Committee, due on Wednesday 15 December, will be closely watched.

The labour market is robust again. More than 6 million jobs were created in 2021, out of the 9.4 million jobs lost in 2020. In November, the unemployment rate dropped to 4.2% of the active population, far below the Fed's expectations. Although the labour market participation rate is still rather low, it is easily explained by the discouragement of workers with the highest exposure to the pandemic, as well as to demographic influences. Unbiased by an aging population, the share of Americans in the 20-64 age group who are active in the job market (employed or actively seeking employment) continues to rise.

Jean-Luc Proutat

US: QUARTERLY CHANGES ISM 3-month moving average (actual) Manufacturing --- 3-month moving average (4 months ago) 6.0 ISM 5.0 Industrial production 4.0 3.0 2.0 Housing Starts Consumer Confidence 0.0 Unemployment Rate Personal Consumption Nonfarm Payrolls PCF Core Price Index Average Hourly

CPI

SOURCE: REFINITIV, BNP PARIBAS

The indicators in the radar are all transformed into 'z-scores' (deviations from the long-term average, as standard deviations). These z-scores have mean zero and their values are between -4 and +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



8

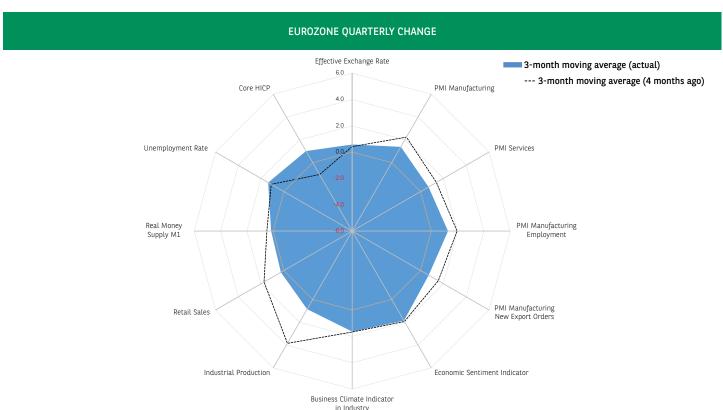
EUROZONE: WHAT CAN WE EXPECT FROM THE ECB'S 16 DECEMBER MEETING?

The ECB's meeting on 16 December is highly anticipated, primarily for the central bank's new growth and inflation forecasts. When it comes to growth, the ECB's September forecast was for annual average growth of 5% in 2021, 4.6% in 2022 and 2.1% in 2023. It could leave its 2021 forecast unchanged, with the positive figures for Q3 offset by a less positive view of Q4, due to the effect of supply constraints, inflationary pressures and a resurgence of the pandemic. Growth in 2022 will be weakened by the same factors. The scale of the forecast downward revision will indicate the level of the ECB's concerns. It will also be interesting to see whether any growth 'lost' in 2022 will be shifted, in part at least, into a higher forecast for 2023.

Turning to inflation, there is little doubt as to the direction of changes to the ECB's forecasts for 2021 and 2022: recent developments mean they can only be upwards. Inflation is continuing to soar (4.9% y/y according to November's flash estimate) and is becoming more deeply rooted (core inflation of 2.6%). In its September forecasts, the ECB predicted average annual inflation of 2.2% in 2021, 1.7% in 2022 and 1.5% in 2023. Christine Lagarde recently suggested it was likely that inflation peaked in November, but the forecasts will nonetheless have to be raised. What will attract attention will be the scale of the revision and the assessment of the balance of risks, and these will tell us to what extent the ECB changed its view regarding the transitory nature of the inflation surge and moved to match the position at the Fed (which no longer describes US inflation as transitory). The forecast for 2023 will provide further information. An unchanged figure will send a strong signal confirming that the ECB believes that the spike in inflation is transitory. We believe that an upward revision, on a limited scale, is more likely. With the ECB's forecasting period extending to 2024, it will also be interesting to see to what extent that year is expected to bear residual traces of inflation.

In terms of monetary policy decisions, we are expecting the ECB to confirm, or in any event send a strong signal for, the ending of the PEPP at the currently planned time, that is to say March 2022. Perhaps even more importantly, attention will focus on details of how the ECB expects the APP to pick up the running (size of monthly purchases, flexibility). The emergence of the new Omicron variant nevertheless makes it possible that some or all of these announcements will be held back to the following meeting on 3 February 2022. Beyond that, the ECB is unlikely to make any commitments, pleading caution and consistency in the face of considerable uncertainty, which has increased still further recently, whilst stating that it is ready to act in any circumstances, that is to say either hardening or softening its stance as conditions demand.

Hélène Baudchon



SOURCE: REFINITIV, BNP PARIBAS

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



9

COVID-19: COMPARED TO LAST WEEK, THE CASE NUMBERS ARE SOARING IN AFRICA

Weekly numbers of new Covid-19 cases have continued to rise in most regions of the world. In the week of 2 to 8 December more than 4 million new cases were detected worldwide, a 4.2% increase on the previous week. The biggest jump (81%) in weekly numbers was in Africa, particularly in southern Africa where the number of cases is soaring with the emergence of the Omicron variant. The continent was followed by North America (16%) and Europe (3%). Infection numbers in Asia fell by 6% and stabilised in South America (chart 1). Meanwhile, 320 million booster doses were administered around the world, half of them in high-income countries. To date, 55.2% of the world's population has now received at least one dose of a Covid-19 vaccine (chart 2).

As far as mobility* is concerned, the trend in visits to retail and recreational facilities continued to fall in Germany, Belgium and Italy. In France and Spain, the increase observed over the last two weeks fits within an upward trend that has extended over several weeks. The US and UK stood out for their relative stability; the recent fall in the US is related to the Thanksgiving holidays but the latest data show a rebound. In Japan, the latest downturn follows a positive trend over the past few weeks (chart 3, blue line).

Lastly, the OECD Weekly Tracker of GDP growth** continues to trend upwards in Spain, the United States, the UK and Japan. In France, the most recent data seem to reflect a slight downward inflection, while in Germany, Italy and Belgium, a rather sharp downward trend is taking shape (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.

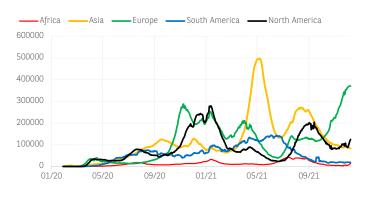
Tarik Rharrab

* 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.

** last update: 12/02/2021

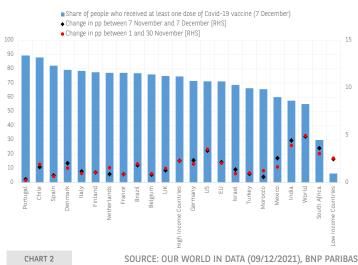
CHART 1

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



SOURCE: JOHNS-HOPKINS UNIVERSITY (09/12/2021), BNP PARIBAS

SHARE OF PEOPLE WHO RECEIVED AT LEAST ONE DOSE OF VACCINE







RETAIL AND RECREATION MOBILITY & OECD WEEKLY TRACKER

Retail and recreation mobility (7-day moving average, % from baseline*)

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

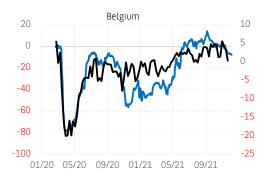


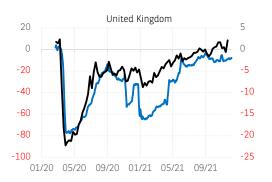


05/20 09/20 01/21 05/21 09/21



01/20











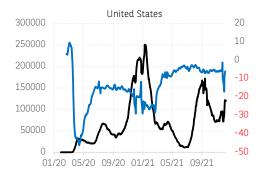
SOURCE: OECD (02/12/2021), GOOGLE (02/12/2021), BNP PARIBAS

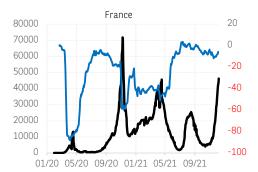


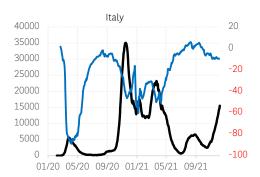


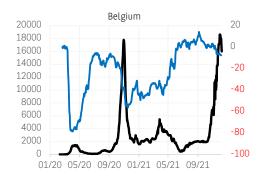
DAILY NEW CASES & RETAIL AND RECREATION MOBILITY

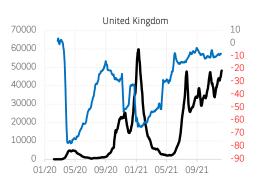
Daily new confirmed cases of Covid-19 (7-day moving average)
 Retail and recreation mobility (7-day moving average, % from baseline*)[RHS]



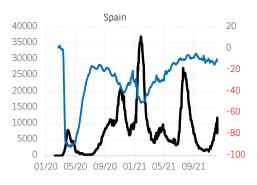


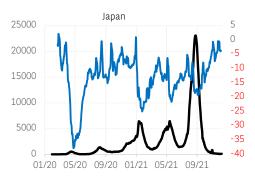












SOURCE: JOHNS-HOPKINS UNIVERSITY (09/12/2021), GOOGLE (09/12/2021), BNP PARIBAS



12

ECONOMIC SCENARIO

UNITED STATES

Albeit in a rather uneven manner, the US economy has bounced back swiftly from the Covid-19 pandemic and is now stronger than in 2019. Its growth rate, at 5.5% in 2021, is likely to return gradually to normal. Longer and stronger than expected, the upturn in inflation is also likely to ease, if only due simply to the basis of comparison (once prices stop being compared to their depressed levels of 2020). The return towards the 2% target could, however, be hampered by rising prices for services, particularly rents. The situation in the labour market has improved: with a rising activity rate and unemployment dropping significantly below 5% of the active population, the economy is approaching full employment.

CHINA

Economic growth has slowed markedly since last summer. Export performance remains strong and supports manufacturing investment. However, the other components of domestic demand are constrained by a host of factors: the effects of the H1 tightening in fiscal policy and domestic credit conditions, the toughening of regulations in various services, the crisis in the property sector, supply constraints in the industry, and the resurgence of the epidemic. In the short term, industrial production growth should recover. Moreover, the authorities should increase their support to domestic activity through prudent monetary and fiscal policy measures, while continuing regulatory tightening and maintaining their objective of rebalancing the real estate market. The contraction in housing sales and the "zero covid" strategy should continue to weigh on private consumption.

EUROZONE

Growth in the eurozone remained strong in Q3 2021, in line with expectations (2.2% q/q). However, the outlook for Q4 is much less bright. According to our most recent forecast dated 25 November, we expect growth to slow down to 0.4% q/q. In addition to the awaited normalization, headwinds have increased (supply-side problems, surging inflation and uncertainties arising from the new wave of the pandemic). Nevertheless, business conditions surveys have shown resilience so far. Although the downside risks have increased, our scenario for 2022 remains fairly optimistic. This is because there is no shortage of tailwinds - supportive 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 - assuming that supply-side problems ease from the second half of the year. Above all, growth will remain well above its trend rate in 2022. We also expect it to be not much lower than its 2021 figure (4.2% versus 5%). Compared with our September scenario, we have cut our growth forecasts and raised our inflation forecasts, taking the view that behind the current temporary pressures on prices, more sustained and widespread factors are also at play. We expect average inflation to be higher in 2022 than in 2021 (3.1% versus 2.5%), although we see inflation falling over the course of next 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 was strong in Q3 2021 – beating expectations at 3% q/q according to INSEE's initial estimate – but we expect it to slow to 0.6% q/q in Q4. In 2022, we anticipate growth of 4.2% in annual average terms (vs. 6.7% in 2021) and inflation of 2.5% (vs. 2%).

RATES AND EXCHANGE RATES

In the US, the Federal Reserve has started tapering and this should lead to net asset purchases ending by the middle of next year, although the exact timing depends on how the economy will evolve. Given current particularly elevated inflation, the inflation outlook and the prospect of a further decline in the unemployment rate, we expect a first rate hike in July 2022, followed by two additional hikes in 2022 and four more in 2023. This should put upward pressure on Treasury yields.

In the eurozone, the ECB is expected to announce in December that it will stop net purchases under the PEPP in March 2022. On that occasion, the monthly volume under the traditional asset purchase program should be increased to avoid market disruption. Given the strength of the recovery, we expect underlying price pressures to build further. We expect that the ECB will hike its deposit rate in June 2023, considering that by then the three conditions for a rate hike would be met. Two additional hikes should follow in the second half of 2023. This, in combination with the influence from higher US Treasury yields, should lead to higher Bund yields and some widening of sovereign spreads.

The Bank of Japan is expected to maintain its current policy stance over the forecast horizon, whilst allowing the 10-year JGB yield to drift higher under the influence of globally rising yields, towards about 20bp, which is in the upper end of its target range of 0 to 25bp.

We expect the dollar to strengthen versus the euro, driven by widening yield differentials and the growing monetary policy divergence between the Federal Reserve and the ECB. The divergence will also increase between the Fed and the BoJ, which explains our forecast of an appreciation of the dollar versus the yen.

GROWTH & INFLATION

	G	GDP Growth		GDP Growth Inflation		1
%	2021 e	2022 e	2023 e	2021 e	2022 e	2023 e
United-States	5,5	4,7	2,8	4,7	4,6	2,1
Japan	1,7	2,6	1,6	-0,2	0,7	0,5
United-Kingdom	7,1	5,4	2,1	2,5	4,5	2,1
Euro Area	5,0	4,2	3,0	2,5	3,1	2,0
Germany	2,6	3,6	3,6	3,1	3,4	2,2
France	6,7	4,2	2,5	2,0	2,5	2,1
Italy	6,3	4,9	3,0	1,8	2,9	1,7
Spain	4,3	5,4	3,5	3,0	3,7	1,7
China	7,9	5,3	5,5	0,9	2,1	2,5
India*	8,0	11,0	6,0	5,4	5,7	5,0
Brazil	4,8	0,5	2,0	8,3	8,3	4,3
Russia	4,5	3,0	1,8	7,0	6,3	4,1

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, %	5					
End of period		Q1 2022 e	Q2 2022 e	Q3 2022 e	Q4 2022 e	Q4 2023 e
US	Fed Funds (upper limit)	0.25	0.25	0.75	1.00	2.00
	T-Notes 10y	1.70	1.80	1.90	2.00	2.30
Ezone	Deposit rate	-0.50	-0.50	-0.50	-0.50	-0.10
	Bund 10y	0.00	0.05	0.05	0.10	0.40
	OAT 10y	0.45	0.40	0.35	0.45	0.70
	BTP 10y	1.35	1.45	1.45	1.55	2.00
	BONO 10y	0.75	0.85	0.90	1.05	1.45
UK	Base rate	0,25	0.50	0.50	0.75	1.25
	Gilts 10y	1.10	1.20	1.30	1.45	1.75
Japan	BoJ Rate	-0.10	-0.10	-0.10	-0.10	-0.10
	JGB 10y	0.12	0.14	0.15	0.18	0.20

Exchange kates	5					
End of period		Q1 2022 e	Q2 2022 e	Q3 2022 e	Q4 2022 e	Q4 2023 e
USD	EUR / USD	1.13	1.12	1.11	1.09	1.09
	USD / JPY	115	116	117	118	120
	GBP / USD	1.35	1.35	1.35	1.33	1.36
EUR	EUR / GBP	0.84	0.83	0.82	0.82	0.80
	EUR / JPY	130	130	130	129	131

 End of period
 Q1 2022 e
 Q2 2022 e
 Q3 2022 e
 Q4 2022 e

Brent

SOURCE: BNP PARIBAS GLOBAL MARKETS (E: ESTIMATES)



CALENDAR

13

LATEST INDICATORS

In Japan, the EcoWatchers survey for November improved in terms of the assessment of the current outlook but confidence about the outlook has dropped. In both cases, the data came in below expectations. In Germany, the ZEW survey disappointed with the current situation worsening far more than expected. Expectations weakened as well, though less than anticipated. Growth of exports and imports picked up strongly in October, thereby significantly beating the consensus. In China, export growth slowed, whilst remaining very dynamic, whereas import growth, surprisingly, jumped. Consumer price inflation accelerated to 2.3% and producer price inflation eased but is still very elevated at 12.9%. In the euro area, the ZEW survey saw an improvement in expectations. Importantly, in France, business sentiment moved higher, more than expected. In the US, the monthly increase in consumer prices slowed slightly but less than expected. Moreover, at 0.8%, it remains extremely high. This also applies to core inflation at 0.5% in November versus October. The increase of headline inflation from a year ago (6.8%) corresponds to the highest number since June 1982. University of Michigan sentiment improved, in particular with respect to the expectations component which increased far more than anticipated. Inflation expectations were stable.

DATE	COUNTRY	INDICATOR	PERIOD	SURVEY	ACTUAL	PREVIOUS
12/06/2021	Germany	Markit Germany Construction PMI	Nov		47.9	47.7
12/06/2021	United Kingdom	New Car Registrations YoY	Nov		1.7%	-24.60%
12/06/2021	United Kingdom	Markit/CIPS UK Construction PMI	Nov	54.2	55.5	54.6
12/07/2021	Germany	Industrial Production SA MoM	Oct	1.0%	2.8%	-1.10%
12/07/2021	Eurozone	Household Cons QoQ	3Q	3.7%	4.1%	3.70%
12/07/2021	Germany	ZEW Survey Expectations	Dec	25.4	29.9	31.7
12/07/2021	Germany	ZEW Survey Current Situation	Dec	5.7	-7.4	12.5
12/07/2021	Eurozone	Employment QoQ	3Q		0.9%	0.90%
12/07/2021	Eurozone	Employment YoY	3Q		2.1%	2.00%
12/07/2021	Eurozone	GDP SA QoQ	3Q	2.2%	2.2%	2.20%
12/07/2021	Eurozone	ZEW Survey Expectations	Dec		26.8	25.9
12/07/2021	China	Exports YoY CNY	Nov	15.8%	16.6%	20.30%
12/07/2021	China	Imports YoY CNY	Nov	15.8%	26.0%	14.50%
12/08/2021	Japan	GDP SA QoQ	3Q	-0.8%	-0.9%	-0.80%
12/08/2021	Japan	Eco Watchers Survey Current SA	Nov	57.4	56.3	55.5
12/08/2021	Japan	Eco Watchers Survey Outlook SA	Nov	57.7	53.4	57.5
12/08/2021	France	Total Payrolls	3Q	0.5%	0.4%	1.10%
12/08/2021	United States	JOLTS Job Openings	Oct	10469k	11033k	10438k
12/08/2021	France	Bank of France Ind. Sentiment	Nov	103.0	104.0	102
12/09/2021	China	CPI YoY	Nov	2.5%	2.3%	1.50%
12/09/2021	China	PPI YoY	Nov	12.1%	12.9%	13.50%
12/09/2021	Germany	Exports SA MoM	Oct	0.8%	4.1%	-0.70%
12/09/2021	Germany	Imports SA MoM	Oct	0.4%	5.0%	0.10%
12/09/2021	United States	Initial Jobless Claims	Dec	220k	184k	
12/09/21-12/15/21	China	Aggregate Financing CNY	Nov	2696.0b	2610.0b	1590.0b
12/10/2021	United Kingdom	Monthly GDP (MoM)	Oct	0.4%	0.1%	0.6%
12/10/2021	Germany	CPI EU Harmonized MoM	Nov	0.3%	0.3%	0.3%
12/10/2021	Germany	CPI EU Harmonized YoY	Nov	6.0%	6.0%	6.0%
12/10/2021	United States	CPI MoM	Nov	0.7%	0.8%	0.9%
12/10/2021	United States	CPI Ex Food and Energy MoM	Nov	0.5%	0.5%	0.6%
12/10/2021	United States	CPI YoY	Nov	6.8%	6.8%	6.2%
12/10/2021	United States	CPI Ex Food and Energy YoY	Nov	4.9%	4.9%	4.6%
12/10/2021	United States	U. of Mich. Sentiment	Dec	68.0	70.4	67.4
12/10/2021	United States	U. of Mich. Current Conditions	Dec	73.4	74.6	73.6
12/10/2021	United States	U. of Mich. Expectations	Dec	62.0	67.8	63.5
12/10/2021	United States	U. of Mich. 1 Yr Inflation	Dec	5.0%	4.9%	4.9%
12/10/2021	United States	U. of Mich. 5-10 Yr Inflation	Dec		3.0%	3.0%

SOURCE: BLOOMBERG



CALENDAR: THE WEEK AHEAD

14

COMING INDICATORS

It's central bank week this week with meetings of the Federal Reserve, the ECB, the Bank of England and the Bank of Japan. In the US, following Jerome Powell's recent comments in front of a Senate commission, the focus will be on whether tapering will be accelerated. Concerning the ECB, the key issue is what happens with the asset purchase programme when the PEPP, as is widely expected, stops in March. Concerning the BoE, the market is anticipating a rate hike. The week will also be busy in terms of data with the Tankan survey in Japan, business confidence in France, IFO business climate in Germany and, in the US, the Philadelphia Fed survey. In addition, the flash PMIs will be published for several countries. Of interest as well are the latest data for China - will the slowdown be confirmed? -, producer prices and retail sales in the US and inflation in France, the euro area and the UK.

DATE	COUNTRY	INDICATOR	PERIOD	CONSENSUS	PREVIOUS
12/13/21	Japan	Tankan Large Mfg Index	4Q	19	18
12/13/21	Japan	Tankan Large Non-Mfg Index	4Q	5	2
12/13/21	Japan	Tankan Large Mfg Outlook	4Q	19	14
12/13/21	Japan	Tankan Large Non-Mfg Outlook	4Q	9	3
12/13/21	Japan	Tankan Large All Industry Capex	4Q	9.80%	10.10%
12/13/21	Japan	Tankan Small Mfg Index	4Q	-3	-3
12/13/21	Japan	Tankan Small Non-Mfg Index	4Q	-6	-10
12/13/21	Japan	Tankan Small Mfg Outlook	4Q	-1	-4
12/13/21	Japan	Tankan Small Non-Mfg Outlook	4Q	-5	-13
12/14/21	United Kingdom	ILO Unemployment Rate 3Mths	Oct		4.30%
12/14/21	United Kingdom	Employment Change 3M/3M	Oct		247k
12/14/21	United States	NFIB Small Business Optimism	Nov		98.2
12/14/21	United States	PPI Final Demand MoM	Nov	0.60%	0.60%
12/14/21	United States	PPI Ex Food and Energy MoM	Nov	0.40%	0.40%
12/14/21	United States	PPI Final Demand YoY	Nov	9.20%	8.60%
12/14/21	United States	PPI Ex Food and Energy YoY	Nov		6.80%
12/15/21	China	New Home Prices MoM	Nov		-0.25%
12/15/21	China	Retail Sales YoY	Nov	4.80%	4.90%
12/15/21	China	Industrial Production YoY	Nov	3.80%	3.50%
12/15/21	China	Fixed Assets Ex Rural YTD YoY	Nov	5.40%	6.10%
12/15/21	China	Property Investment YTD YoY	Nov	5.90%	7.20%
12/15/21	China	Surveyed Jobless Rate	Nov	4.90%	4.90%
12/15/21	United Kingdom	CPIH YoY	Nov		3.80%
12/15/21	United Kingdom	CPI Core YoY	Nov		3.40%
12/15/21	United Kingdom	Retail Price Index	Nov		312
12/15/21	United Kingdom	PPI Output NSA YoY	Nov		8.00%
12/15/21	United Kingdom	PPI Input NSA YoY	Nov		13.00%
12/15/21	France	CPI EU Harmonized MoM	Nov F		0.40%
12/15/21	France	CPI EU Harmonized YoY	Nov F		3.40%
12/15/21	United States	Retail Sales Advance MoM	Nov	0.80%	1.70%
12/15/21	United States	Retail Sales Control Group	Nov	0.80%	1.60%
12/15/21	United States	NAHB Housing Market Index	Dec	84	83
12/15/21	United States	FOMC Rate Decision (Upper Bound)	15-Dec	0.25%	0.25%

SOURCE: BLOOMBERG





DATE	COUNTRY	INDICATOR	PERIOD	CONSENSUS	PREVIOUS
12/16/21	Japan	Jibun Bank Japan PMI Services	Dec P		53
12/16/21	Japan	Jibun Bank Japan PMI Mfg	Dec P		54.5
12/16/21	Japan	Jibun Bank Japan PMI Composite	Dec P		53.3
12/16/21	France	Business Confidence	Dec		114
12/16/21	France	Markit France Manufacturing PMI	Dec P		55.9
12/16/21	France	Markit France Services PMI	Dec P		57.4
12/16/21	France	Markit France Composite PMI	Dec P		56.1
12/16/21	Germany	Markit/BME Germany Manufacturing PMI	Dec P		57.4
12/16/21	Germany	Markit Germany Services PMI	Dec P		52.7
12/16/21 09:30	Germany	Markit/BME Germany Composite PMI	Dec P		52.2
12/16/21 10:00	Eurozone	Markit Eurozone Manufacturing PMI	Dec P		58.4
12/16/21 10:00	Eurozone	Markit Eurozone Services PMI	Dec P		55.9
12/16/21 10:00	Eurozone	Markit Eurozone Composite PMI	Dec P		55.4
12/16/21 10:30	United Kingdom	Markit UK PMI Manufacturing SA	Dec P		58.1
12/16/21 10:30	United Kingdom	Markit/CIPS UK Services PMI	Dec P		58.5
12/16/21 10:30	United Kingdom	Markit/CIPS UK Composite PMI	Dec P		57.6
12/16/21 13:00	United Kingdom	Bank of England Bank Rate	16-Dec	0.25%	0.10%
12/16/21 13:45	Eurozone	ECB Deposit Facility Rate	16-Dec		-0.50%
12/16/21 14:30	United States	Initial Jobless Claims	11-Dec		
12/16/21 14:30	United States	Housing Starts MoM	Nov	3.30%	-0.70%
12/16/21 14:30	United States	Building Permits MoM	Nov	1.00%	4.00%
12/16/21 14:30	United States	Philadelphia Fed Business Outlook	Dec	26.5	39
12/16/21 15:45	United States	Markit US Manufacturing PMI	Dec P		58.3
12/16/21 15:45	United States	Markit US Composite PMI	Dec P	**	57.2
12/16/21 15:45	United States	Markit US Services PMI	Dec P		58
12/17/21 01:01	United Kingdom	GfK Consumer Confidence	Dec		-14
12/17/21 08:00	Eurozone	EU27 New Car Registrations	Nov		-30.30%
12/17/21 08:00	United Kingdom	Retail Sales Ex Auto Fuel MoM	Nov		1.60%
12/17/21 08:45	France	Wages QoQ	3Q F		0.30%
12/17/21 10:00	Germany	IFO Expectations	Dec		94.2
12/17/21 10:00	Germany	IFO Current Assessment	Dec		99
12/17/21 10:00	Germany	IFO Business Climate	Dec		96.5
12/17/21 11:00	Eurozone	CPI YoY	Nov F		4.90%
12/17/21 11:00	Eurozone	CPI Core YoY	Nov F		2.60%
12/17/21 11:00	Eurozone	CPI MoM	Nov F		0.50%
12/17/21	Japan	BOJ Policy Balance Rate	17-Dec		-0.10%

SOURCE : BLOOMBERG



FURTHER READING

16

Greece: encouraging trends	EcoTVWeek	10 December 2021
Signs of a decline in globalization	Chart of the Week	9 December 2021
Three headwinds to growth	EcoWeek	6 December 2021
US: PPP government-guaranteed loans are largely converted into public subsidies	EcoTVWeek	3 December 2021
US: The Fed, the new preferred repo counterparty in times of tension	EcoFlash	2 December 2021
Egypt: persistent vulnerabilities	EcoConjoncture	1 December 2021
Turkey: New financial tensions	Chart of the Week	1 December 2021
High inflation, optionality and central bank patience	EcoWeek	29 November 2021
Supply shocks, inflation and monetary policy	EcoTVWeek	26 November 2021
United States: reallocation of bank portfolios towards the Eurozone since Brexit	Chart of the Week	24 November 2021
European labour market bottlenecks: structural aspects	EcoWeek	22 November 2021
Services support French growth: towards a (big) comeback?	EcoTVWeek	19 November 2021
COP26: Investment in energy system should double to reach zero carbon by 2050	Chart of the Week	17 November 2021
Spain : Upturn in the labour market	EcoFlash	16 November 2021
Eurozone : Euro area labour market bottlenecks: cyclical aspects	EcoWeek	15 November 2021
China's economic engine is stopped	EcoTVWeek	12 November 2021
Poland: industrial shortages trigger a slump in exports	Chart of the Week	10 November 2021
Eurozone : Deposit rate lift-off, markets and the ECB	EcoWeek	8 November 2021
Monetary tightening in emerging countries	EcoTVWeek	5 November 2021



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 - France, Eurozone	+33 1 58 16 03 63	helene.baudchon@bnpparibas.com
Guillaume Derrien Southern Europe - International trade	+33 1 55 77 71 89	guillaume.a.derrien@bnpparibas.com
Stéphane Colliac France	+33 1 42 98 43 86	stephane.colliac@bnpparibas.com
Raymond Van Der Putten Germany, Netherlands, Austria, Switzerland, Japan – Climate, pensions, long-term growth	+33 1 42 98 53 99	raymond.vanderputten@bnpparibas.com
Veary Bou, Patrick Capeillère, Tarik Rharrab Statistics		
ECONOMIC PROJECTIONS, RELATIONSHIP WITH THE FRENCH	I NETWORK	
Jean-Luc Proutat Head - United States, United Kingdom	+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
Laure Baquero	+33 1 43 16 95 50	laure.baquero@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	+33 1 42 98 79 82	francois.faure@bnpparibas.com
Christine Peltier Deputy Head – Greater China, Vietnam, South Africa	+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
Stéphane Colliac Turkey, Ukraine, Central European countries	+33 1 42 98 43 86	stephane.colliac@bnpparibas.com
Pascal Devaux Middle East, Balkan countries	+33 1 43 16 95 51	pascal.devaux@bnpparibas.com
Hélène Drouot Korea, Thailand, Philippines, Mexico, 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
Johanna Melka India, South Asia, Russia, CIS	+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



CONJONCTURE

Structural or thematic topics.



EMERGING

Analyses and forecasts for a selection of emerging economies.



Analyses and forecasts with a focus on developed countries.



ECOFLASH

Data releases, major economic events.



ECOWEEK

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



A monthly video with interviews of our



ECOTY WEEK

A weekly video discussing the main event of the



MACROWAVES

Our economic podcast.



Published by BNP PARIBAS Economic Research

Head office: 16 boulevard des Italiens – 75009 Paris France / Phone : +33 (0) 1.42.98.12.34 Internet: www.group.bnpparibas.com - <a href="https://www

Head of publication: Jean Lemierre / Chief editor: William De Vijlder

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. 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 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 preson mentioned in this report, including a long or short position in their securities and/or 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 certainty 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 be a party to an agreement with any person referred to in this report. BNP Paribas may The information and opinions contained in this report have been obtained from, or are based on, 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 accepting 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. 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 75009 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 Finanzdienstleistungsaufsicht (BaFin). 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 Authority 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 instruments 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 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 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 ${\tt https://globalmarkets.bnpparibas.com}$

© BNP Paribas (2015). All rights reserved

