ECOWEEK

Issue 23.3311 September 2023





The bank for a changing world

TABLE OF CONTENT

3

EDITORIAL

Global: Population ageing, wage growth and inflation

5

MARKETS OVERVIEW

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

/

ECONOMIC PULSE

Analysis of some recent economic data: PMI indices

8

ECONOMIC SCENARIO

Main economic and financial forecasts

9

FURTHER READING

Latest articles, charts, videos and podcasts of Economic Research



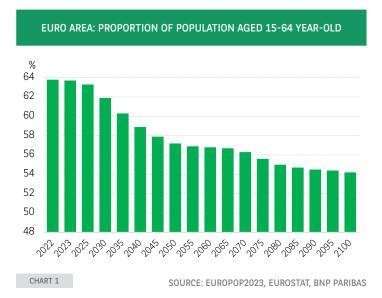
EDITORIAL

GLOBAL: POPULATION AGEING, WAGE GROWTH AND INFLATION

There is broad agreement amongst researchers that population ageing has a detrimental impact on economic growth through a reduction in the working-age population. There is less agreement on the impact on inflation, which amongst other things is influenced by age-dependent spending and savings behaviour. Wage developments will play a key role. A shrinking labour force could create structural labour market bottlenecks in certain sectors, trigger a 'war for talent' and force companies to pay higher wages and raise their selling prices. This would spill over to the rest of the economy. It shows the importance of supply-side oriented policies aiming to raise potential GDP growth, thus avoiding that the central bank would be forced to address the inflation challenge through tighter monetary policy, which would lower realised growth.

There is broad agreement amongst researchers that population ageing has a detrimental impact on economic growth. Recent research shows that in the US, between 1980 and 2010, it has reduced the growth rate in GDP per capita by 0.3 percentage points per year¹. It is to be expected that this trend will continue. An ECB paper quotes research by the European Commission, which concludes that in the Eurozone, "population ageing is expected to have a dampening impact on potential growth²." The Commission assumes that the decline in the working-age population (chart 1) "will not be significantly counterbalanced by migration and a further rise in the labour force participation rate", but it expects that total factor productivity will be the main driver of potential growth over the medium term³. There is less agreement on the impact of ageing on inflation, which depends amongst other things on what happens to spending versus production, considering the differences in spending and savings behaviour between various age groups⁴. Wage developments may also be an important factor: a shrinking labour force could create structural labour market bottlenecks, trigger a 'war for talent', increase employees' negotiating power, and force companies to pay higher wages and raise their selling prices. This is one out of many channels whereby population ageing can, through the labour market, influence inflation (exhibit 1).

For a detailed analysis of these drivers, we can first assume that the total working-age population remains constant. People who retire are replaced by young people that enter the labour market, by migration, by people who decide to work longer, by an increase in the participation rate. Under such a scenario, there could still be a negative impact on inflation because older people receive a higher wage so if an older cohort is replaced with a younger one, the average wage level would decline.



This reduction in the cost base of companies could, through competitive pressure, cause a decline in selling prices. A potential increase in the productivity due to the changing age structure of the labour force, could also be disinflationary. On the other hand, wages increase faster for people early in their career, so this would limit the impact of the difference in wage levels⁵. Moreover, to the extent that older people work longer, the wage bill of companies would not decline.

regative savings rate.

5 Changes in the age structure of employment can therefore have substantial effects on wage growth. The main channel for such effects seems to be the different wage levels, given that the average hourly wage of an employee who is 60 or older is more than 50% higher than that of an employee under 30. The fact that wage growth tends to decrease with age works in the opposite direction. However, this effect tends to be more gradual and is therefore often less important – especially in times of large cyclical fluctuations in participation



The decline in the working-age population raises the risk that, through various channels, inflation would increase. This creates a necessity of supply-side oriented policies to mitigate this risk.



Source: Nicole Maestas, Kathleen J. Mullen, David Powell, *The Effect of Population Aging on Economic Growth, the Labor Force, and Productivity,* American Economic Journal: Macroeconomics, April 2023.
2Source: *The macroeconomic and fiscal impact of population ageing,* ECB Occasional Paper 296, June 2022.
3There is disagreement on the impact of an ageing workforce on productivity. The research mentioned in footnote 1 finds a negative effect in the US.
4 At the risk of oversimplifying, younger generations save in order to accumulate sufficient financial wealth by the time they retire whereas retired people have a low or even pegative savings rate

EDITORIAL

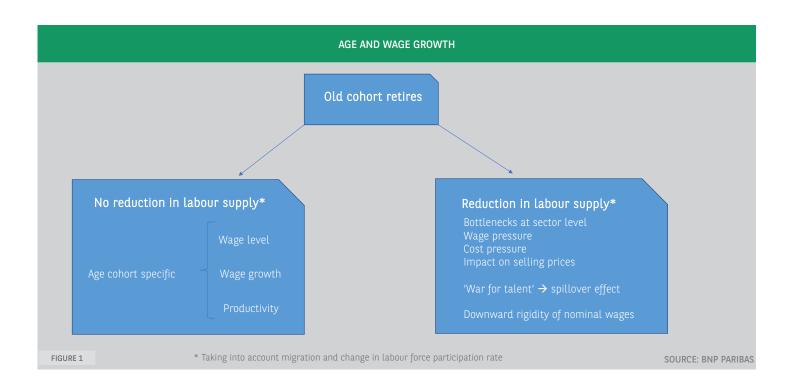
4

A more realistic assumption is that the working-age population declines, causing structural labour market bottlenecks in many if not most sectors. This would put upward pressure on wages as companies seek to poach staff from competitors or from other sectors where employees have similar skillsets. This way, upward wage pressure due to bottlenecks in one sector would spill over to other sectors, although the latter may not suffer from similar bottlenecks. A higher wage bill would force companies to increase their selling prices -if the competitive environment allows them to do so-, thereby creating another spillover channel to the rest of the economy. How about the possibility that in certain sectors, the opposite would occur, and that available labour would be in excess supply? Could this be a counterbalancing force in terms of inflation?

This is very unlikely due to the downward rigidity of nominal wages. Moreover, the question seems rather theoretical: anecdotal evidence shows that already today, shortages are widespread.

To conclude, the decline in the working-age population can, through various channels, put upward pressure on inflation. The fact that different channels exist increases the risk that this theoretical possibility becomes reality, hence the necessity of supply-side oriented policies to mitigate this risk: improving the matching of skills -those required by companies versus those offered by job seekers-, increasing the participation rate, providing incentives for working longer, a policy towards skilled migration, boosting productivity. This would not only raise potential growth but it would also avoid that the central bank would be forced to address the inflation challenge through tighter monetary policy, which would lower realised growth.

William De Vijlder





OVERVIEW

MONEY & BOND MARKETS

Week 1-9 23 to 8-9-	-23			Interest Rates		highest 23	lowest	23	Yield (%)		highest 23	lowest 23
≥ CAC 40	7 297 ▶	7 241	-0.8 %	€ ECB	4.25	4.25 at 02/08			€ AVG 5-7y	2.64	2.64 at 02/01	2.64 at 02/01
≥ S&P 500	4 516 ▶	4 457	-1.3 %	Eonia	-0.51				Bund 2y	3.16	3.36 at 08/03	2.39 at 20/03
				Euribor 3M	3.80	3.83 at 23/08	2.16 at	02/01	Bund 10y	2.57	2.75 at 02/03	1.98 at 18/01
→ Volatility (VIX)	13.1 ▶	13.8	+0.8 pb	Euribor 12M	4.09	4.19 at 07/07	3.30 at	19/01	OAT 10y	3.10	3.23 at 03/03	2.42 at 18/01
■ Euribor 3M (%)	3.77 ▶	3.80	+3.0 bp	\$ FED	5.50	5.50 at 27/07	4.50 at	02/01	Corp. BBB	4.63	4.77 at 10/07	3.95 at 02/02
7 Libor \$ 3M (%)	5.66 ▶	5.67	+0.8 bp	Libor 3M	5.67	5.68 at 29/08	4.77 at	02/01	\$ Treas. 2y	5.03	5.16 at 25/08	3.85 at 04/05
7 OAT 10y (%)	3.02 ▶	3.10	+7.7 bp	Libor 12M	6.04	6.04 at 30/06	4.70 at	20/03	Treas. 10y	4.26	4.35 at 21/08	3.30 at 06/04
7 Bund 10y (%)	2.51 ▶	2.57	+5.9 bp	£ BoE	5.25	5.25 at 03/08	3.50 at	02/01	High Yield	8.68	9.16 at 20/03	7.94 at 02/02
7 US Tr. 10y (%)	4.19 ▶	4.26	+7.1 bp	Libor 3M	5.56	5.60 at 30/08	3.87 at	02/01	£ gilt. 2y	4.79	5.51 at 06/07	3.15 at 02/02
≥ Euro vs dollar	1.08 ▶	1.07	-0.9 %	Libor 12M	0.81	0.81 at 02/01	0.81 at	02/01	gilt. 10y At 8-9-23	4.42	4.74 at 17/08	3.00 at 02/02
■ Gold (ounce, \$)	1 939 ▶	1 922	-0.9 %	At 8-9-23					AL 8-9-23			
→ Oil (Brent, \$)	88.6 ▶	90.7	+2.3 %									

EXCHANGE RATES

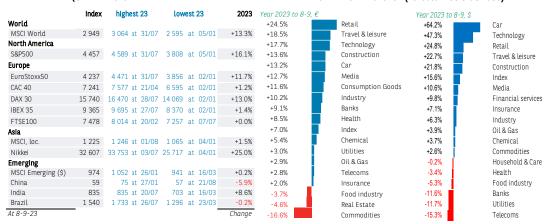
1€ =		high	est 23	low	est/	23	2023
USD	1.07	1.12	at 14/07	1.05	at	05/01	+0.4%
GBP	0.86	0.90	at 03/02	0.85	at	11/07	-3.3%
CHF	0.96	1.00	at 24/01	0.95	at	05/09	-3.2%
JPY	158.22	159.39	at 30/08	138.02	at	03/01	+12.4%
AUD	1.68	1.70	at 21/08	1.53	at	27/01	+6.5%
CNY	7.87	8.08	at 19/07	7.23	at	05/01	+6.1%
BRL	5.35	5.79	at 04/01	5.20	at	23/06	-5.1%
RUB	105.14	110.46	at 14/08	73.32	at	12/01	+35.0%
INR	88.88	92.37	at 14/07	86.58	at	08/03	+0.7%
Δt R-9	- 22						Change

COMMODITIES

Spot price, \$		high	est 23	lo	west	23	2023	2023(€)
Oil, Brent	90.7	90.7	at 08/0	09 71.9	at	12/06	+6.8%	+6.4%
Gold (ounce)	1 922	2 047	at 04/0	5 1 810	at	24/02	+5.9%	+5.4%
Metals, LMEX	3 664	4 404	at 26/0	1 3 564	at	24/05	-8.0%	-8.4%
Copper (ton)	8 229	9 331	at 23/0	01 7 852	at	24/05	-1.6%	-2.0%
wheat (ton)	192	2.9	at 13/0)2 190	at	01/09	-32.8%	-33.1%
Corn (ton)	181	2.7	at 13/0	02 161	at	21/08	-3.0%	-30.5%
At 8-9-23	-				-			Change

EOUITY INDICES

PERFORMANCE BY SECTOR (Eurostoxx50 & S&P500)



SOURCE: REFINITIV, BNP PARIBAS



MARKETS OVERVIEW

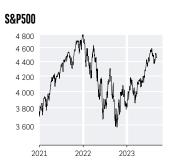
6



2022

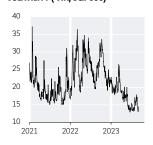
2023





VOLATILITY (VIX, S&P500)

2021





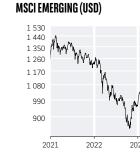
2022

2023

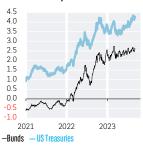
2 600

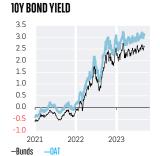
2 500 2 400

2021



10Y BOND YIELD, TREASURIES VS BUND

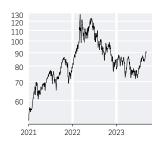




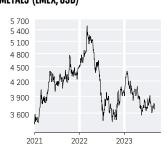
10Y BOND YIELD & SPREADS



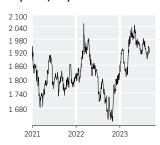
OIL (BRENT, USD)



METALS (LMEX, USD)



GOLD (OUNCE, USD)



SOURCE: REFINITIV, BNP PARIBAS



ECONOMIC PULSE

7

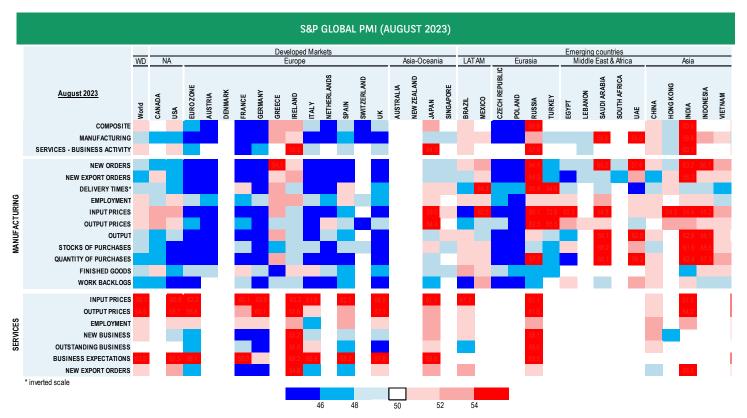
PMI SERVICES AND MANUFACTURING: THE GAP NARROWED CONSIDERABLY

According to its final estimate, the S&P Global composite PMI index fell for the seventh month in a row in August, illustrating the loss of momentum in global growth in the middle of the 3rd quarter. The negative signal is reinforced by the level of the index, which reached just 50 (from 51.6 in July), the threshold between expansion and contraction. The good news of the modest increase in the manufacturing PMI (49 compared to 48.6 in July) – the first since May 2023 – is offset by the continued deterioration of the services PMI, for the seventh consecutive month (51.1 compared to 52.7 in July). The decoupling of the business climate between the two sectors is disappearing.

The deterioration in the services sector is widespread. Five of the six components covered by the survey fell: new business, new export orders, input prices, employment and output prices. Eleven of the 16 countries for which August data are available reported a decrease in the index compared to the previous month. This decline is marked in the euro area, driven down by Germany and Spain, to the point of sliding into contraction territory, for the first time since last December. The index also worsened in the United States, the United Kingdom and China. China's index is now at the lowest level since last December, when lockdown measures against Covid-19 were still in place.

The global manufacturing PMI index, while recovering slightly in August, remains in contraction territory for the twelfth month in a row, reflecting the difficult global economic conditions. In detail, the sub-indices of new orders, output, new export orders and quantity of purchases increased slightly but remained below 50. The employment sub-index rose (50.6 compared to 50.1 in July), but this good news is offset by the rise in input (51.1 compared to 49.3) and output prices (50.5 compared to 49.7), after three months of decline. The eurozone index rebounded, wiping out its July decline, but it remains well in contraction territory, almost 7 points below the 50-point mark. The manufacturing PMI also rose in the Asian countries covered by the survey. Conversely, the United States, Canada, and the United Kingdom saw their index fall due to a decline in new orders and output. In Japan, the index remained stable.

Tarik Rharrab



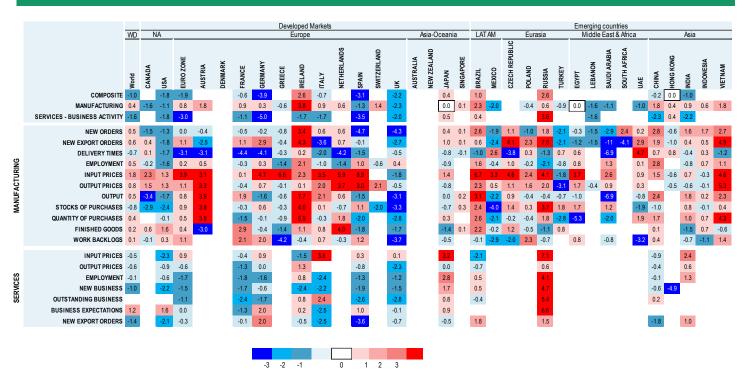
SOURCE: S&P GLOBAL, BNP PARIBAS



ECONOMIC PULSE

8

S&P GLOBAL PMI (AUGUST VERSUS JULY)



SOURCE: S&P GLOBAL, BNP PARIBAS

ECONOMIC SCENARIO

UNITED STATES

After a strong second half of 2022 (+0.7% q/q on average per quarter), US activity decelerated only slightly in the first half of 2023 (+0.5% q/q on average per quarter), thanks to the resilience of household consumption and the strength of nonresidential investment. The impact of the tighter monetary policy on lending standards is strong but it still limited on activity and employment growth. Q3 GDP growth is expected to be very positive again before a sharp slowdown in Q4 and to slide into recession in the first half of 2024. While the peak in inflation was reached in mid-2022, core disinflation remains gradual. Headline inflation should approach the 2% target in 2024. However, the slow pace of disinflation argues in favor of keeping monetary policy in restrictive territory, despite the expected start of the easing cycle in Q2 2024. This should limit the recovery in 2024.

CHINA

Economic growth, which was sluggish and unbalanced in 2022, started to accelerate in early 2023 following the end of the zero Covid policy. However, the post-Covid recovery has lost momentum very rapidly. Export momentum has stalled due to weak global demand and tensions with the US. Domestic demand remains held back by a significant loss in consumer and investor confidence. The crisis in the property sector is persisting, with the continued fall in sales, new defaults of developers and growing difficulties of certain financial institutions. The government and the central bank implement new policy stimulus measures, which yet remain of moderate magnitude. The weak financial situation of local governments should constrain public investment.

EUROZONE

After a slight contraction in GDP in Q4 2022, the euro area returned to slightly positive growth in the first half of 2023. According to the latest figures available, Q1 growth was again revised up (from -0.1% to 0.0% and now to +0.1% q/q), but Q2 growth was downwardly revised to +0.1% q/q, erasing the initially reported technical rebound of +0.3% q/q. The disparate performance between Member States further weakens the overall result. France and Spain have been doing well, but Germany, Italy and the Netherlands are struggling. The negative effects of monetary tightening should intensify and further slow economic activity, which would stagnate in the second half of 2023, before starting a sluggish recovery. Although it is expected to decline throughout 2023, inflation would remain elevated, slightly exceeding 3% y/y at the end of this year. Illustrating the slowness of the disinflation process, it would still be significantly above the 2% target at the end of 2024 (2.5% y/y), forcing monetary policy to remain in restrictive territory.

FRANCE

French growth significantly surprised on the upside in Q2 2023, with activity accelerating more than expected (+0.5% q/q, after stagnation in Q1 and a modestly positive Q4 2022). While household consumption and investment remain depressed, this rebound has been supported by business investment and, above all, exports. A negative correction is likely in Q3. Inflation rebounded in August (5.7% y/y according to the harmonized measure), driven by energy prices, but which does not call into question its slow downward trajectory. Because of rising interest rates, household demand should remain subdued in 2023, weighing on our GDP growth forecast (0.7% in 2023, compared to 2.5% in 2022).

RATES AND EXCHANGE RATES

In the US, after having skipped the June meeting, the Federal Reserve proceeded, as expected, to a further 25bp rate hike in July. This increase would be the last in our view, but uncertainty remains given the still elevated core inflation and the resilience of activity and the labour market to date. In any case, these factors argue against a rate cut before the beginning of 2024. The residual uncertainty on the policy rate peak is reflected in long-term rates, which remained on an upward trend early September. However, as inflation falls further and the prospect of monetary easing in 2024 rises, long-term rates should resume their decline soon.

Unlike the Fed, the ECB did not pause in June but, like the Fed, it increased its key rates by 25bp in July (deposit rate at 3.75%, refinancing rate at 4.25%). We are of the view that this increase would mark the end of the ECB's tightening cycle, considering the effects of the monetary tightening already underway. But it is not yet certain that it will be the last, given the absence of a tangible fall at this stage of core inflation.

As part of its monetary tightening, the ECB also announced a complete halt, starting in July 2023, of its reinvestments under the APP. European long-term rates are trending up, moving in line with US rates, but in a more muted way. They are expected to ease gradually as the fall in core inflation should become more visible, dissipating uncertainty over the continuation of monetary tightening.

On 27 July, the Bank of Japan (BoJ) adjusted its yield curve control policy (YCC) by allowing a wider fluctuation in 10-year sovereign interest rates around the target of 0.5%Further adjustments to the YCC cannot be excluded, given that the country currently faces the fastest rate of inflation since the early 1990s. Nevertheless, the BoJ is unlikely to increase its policy rates this year, but a rise is expected in 2024. We expect the dollar to weaken somewhat versus the euro. The dollar's valuation is expensive and next year the Federal Reserve should ease earlier and more than the ECB. We expect the yen to remain around current levels in the near term before strengthening versus the dollar based on the expected monetary divergence between the Fed and the BoJ in 2024.

GDP GROWTH AND INFLATION									
		GDP	Growth			Inflation			
%	2021	2022	2023 e	2024 e		2021	2022	2023 e	2024 e
United-States	5.9	2.1	2.1	0.3		4.7	8.0	4.0	2.1
Japan	2.2	1.0	2.0	1.0		-0.2	2.5	3.2	2.3
United-Kingdom	7.6	4.1	0.5	0.1		2.6	9.0	7.6	3.1
Euro Area	5.3	3.4	0.5	0.9		2.6	8.4	5.6	2.9
Germany	2.6	1.9	-0.3	0.3		3.2	8.6	6.2	3.0
France	6.8	2.5	0.7	0.5		2.1	5.9	5.7	2.7
Italy	7.0	3.8	0.9	1.1		1.9	8.7	6.0	2.0
Spain	5.5	5.5	2.2	1.5		3.0	8.3	3.6	3.2
China	8.4	3.0	5.1	4.5		0.9	2.0	0.5	2.0
India*	8.7	7.3	6.1	6.0		5.5	6.7	5.9	5.0
Brazil	5.0	2.9	3.1	1.8		8.3	9.3	4.7	4.2

Source : BNP Paribas (e: Estimates & forecasts)

Last update: 5 September 2023

^{*} Fiscal year from 1st April of year n to March 31st of year n+1

INTEREST AND EXCHANGE RATES						
Interest rates, % End of period		Q4 2023	Q1 2024	Q2 2024	Q3 2024	Q4 2024
US	Fed Funds (upper limit)	5.50	5.50	5.25	4.75	4.25
	T-Note 10y	4.20	4.05	3.95	3.90	3.90
Eurozone	deposit rate	3.75	3.75	3.75	3.50	3.25
	Bund 10y	2.60	2.45	2.40	2.30	2.35
	OAT 10y	3.17	2.99	2.93	2.85	2.92
	BTP 10y	4.50	4.25	4.10	4.10	4.25
	BONO 10y	3.70	3.45	3.35	3.30	3.40
UK	Base rate	5.50	5.50	5.00	4.50	4.00
	Gilts 10y	4.00	3.80	3.60	3.65	3.70
Japan	BoJ Rate	-0.10	-0.10	0.10	0.10	0.25
	JGB 10y	0.75	0.85	0.90	0.90	1.00

Exchange Rates						
End of period		Q4 2023	Q1 2024	Q2 2024	Q3 2024	Q4 2024
USD	EUR / USD	1.10	1.11	1.12	1.13	1.15
	USD / JPY	145	145	140	138	135
	GBP / USD	1.29	1.29	1.29	1.30	1.32
EUR	EUR / GBP	0.85	0.86	0.87	0.87	0.87
	EUR / JPY	160	161	157	156	155
Brent						
End of period		Q4 2023	Q1 2024	Q2 2024	Q3 2024	Q4 2024
Brent	USD/bbl	81	82	86	88	86

Sources: BNP Paribas (Market Economics, Interest Rate Strategy, FX

Strategy, Commodities Desk Strategy)
Last update: 5 September 2023



FURTHER READING

10

Economic forecasting in a world without stylised facts	EcoTVWeek	8 September 2023
Inflation tracker of September 2023	EcoCharts	8 September 2023
The European Union's response to climate and industrial challenges	Chart of the Week	6 September 2023
From inflation to growth: the migration of uncertainty	EcoWeek	4 September 2023
Jackson Hole 2023: the fight against inflation is not over	EcoTV Week	1 September 2023
France: August's inflation figure reminds us that disinflation will remain gradual	EcoBrief	31 August 2023
July 2023: the hottest month ever measured	Chart of the Week	30 August 2023
Climate neutrality: the race has begun	EcoConjonture	29 August 2023
Global economy: the long wait	EcoWeek	28 August 2023
Greenflation: how inflationary is the energy transition?	EcoFlash	28 August 2023
Spain: strong job creations to support growth	EcoBrief	27 July 2023
Central America: How climate variability impacts human mobility?	Chart of the Week	27 July 2023
Eurozone: Inflation through the lens of business surveys. The case of services.	EcoWeek	24 July 2023
OECD: Economic pulse of June 2023	EcoPulse	24 July 2023
The Caribbean: Trouble in Paradise	EcoTVWeek	21 July 2023
United States: Money market funds reallocate their assets outside the ON RRP facility	Chart of the Week	19 July 2023
Eurozone: Inflation through the lens of business surveys - The case of industry	EcoWeek	18 July 2023
Is Chili a leader in energy transition?	EcoTVWeek	13 July 2023
Transport, France's main source of greenhouse gases emissions	Chart of the Week	12 July 2023
Eurozone: "have money, will travel"	EcoWeek	10 July 2023
Japan: After Price Inflation, Time for Wages?	EcoBrief	7 July 2023



GROUP ECONOMIC RESEARCH

William De Vijlder Chief Economist	+33 1 55 77 47 31	william.devijlder@bnpparibas.com
OECD ECONOMIES AND STATISTICS		
Hélène Baudchon Deputy chief economist, Head - United States	+33 1 58 16 03 63	helene.baudchon@bnpparibas.com
Stéphane Colliac France, Germany	+33 1 42 98 43 86	stephane.colliac@bnpparibas.com
Guillaume Derrien Eurozone, Southern Europe, Japan, United Kingdom - Global trade	+33 1 55 77 71 89	guillaume.a.derrien@bnpparibas.com
Veary Bou, Tarik Rharrab Statistics		
ECONOMIC PROJECTIONS, RELATIONSHIP WITH THE FRENCH	NETWORK	
Jean-Luc Proutat Head	+33 1 58 16 73 32	jean-luc.proutat@bnpparibas.com
BANKING ECONOMICS		
Laurent Quignon Head	+33 1 42 98 56 54	laurent.quignon@bnpparibas.com
Céline Choulet	+33 1 43 16 95 54	celine.choulet@bnpparibas.com
Thomas Humblot	+33 1 40 14 30 77	thomas.humblot@bnpparibas.com
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
Lucas Plé Africa (Portuguese & English-speaking countries)	+33 1 40 14 50 18	lucas.ple@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

ECOEMERGING

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.

ECOCHARTS

Easy-to-read monthly overview of inflation dynamics in the main developed economies.

ECOPULSE

Monthly barometer of key economic indicators of the main OECD

ECOTV WFFK

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 - www.economic-research.bnpparibas.com

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

Copyright:

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 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 "RNP) Paribas" may make a market in or may as principal or agent buyer sell sequitive of any "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 or derivatives thereon. BNP Paribas may have a financial interest in any issuer or person 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 puryields 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, from time to time, solicit, perform or have performed investment banking, underwriting or other services (including acting as adviser, manager, underwriter or lender) within the last 12 months for any person referred to in this report. BNP Paribas may be a party to an agreement with any person relating to the production of this report. BNP Paribas, may to the extent permitted by law, have acted upon or used the information contained bergin or the research or analysis on which it was based before its publication BNP Paribas. herein, or the research or analysis on which it was based, before its publication. BNP Paribas may receive or intend to seek compensation for investment banking services in the next three months from or in relation to any person mentioned in this report. Any person mentioned in this report may have been provided with sections of this report prior to its publication in order 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 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.

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

Jurt is authorised and supervised by the Autorite de Controle 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 RNP paribas Securities Corp. 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. 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