



# ECOCHARTS

October 2023

INFLATION TRACKER



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# CHART OF THE MONTH: Focus on alternative measures of Eurozone inflation

Whilst euro area August inflation figures warned of the slowness of disinflation, September data (Eurostat's preliminary estimates) point to an acceleration and an amplification of disinflation. Headline and core inflations fell by almost one percentage point year-on-year. Besides, the decline is driven by the four main HICP items (harmonized index of consumer prices): manufactured goods (contribution down -0.1 percentage points), services (-0.3), food (-0.2) and energy (-0.1). Headline and core inflation remain high (4.3% and 4.5% y/y respectively) but their fall is becoming more visible.

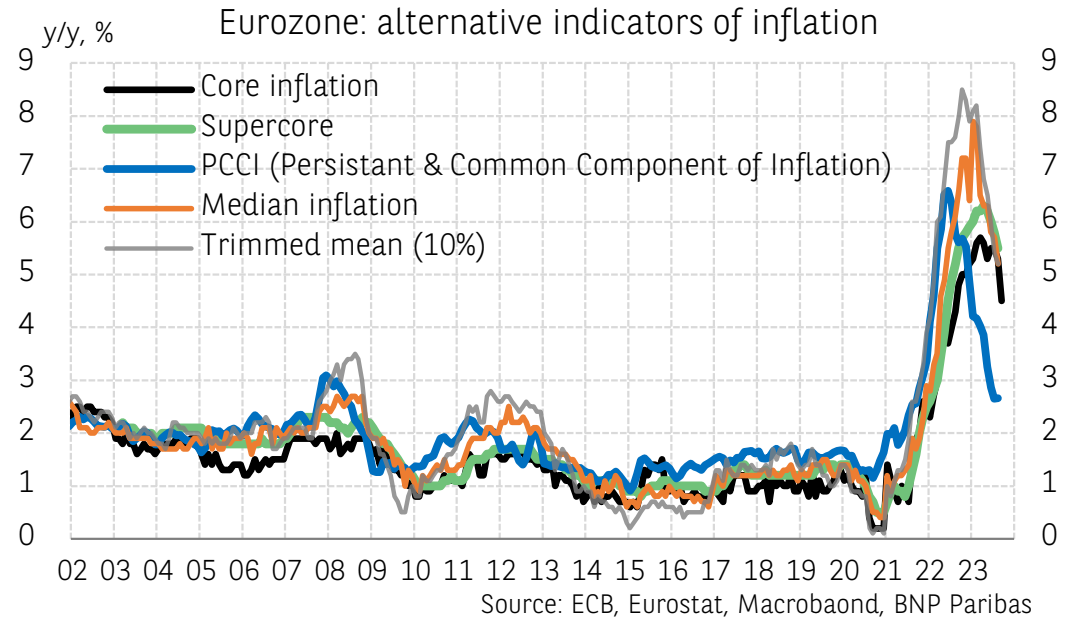
The decline in the various alternative measures of inflation (less volatile and more trend-informative measures of inflation), the main ones being shown in the graph, strengthens the encouraging global picture. The decrease in the persistent and common component of inflation (PCCI) is the most marked (this measure of inflation is the only one below 3%, since June 2023) and the earliest (the indicator turned downward in early 2022). This is a strong disinflationary signal of the diminishing persistence of inflation and its commonality across euro area countries and HICP items.

The so-called "supercore" measure goes beyond a purely statistical analysis, excluding the most volatile components of inflation: it makes an explicit link to macroeconomic conditions. Indeed, the "supercore" index is based on the core components of the HICP deemed sensitive to slack (as measured by the output gap). The fall of this measure has begun, but so far it is more moderate than that of other alternative measures of inflation.

The inflation measures based on median and trimmed means (10%)<sup>1</sup> are closer to the headline print: they rose significantly higher than the other alternative measures of inflation and have fallen more sharply since their peak in October 2022 (by, respectively, -2 and -3.3 points, and -6.3 points for headline inflation).

In addition to these encouraging developments in inflation and its alternative measures, first signs of moderation in wage growth are visible too. According to the monthly wage tracker developed by the Central Bank of Ireland, wage growth fell to below 4% y/y in August (3.9%), from a high of 5.3% in September 2022.

<sup>1</sup> 5% of the lowest and 5% of the highest inflation rates are eliminated. Median inflation is an extreme form of a trimmed mean approach (50% of the lowest and 50% of the highest monthly changes are excluded): each period, the individual item with a monthly variation situated at the weighted median of the 93 HICP sub-items variations is selected. Its year-on-year change corresponds to median inflation.



# Positive developments

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- In the United States, core inflation dropped again in August, as did the pace of wage growth: both were at 4.3% y/y. The fall in services inflation continued (to 5.3% y/y), led by a more significant decrease in medical care prices (-2.1% y/y) and gas prices (-16.5%). Conversely motor vehicle insurance prices rose more strongly (19.1% y/y). The shelter component, which is included in services and accounts for one-third of the CPI, continued to ease but inflation here remains high (7.3% y/y). The University of Michigan indices are also showing a downward shift in household expectations of inflation in 1 year towards 5-years expectations. Both measures are now at around 3%, which is very close to the estimates in professional forecasters' surveys.
- In the eurozone, headline inflation has fallen slightly below core inflation since July. All alternative measures of inflation are falling, with the biggest fall recorded by the PCCI, below 3% now. Large inflation differentials between member states remain: while The Netherlands saw slight deflation in September (-0.3% y/y), Slovakia is still posting figures close to 9% (8.9%). Among the four biggest economies, there were slight rises in Spain (3.2%) and Italy (5.7%), whilst inflation fell slightly in France (5.6%) and more significantly in Germany (4.3%). Wage settlements in the eurozone are likely to catch up with inflation in the third quarter, which will support household purchasing power but reduce the pace of disinflation.
- The situation in the United Kingdom remains the most worrying, but the latest developments have been relatively positive. Headline inflation fell by 0.3 points in August, to 6.3% y/y, and the short-term momentum measure (3m/3m) suggests a bigger fall over the autumn. The core measure (6.2% y/y) is also likely to drop more significantly over the fourth quarter. However, inflation as measured by the Retail Price Index (RPI) is stronger than the CPI measure, due mainly to higher mortgage interest payments (+60.3% y/y) which are not included in the latter. Although the Bank of England voted by a narrow majority (five votes to four) to leave interest rates unchanged in September, falling inflation over the coming months is likely to strengthen the case for the status quo.
- In Japan, the new inflationary context is leading to a recalibration in market expectations: the inflation breakeven rate rose above 1.5% in September. This is the first time in ten years that the breakeven rate has risen above this threshold. The alternative inflation measures scrutinised by the BoJ are still rising, while more than 40% of the CPI basket is now showing annual price increases above 2%. The sharp depreciation of the yen in 2023 will generate more imported inflation. These trends are pushing JGB yields upwards, particularly the 10-year rate, which is now approaching the 0.8% threshold and thus closing in on the BoJ's intervention ceiling, which is currently 1%.

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**General dynamics of inflation**

**Inflation and survey data**

**Inflation expectations (households, forecasters, markets)**

**Raw materials**

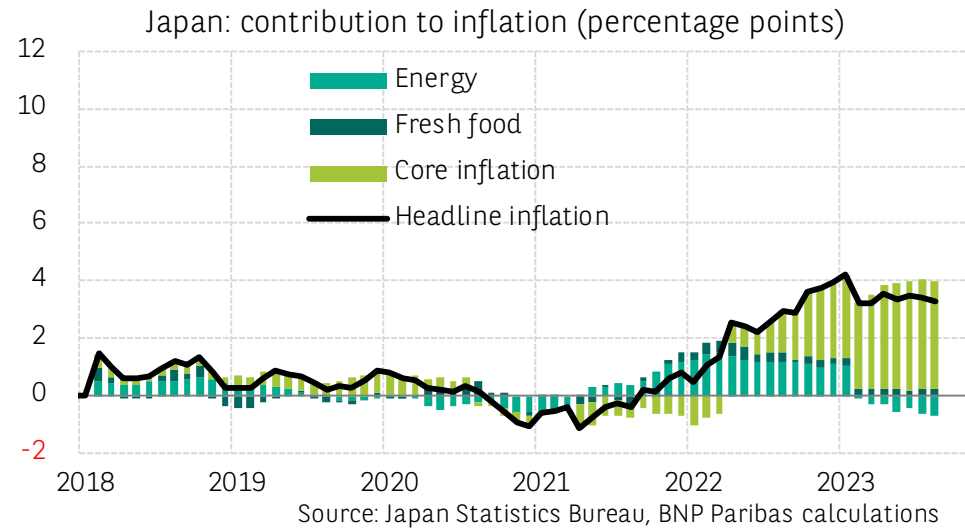
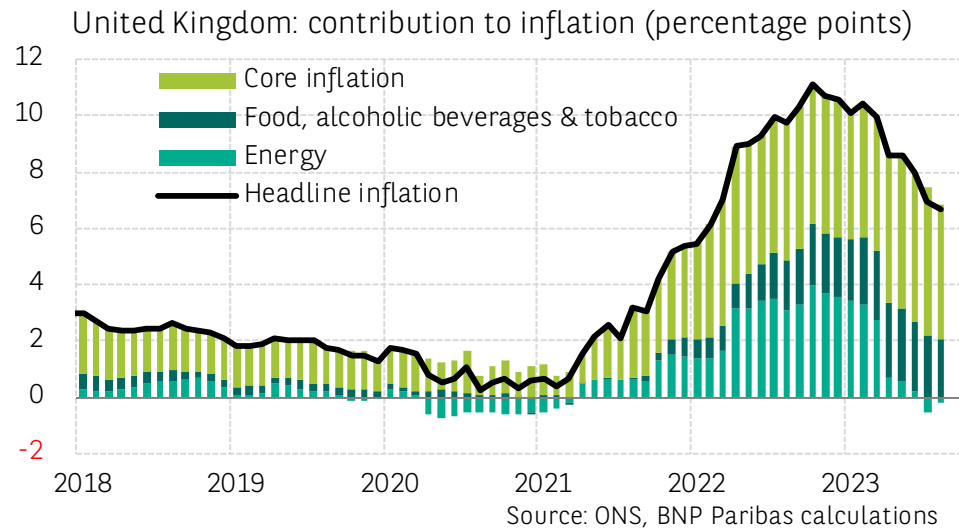
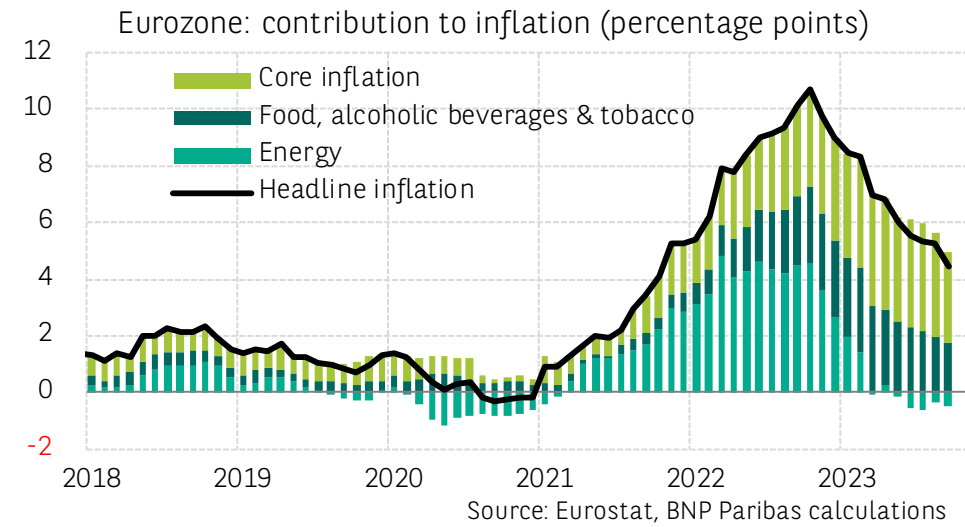
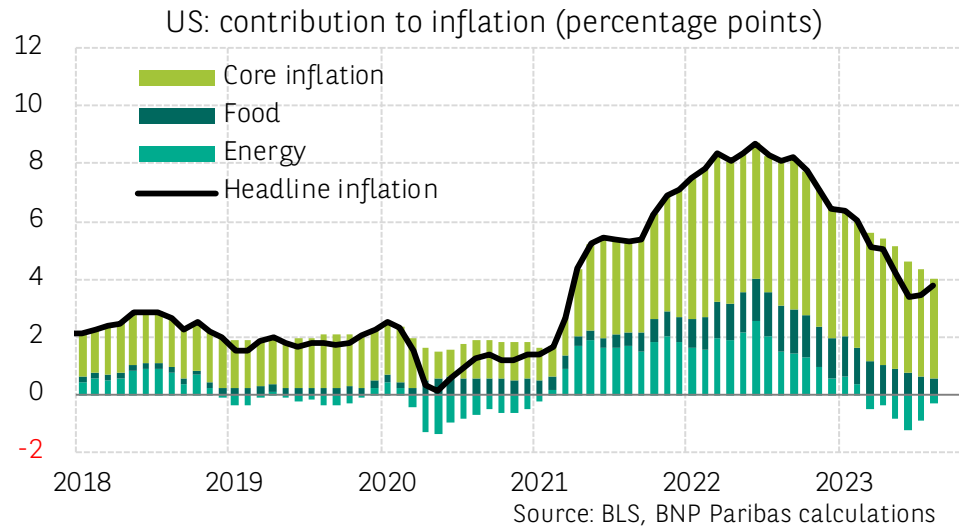
**Macroeconomic determinants of inflation (wages, unemployment rate, capacity utilization rate, exchange rate)**



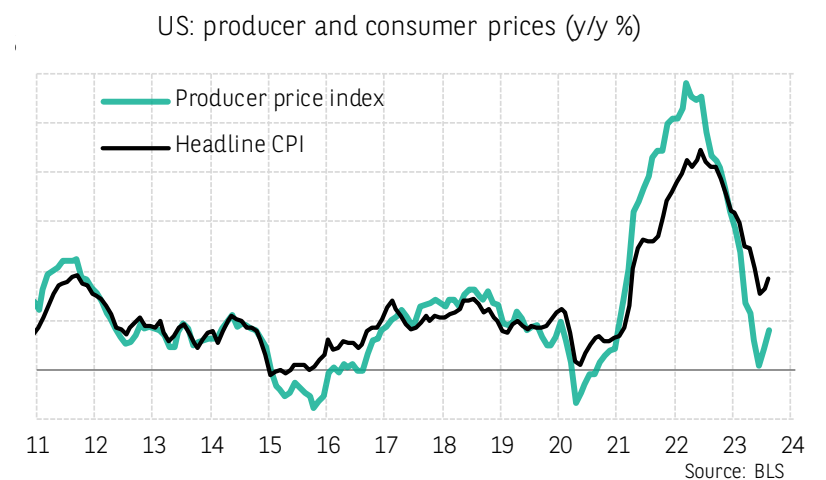
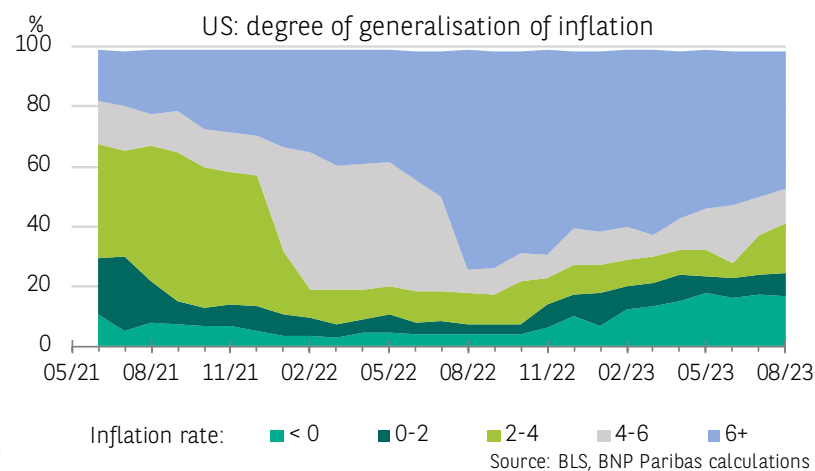
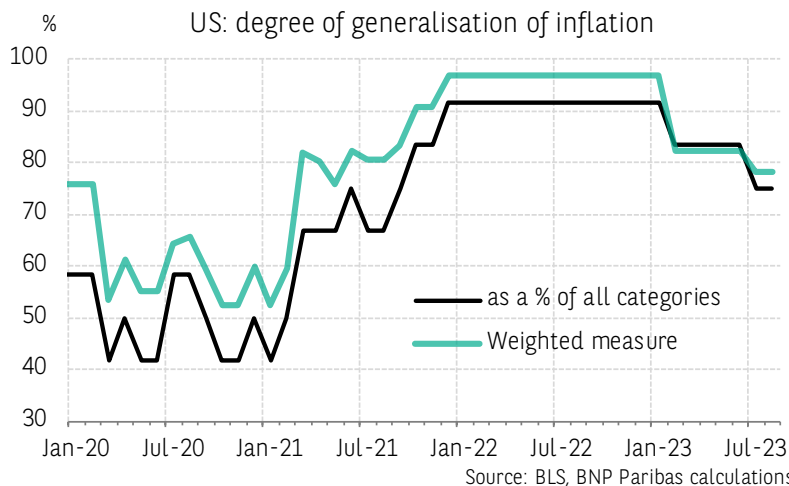
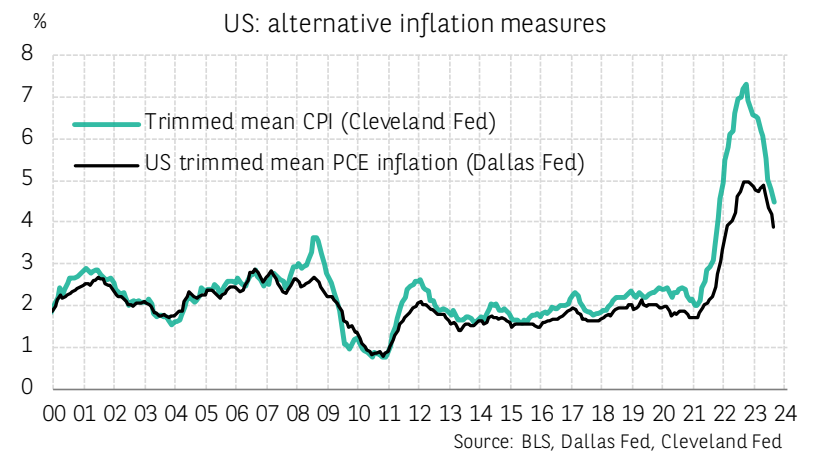
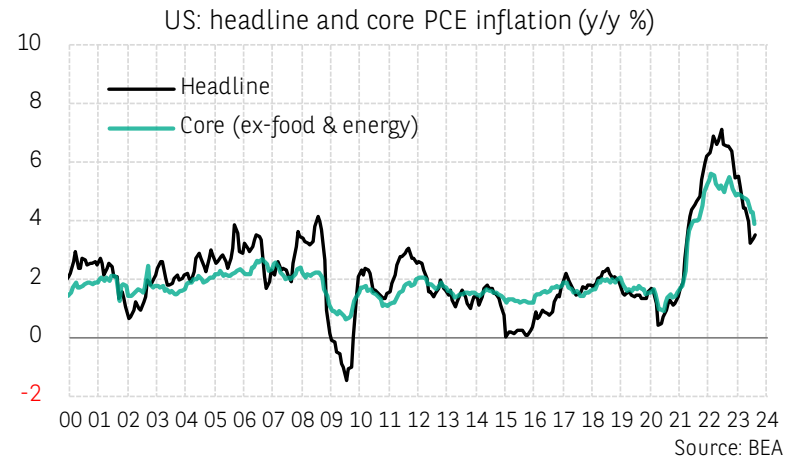
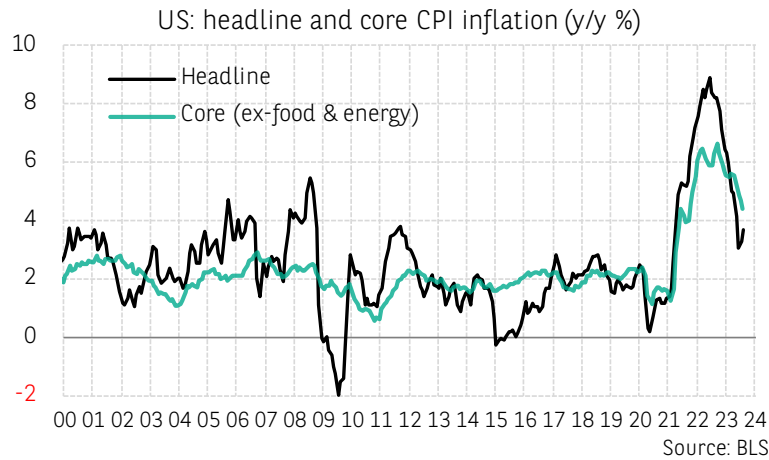
# General dynamics of inflation



# General dynamics of inflation: decomposition of inflation



# Inflation dynamics in the United States: different metrics and degree of generalisation



Note: the black line represents the % of CPI components whose increase is greater than, or equal, to 2%. The hatched green line weights the results by the share of each component in the CPI.



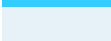
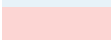


# United States inflation heatmap

Difference between the current inflation rate (y/y, %) and the 2010-2019 average

	Weight (%)	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23
Total	100	6.46	6.44	5.99	5.36	4.67	4.58	4.21	3.22	3.19	2.36	1.32	1.53	1.94
Food and non-alcoholic beverages	7.6	12.34	11.73	11.25	10.76	10.69	10.16	8.96	7.13	5.82	4.45	3.39	2.29	1.70
Alcoholic beverages, tobacco and narcotics	1.2	3.67	3.22	2.82	3.04	2.98	3.37	3.06	2.95	2.68	2.68	2.08	1.96	1.56
Clothing and footwear	2.7	5.11	5.18	3.91	3.13	2.46	2.41	2.56	2.53	2.88	2.90	2.26	2.21	2.45
Housing, water, electricity, gas and other fuels	36.1	5.18	5.52	5.37	5.46	5.87	6.02	5.98	5.54	5.28	4.69	4.18	4.11	3.72
Furnishings, household equipment and routine household maintenance	4.0	10.28	9.60	8.94	8.04	7.04	6.01	5.83	5.22	4.90	3.72	2.97	2.21	1.44
Health	7.4	0.59	0.90	0.61	0.41	0.83	0.19	-0.01	-0.30	-0.18	0.10	0.07	-0.10	-0.08
Transports	14.5	13.78	12.37	10.49	6.55	1.82	1.54	0.18	-3.82	-2.51	-5.20	-8.66	-6.47	-1.72
Communications	3.3	0.00	-0.62	-0.91	0.48	0.62	1.11	1.13	1.67	1.87	1.73	1.39	1.61	1.62
Recreation and culture	6.7	3.85	4.00	3.71	4.15	4.27	3.95	4.31	4.20	4.45	4.02	3.74	3.35	2.96
Education	2.7	0.31	1.27	1.16	1.39	1.62	0.05	-0.18	0.14	0.03	-0.39	-0.85	-0.64	-0.59
Restaurants and hotels	7.8	5.40	5.52	6.06	5.58	5.35	5.41	4.76	4.04	3.43	2.81	2.49	2.41	2.33
Miscellaneous goods and services	6.1	5.74	7.05	6.90	6.57	5.85	5.27	4.41	3.80	3.60	3.53	2.76	2.26	1.99

Source: BLS

Difference with the 2010-2019 average

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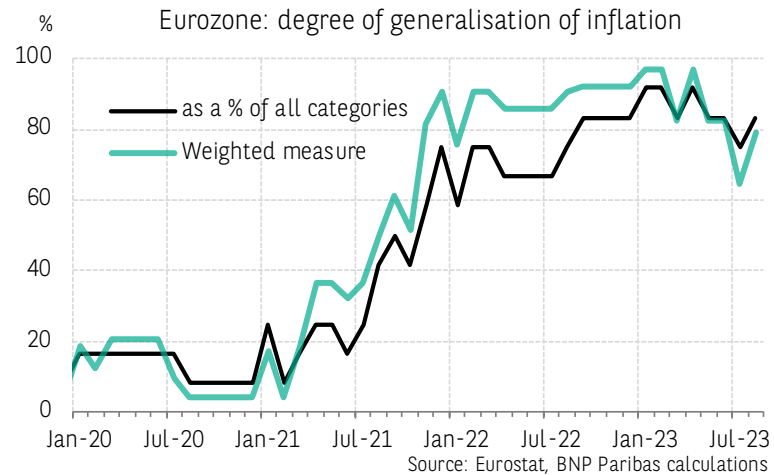
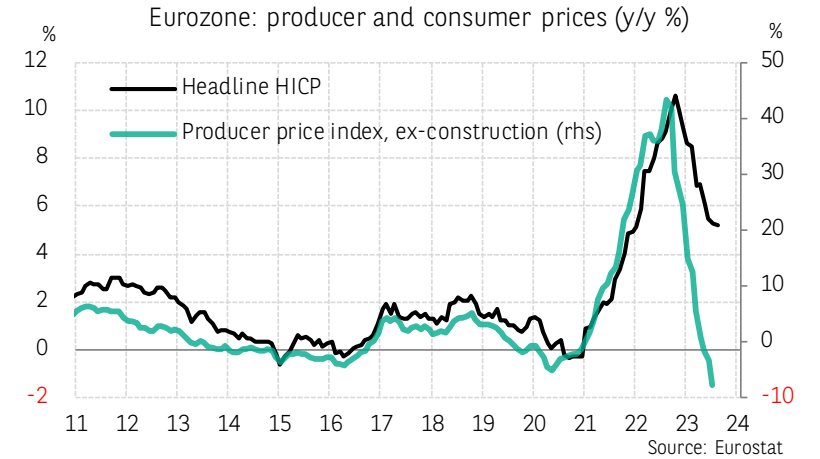
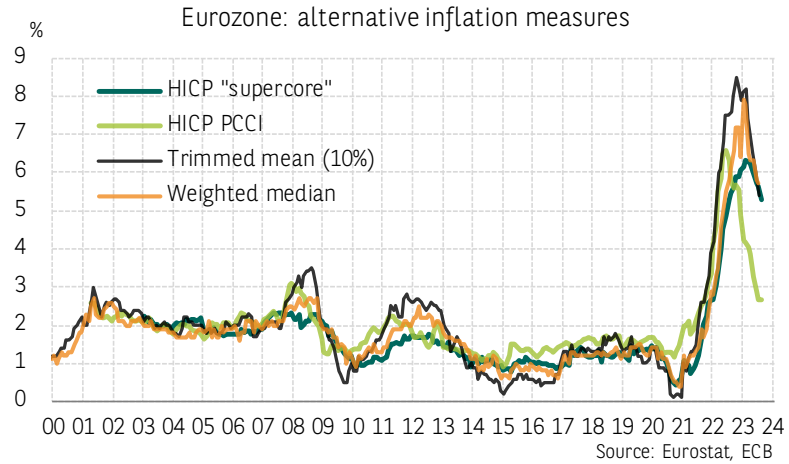
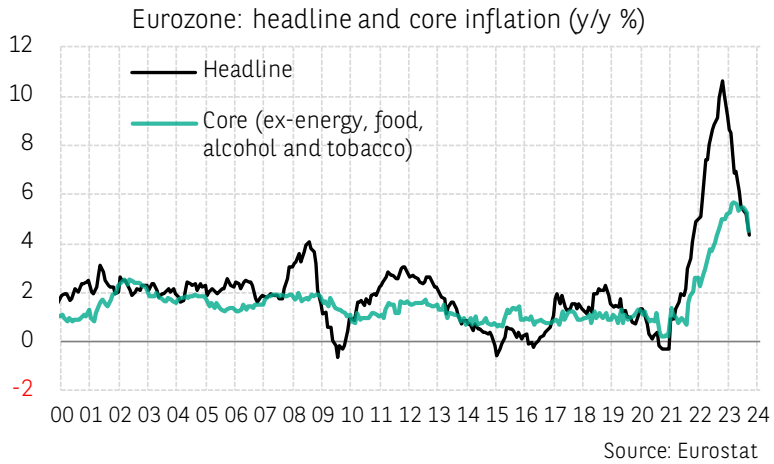


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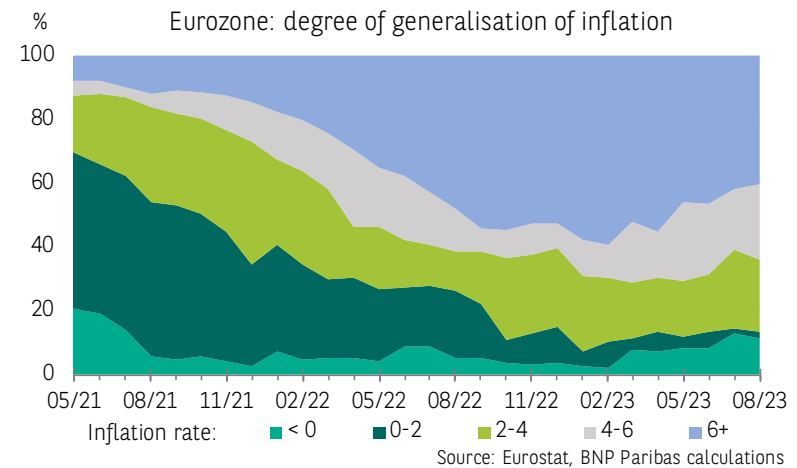
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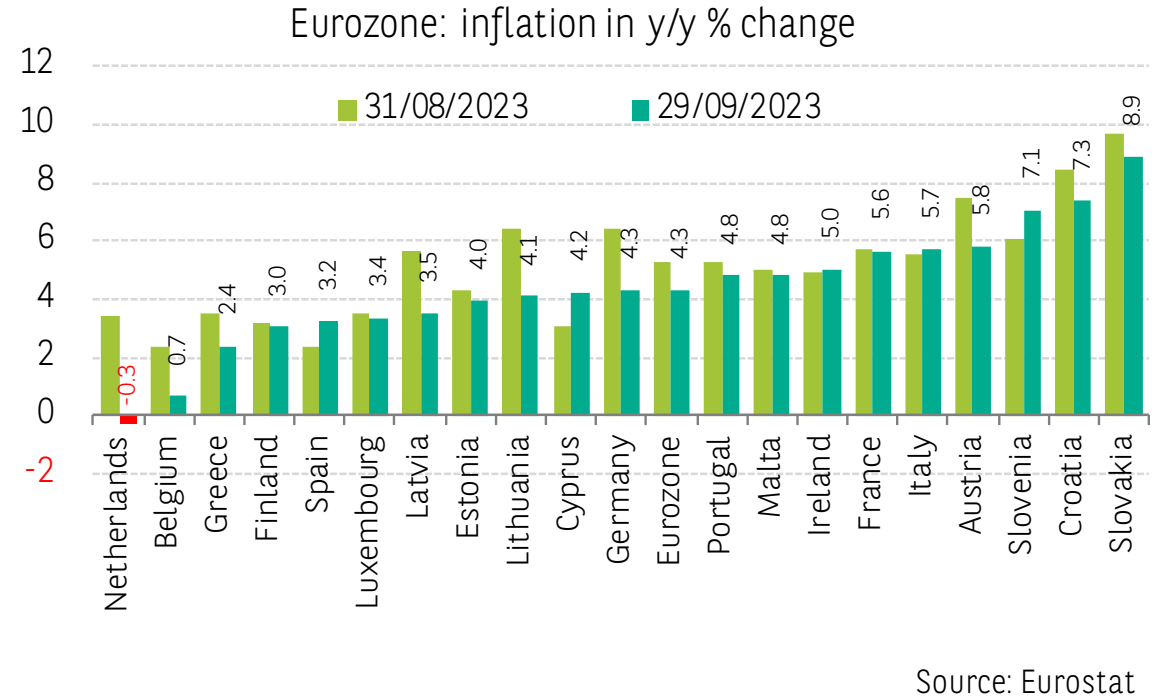
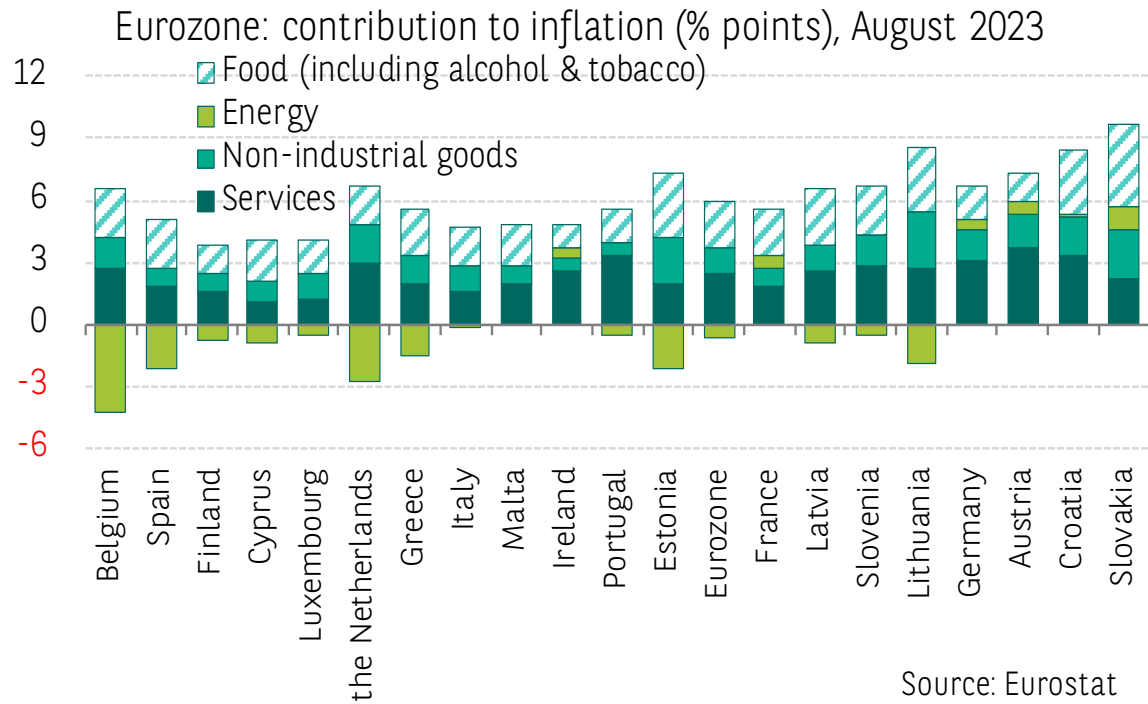
# Inflation dynamics in the Eurozone: different metrics and degree of generalisation



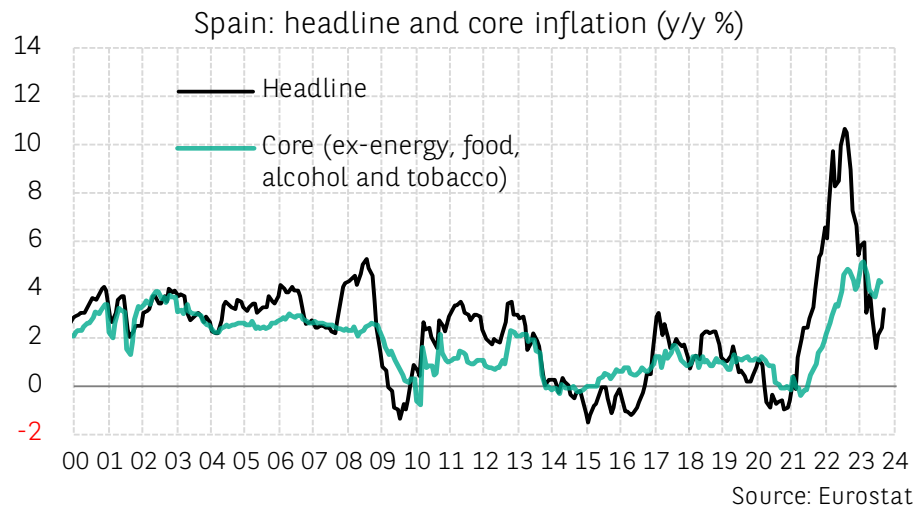
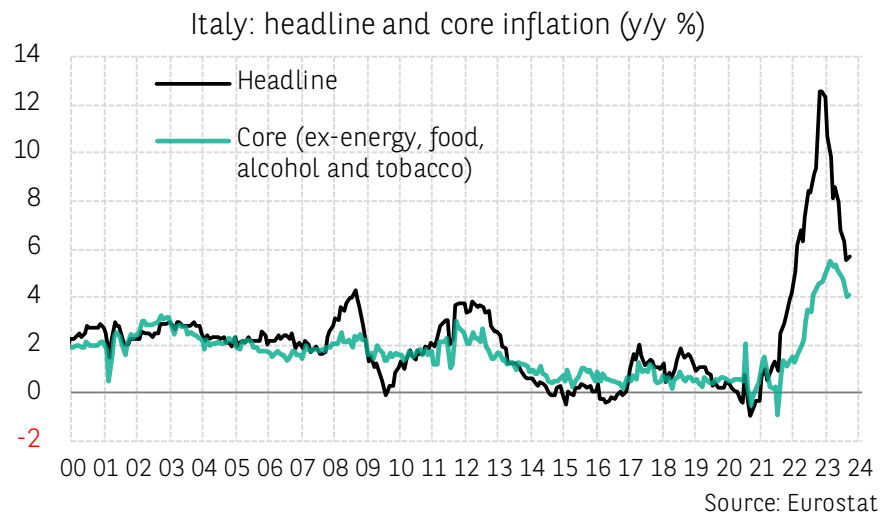
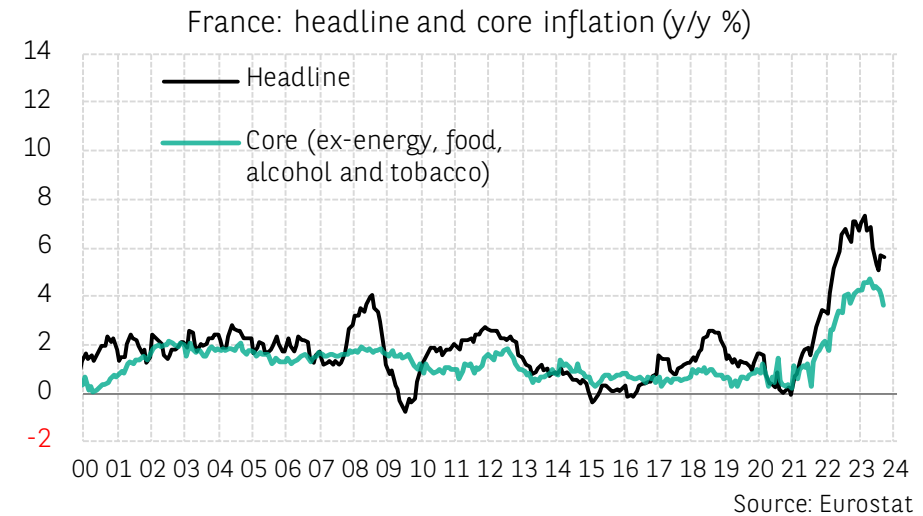
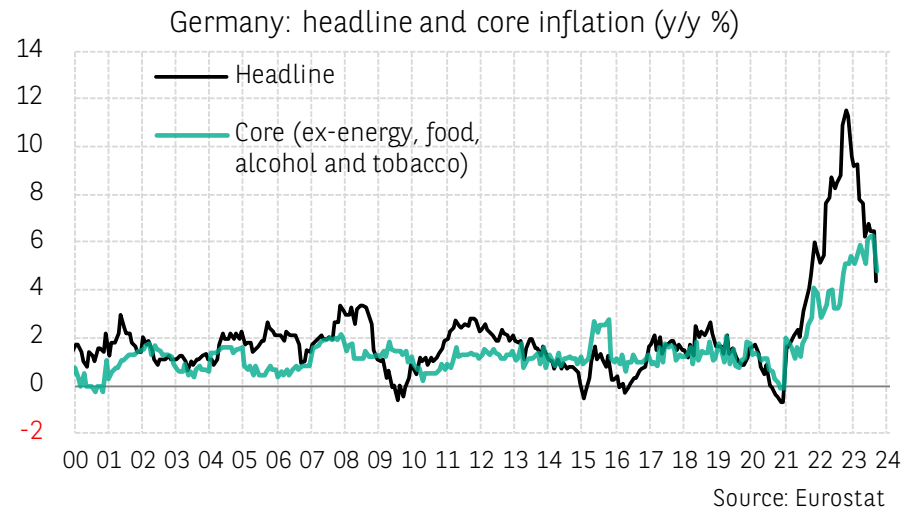
Note: the black line represents the % of CPI components whose increase is greater than, or equal to 2%. The hatched green line weights the results by the share of each component in the CPI.



# Inflation dynamics in the Eurozone by country (1)



# Inflation dynamics in the Eurozone by country (2)





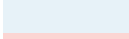



# Eurozone inflation heatmap

Difference between the current inflation rate (y/y, %) and the 2010-2019 average

	Weight (%)	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23
Total	100	7.79	8.57	9.27	8.70	7.84	7.29	7.15	5.53	5.61	4.75	4.17	3.96	3.89
Food and non-alcoholic beverages	17	10.97	12.33	14.02	14.54	14.55	14.83	15.87	16.08	13.54	12.25	11.12	10.13	8.84
Alcoholic beverages, tobacco and narcotics	4	0.68	0.96	1.10	1.46	2.11	2.47	2.96	4.23	4.51	4.46	4.56	4.47	4.39
Clothing and footwear	5	1.55	2.70	3.29	2.83	3.14	4.42	4.81	4.19	3.59	3.66	3.74	3.27	3.37
Housing, water, electricity, gas and other fuels	18	17.86	19.31	21.38	18.80	14.43	10.13	8.23	2.79	2.98	2.23	0.72	-1.02	-2.50
Furnishings, household equipment and routine household maintenance	7	6.81	7.23	7.94	8.08	8.53	8.54	8.32	7.98	7.52	6.69	6.06	5.50	4.85
Health	5	0.24	0.45	0.80	0.72	0.76	1.51	1.64	1.62	1.78	1.83	1.96	1.99	2.01
Transports	15	8.08	9.10	8.13	6.84	5.08	5.31	3.96	-1.24	1.24	-1.75	-2.42	-1.02	2.41
Communications	3	1.03	0.97	0.82	0.73	0.89	1.54	2.09	2.02	2.04	2.25	1.46	1.66	1.74
Recreation and culture	8	4.06	3.89	4.16	4.00	4.76	3.53	4.37	5.58	4.89	5.02	5.12	5.84	5.87
Education	1	-1.64	2.93	3.22	3.26	3.24	3.37	3.53	3.59	3.68	3.64	3.75	3.68	3.68
Restaurants and hotels	8	6.29	6.68	6.60	6.27	6.44	6.33	6.80	6.68	7.02	6.55	5.86	5.85	5.47
Miscellaneous goods and services	10	1.80	1.95	2.39	2.68	2.81	3.65	3.85	3.86	3.86	3.87	4.11	3.95	3.87

Source: Eurostat

Difference with the 2010-2019 average

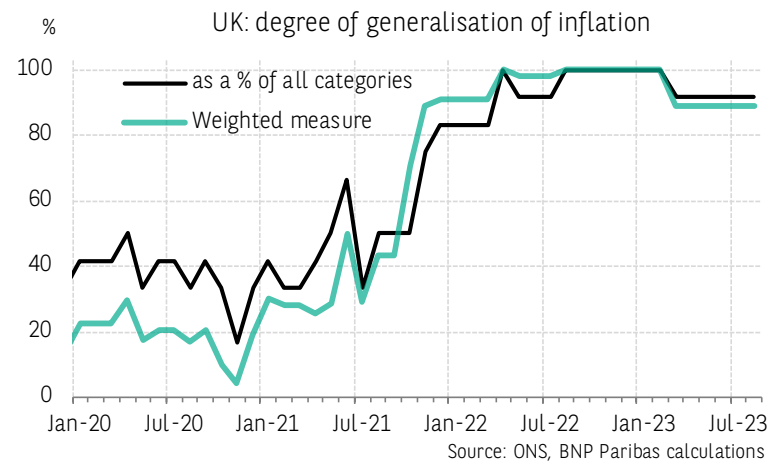
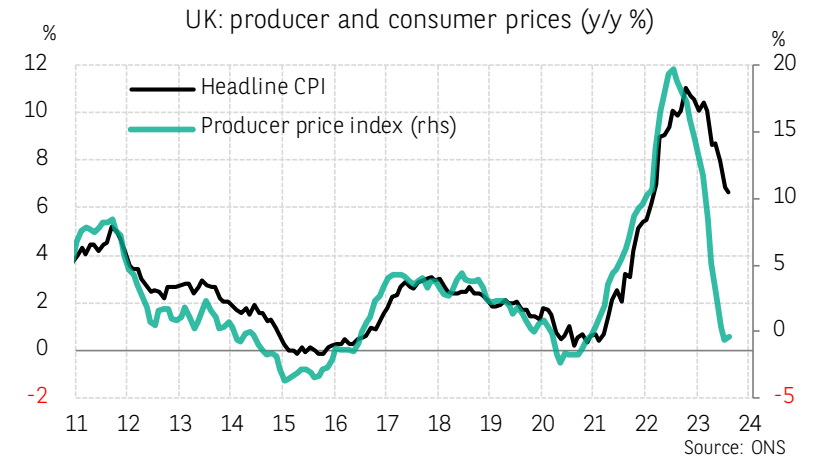
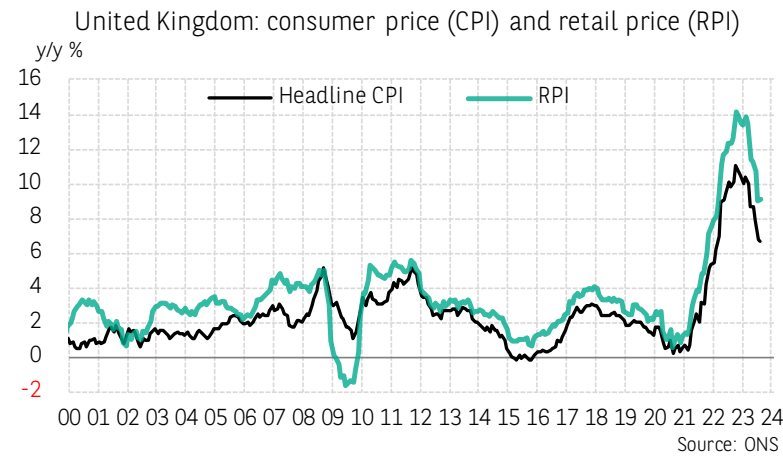
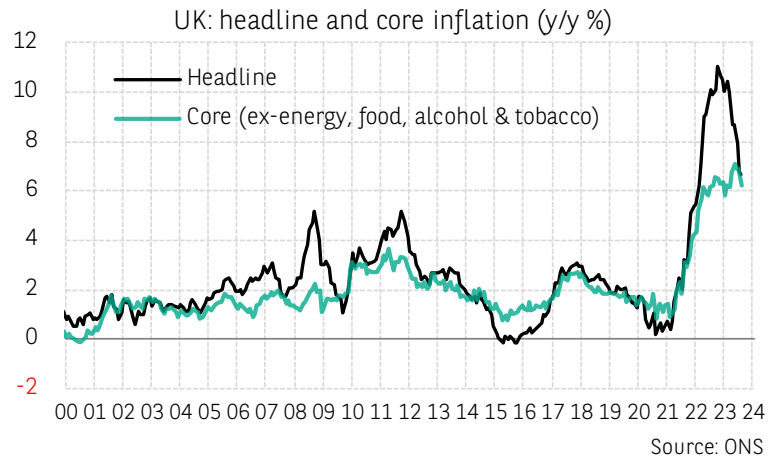
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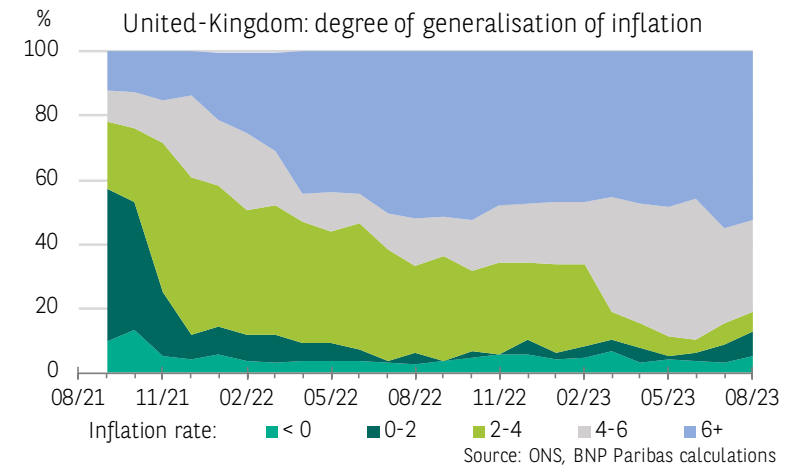
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# Inflation dynamics in the United Kingdom: different metrics and degree of generalisation



Note: the black line represents the % of CPI components whose increase is greater than or equal to 2%. The hatched green line weights the results by the share of each component in the CPI.




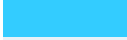
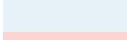



# United Kingdom inflation heatmap

Difference between the current inflation rate (y/y, %) and the 2010-2019 average

	Weight (%)	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23
Total	100	7.64	7.87	8.82	8.44	8.30	7.82	8.19	7.83	6.43	6.45	5.72	4.60	4.43
Food and non-alcoholic beverages	9.3	11.43	12.91	14.60	14.77	15.17	15.04	16.40	17.51	17.40	16.66	15.68	13.19	11.94
Alcoholic beverages, tobacco and narcotics	3.9	0.75	0.81	1.39	-0.63	-1.02	0.39	0.96	0.59	4.42	4.58	4.54	4.70	5.83
Clothing and footwear	4.9	6.97	7.85	7.88	6.88	5.84	5.58	7.43	6.53	6.15	6.42	6.59	5.95	6.36
Housing, water, electricity, gas and other fuels	31.4	17.55	17.79	24.19	24.12	24.11	24.28	24.14	23.61	9.86	9.68	9.50	4.33	4.52
Furnishings, household equipment and routine household maintenance	6.3	8.32	8.96	8.81	8.92	8.08	7.43	6.94	6.31	5.73	5.78	4.80	4.51	3.33
Health	1.8	0.03	0.89	1.62	2.20	2.50	3.70	4.23	4.53	4.42	5.72	5.54	6.30	5.84
Transports	11.1	9.09	7.66	6.01	4.31	3.57	0.21	-0.01	-2.11	-1.45	-1.72	-4.69	-4.95	-3.47
Communications	1.9	-0.04	-0.37	0.44	-0.23	-0.80	-0.41	0.89	0.88	5.06	6.26	6.67	4.28	5.41
Recreation and culture	10.5	4.21	4.16	4.74	4.24	3.79	3.91	2.96	3.53	5.18	5.59	5.61	5.47	4.72
Education	2.6	-2.47	-2.72	-3.82	-3.82	-3.82	-3.82	-3.82	-3.82	-3.82	-3.82	-3.82	-3.82	-3.82
Restaurants and hotels	9.0	5.82	6.85	6.72	7.41	8.51	7.93	9.27	8.47	7.36	7.46	6.69	6.78	5.51
Miscellaneous goods and services	7.3	3.34	3.81	3.87	4.15	4.15	4.62	5.35	5.51	5.58	5.54	5.32	4.76	4.38

Source : ONS

Difference with the 2010-2019 average

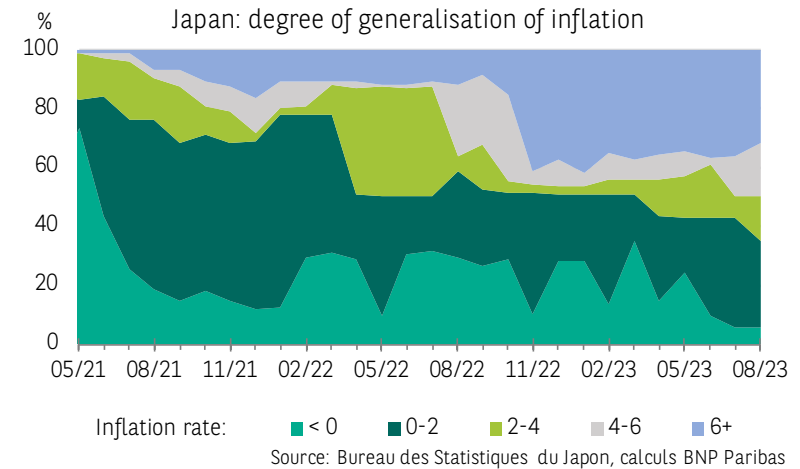
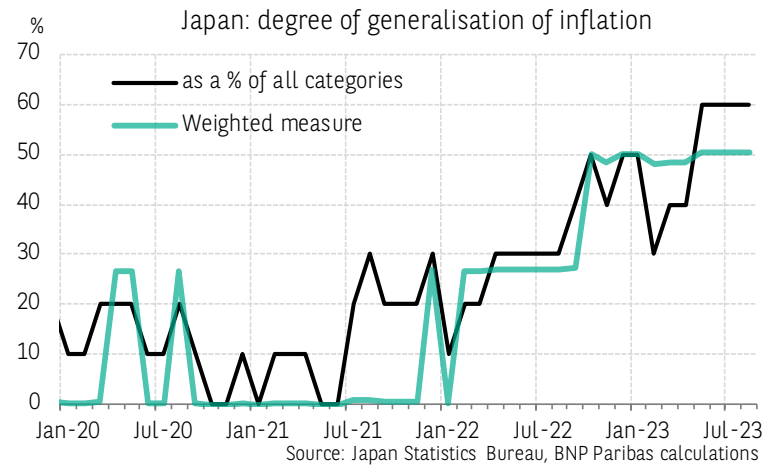
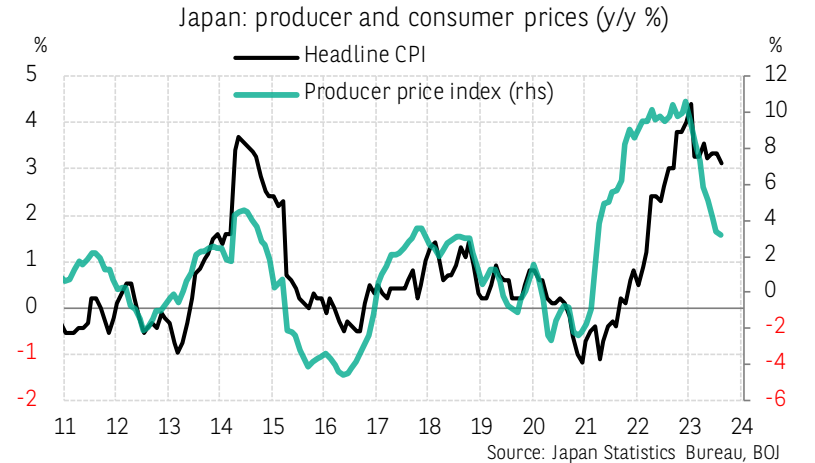
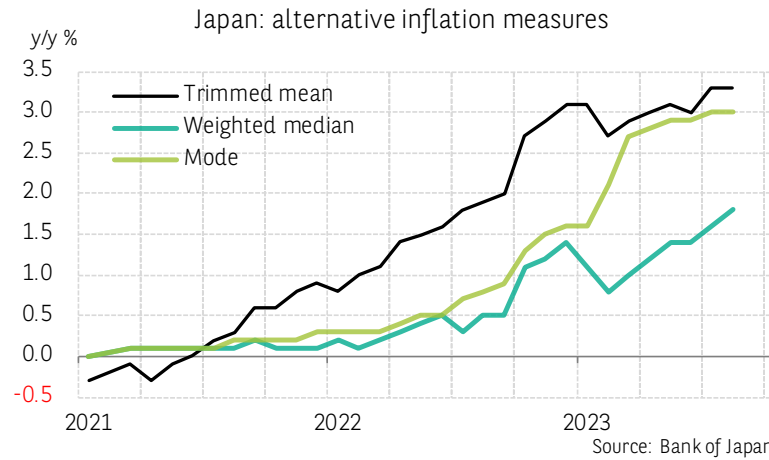
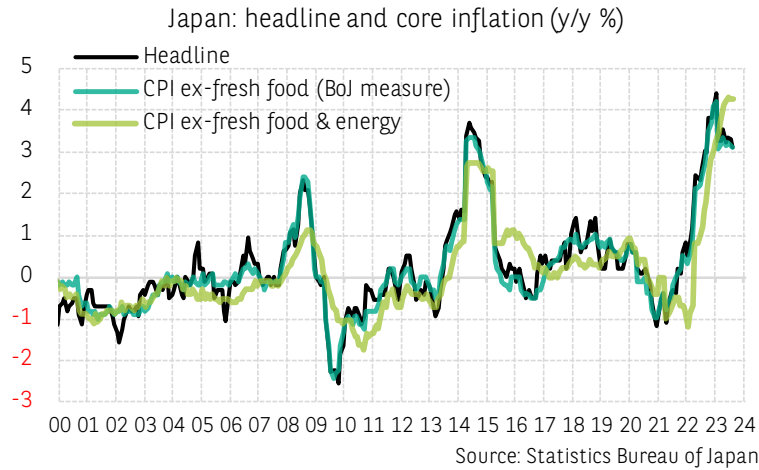
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# Inflation dynamics in Japan: different metrics and degree of generalisation



Note: the black line represents the % of CPI components whose increase is greater than or equal to 2%. The hatched green line weights the results by the share of each component in the CPI.





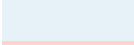



# Japan inflation heatmap

Difference between the current inflation rate (y/y, %) and the 2010-2019 average

	Weight (%)	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23
Total	100	2.54	2.53	3.33	3.33	3.53	3.92	2.81	2.79	3.08	2.77	2.87	2.85	2.65
Food	9.3	3.55	3.09	5.20	5.89	5.89	6.30	6.48	6.66	7.40	7.46	7.25	7.70	7.56
Clothing and footwear	3.9	0.94	1.28	1.96	2.15	2.27	2.63	2.92	3.08	3.22	3.22	3.33	3.48	3.83
Housing	4.9	0.74	0.74	1.23	1.33	1.43	1.43	1.43	1.43	1.33	1.33	1.23	1.33	1.23
Fuel, light and water charges	31.4	13.87	13.17	12.97	12.47	13.37	13.27	-2.03	-4.43	-5.53	-10.03	-8.33	-11.33	-14.03
Furniture and household utensils	6.3	5.36	7.65	7.84	8.31	8.48	8.60	9.62	10.39	10.99	10.57	9.57	9.43	8.08
Medical care	1.8	-1.03	-0.83	-0.13	-0.03	-0.03	0.17	0.58	0.98	1.39	1.79	1.99	1.89	1.99
Transportation and communication	11.1	0.17	0.28	1.70	1.26	1.69	1.80	1.37	1.14	1.36	1.90	1.79	1.87	2.93
Culture and recreation	1.9	1.54	2.06	0.77	-0.21	-0.11	1.47	1.46	2.14	2.99	3.27	3.41	4.64	4.85
Education	10.5	1.30	1.20	1.20	1.20	1.20	1.20	1.60	1.50	1.89	1.89	1.99	1.99	1.99
Miscellaneous goods and services	2.6	0.07	-0.03	-0.43	-0.34	-0.04	-0.04	0.16	0.15	-0.04	0.05	0.25	0.05	0.44

Source : Statistics Bureau of Japan

Difference with the 2010-2019 average

Less than 0	
Between 0 and 1	
Between 1 and 2	
Between 2 and 4	
Between 4 and 7	
Greater than 7	



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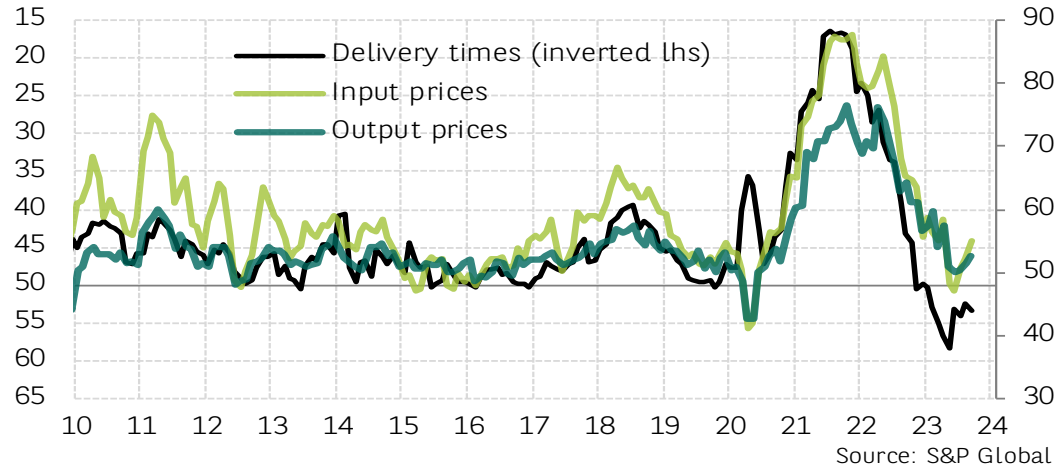


# Inflation and survey data

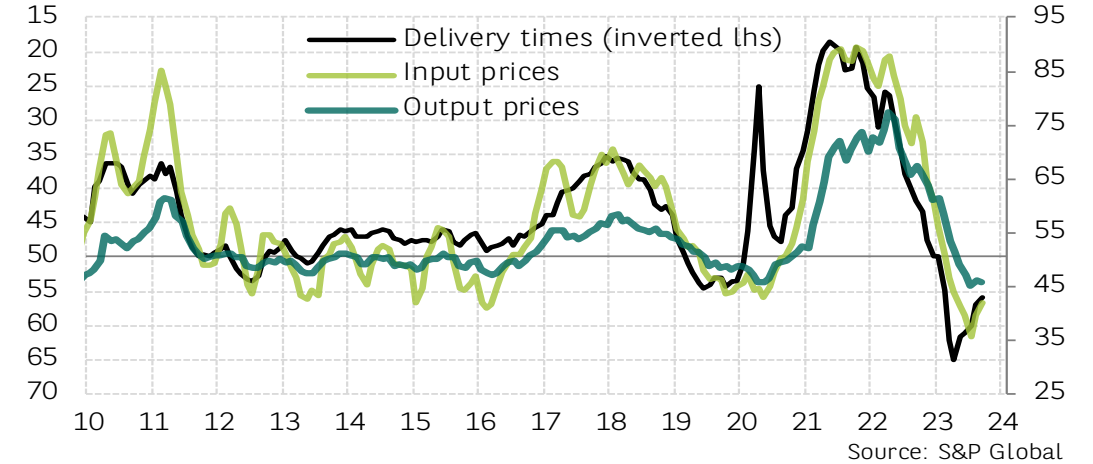


# PMI surveys: an indication of inflationary pressures (1)

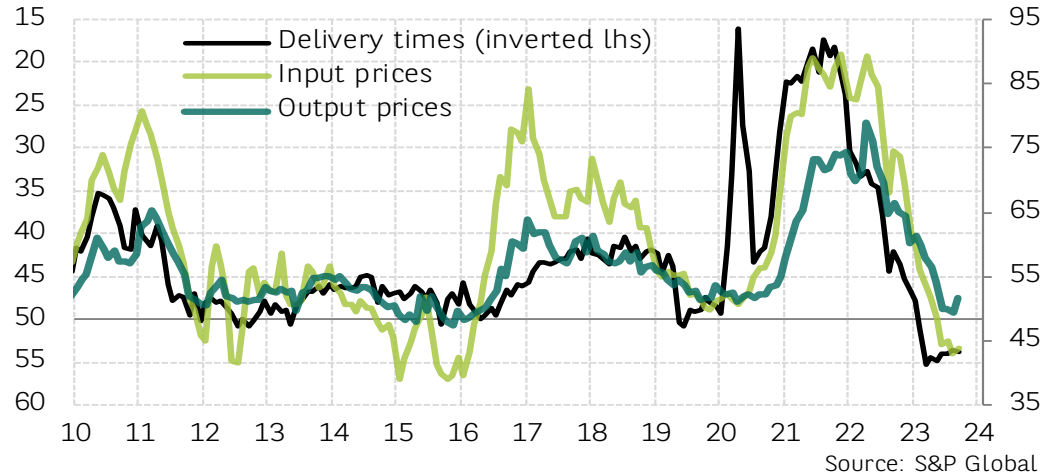
United States: manufacturing PMI indices



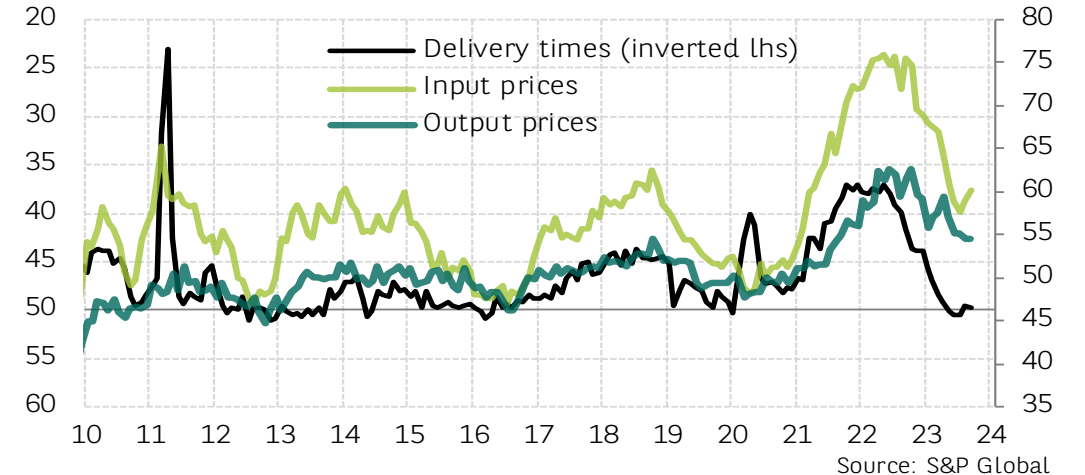
Eurozone: manufacturing PMI indices



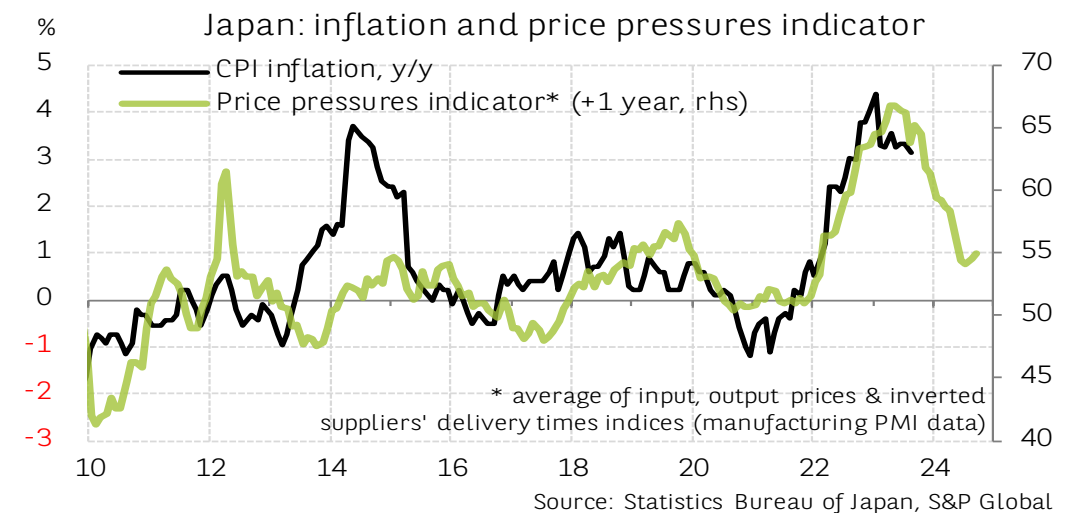
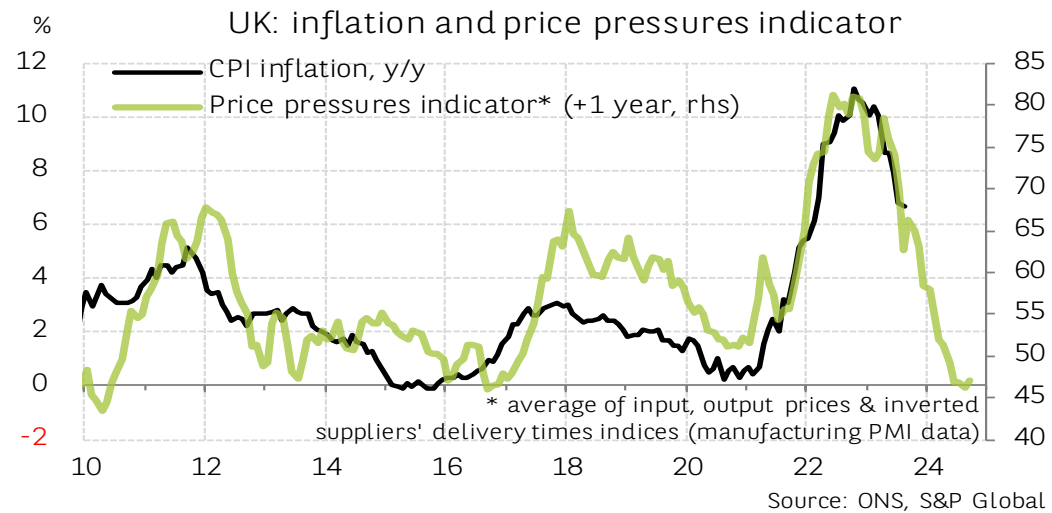
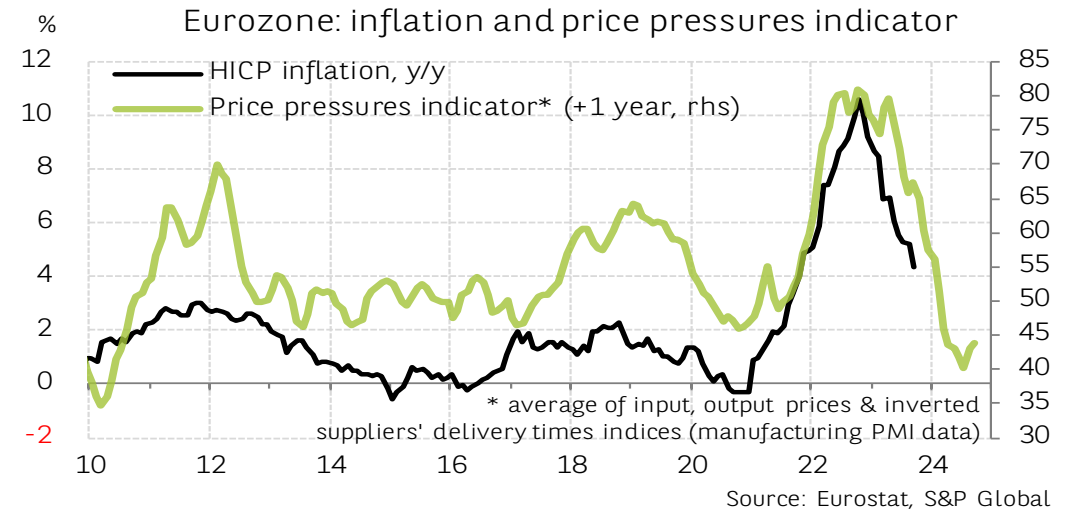
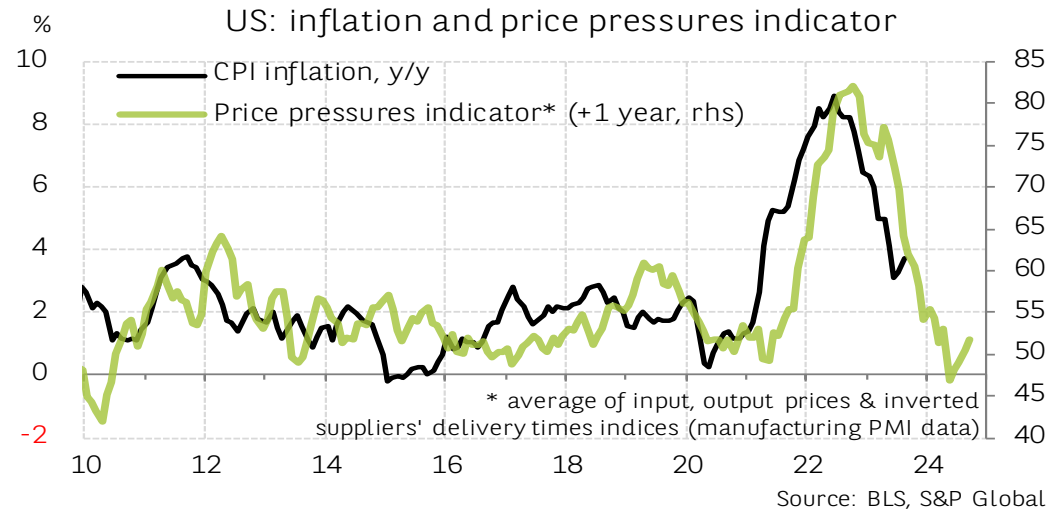
United Kingdom: manufacturing PMI indices



Japan: manufacturing PMI indices



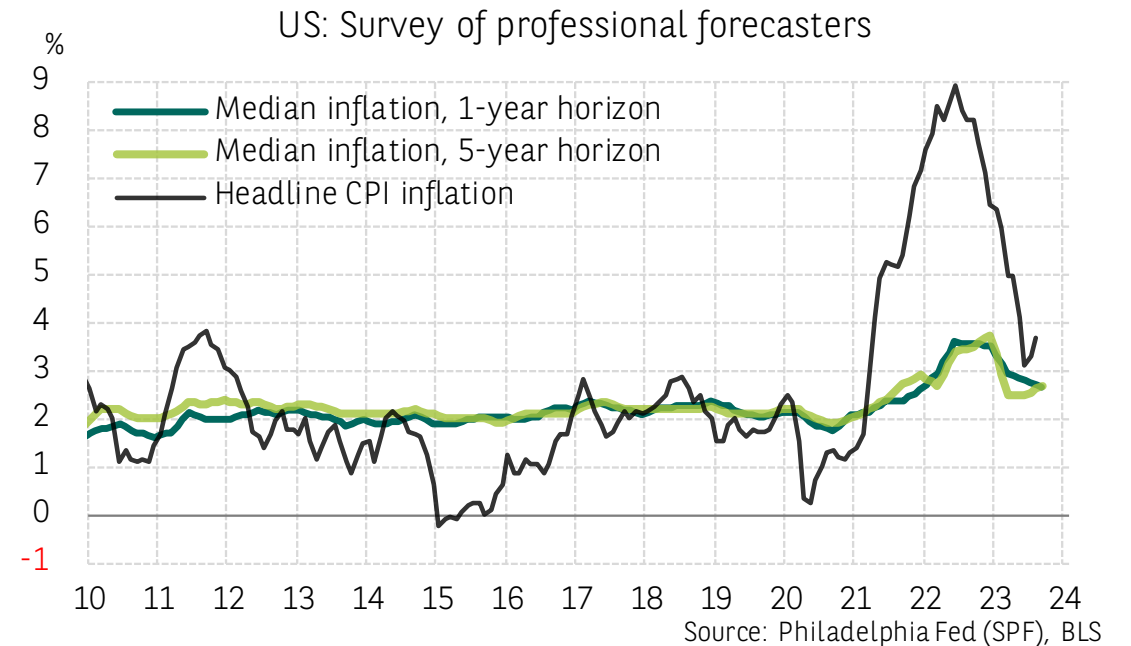
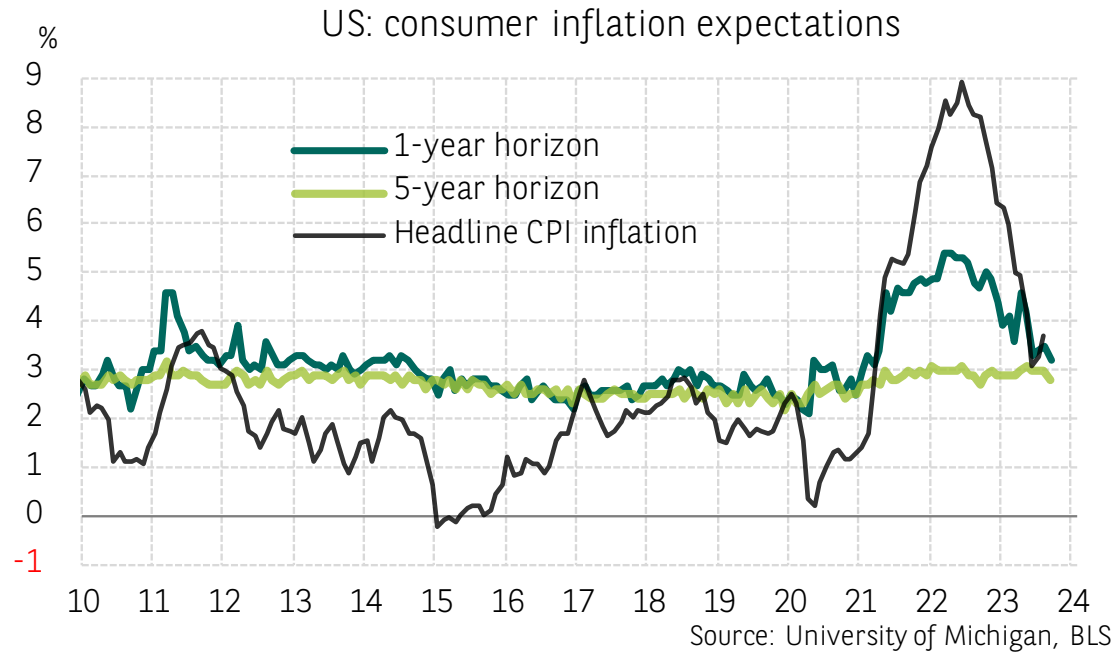
# PMI surveys: an indication of inflationary pressures (2)



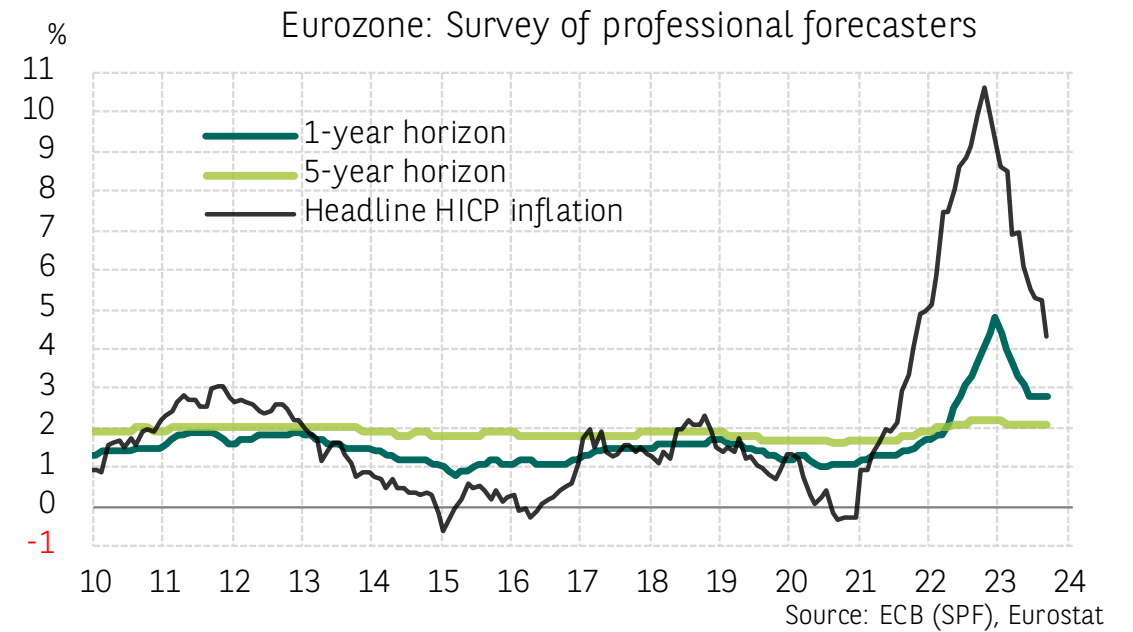
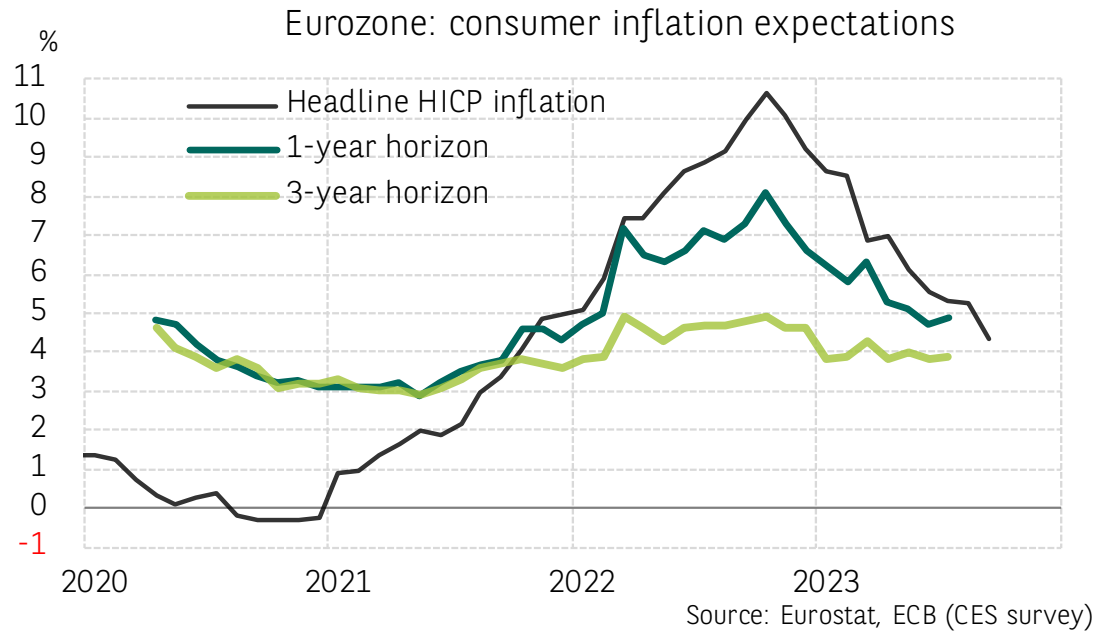
# Inflation expectations (households, forecasters, markets)



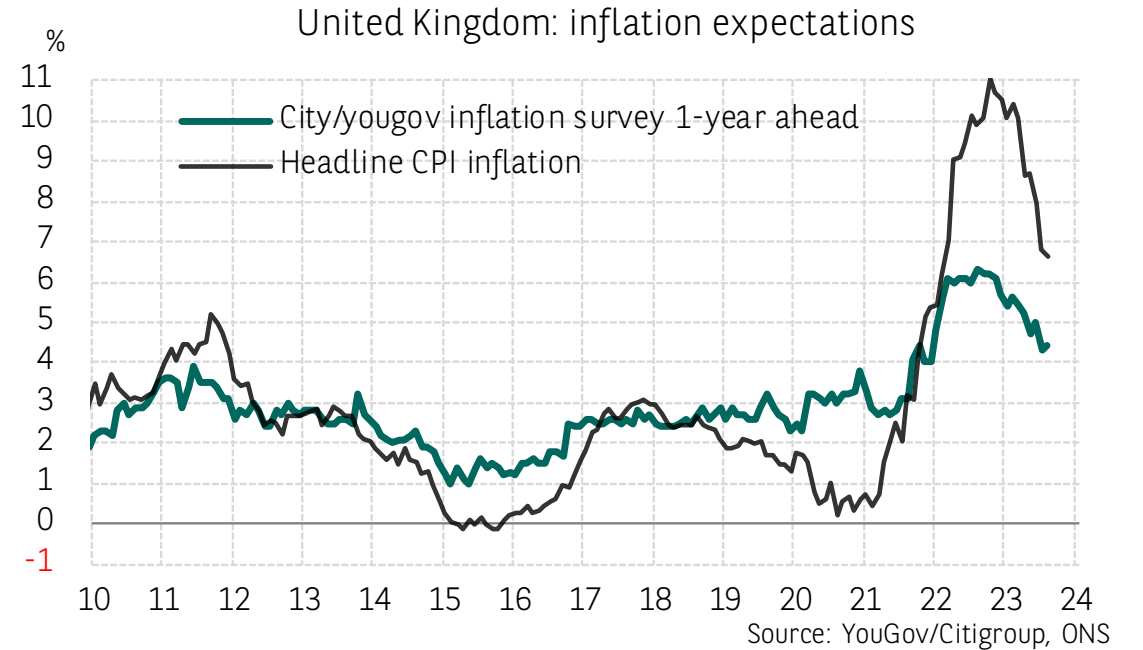
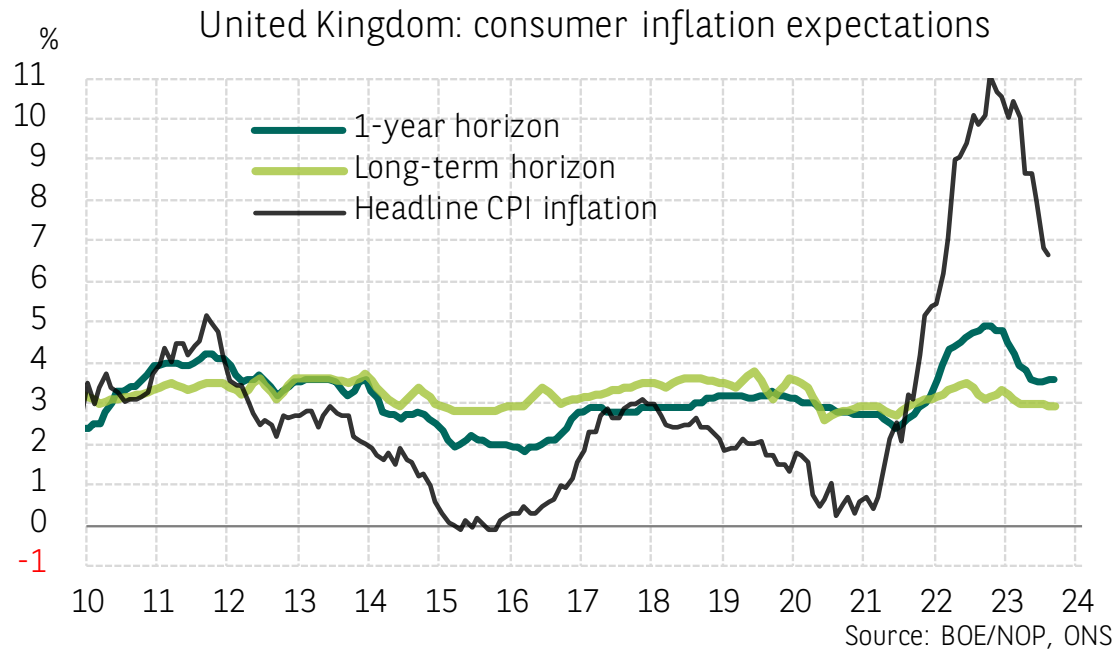
# Inflation expectations in the United States



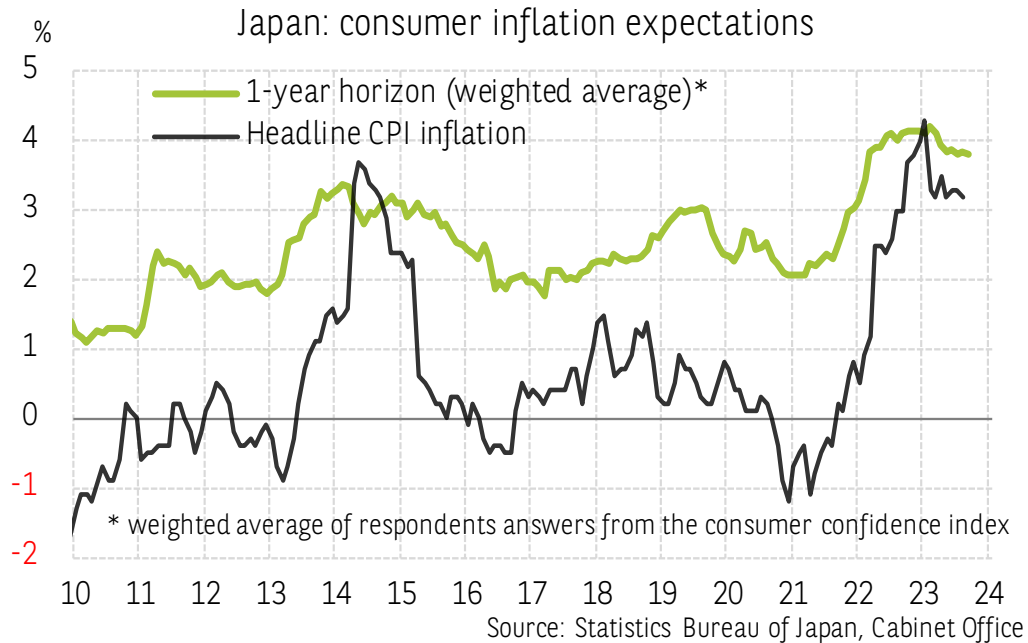
# Inflation expectations in the Eurozone



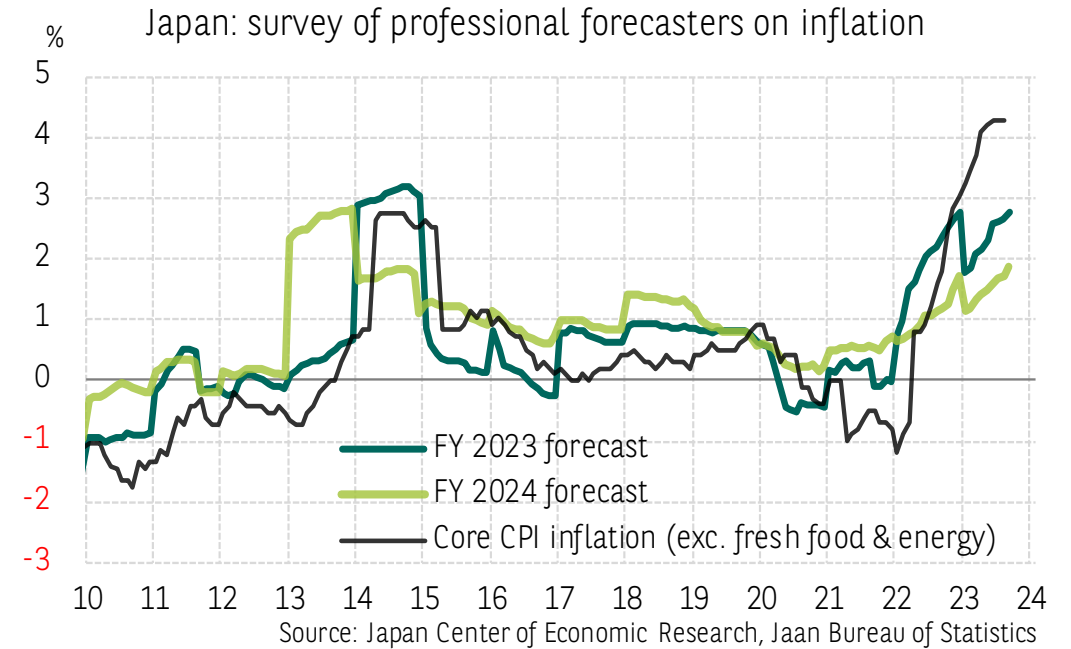
# Inflation expectations in the United Kingdom



# Inflation expectations in Japan

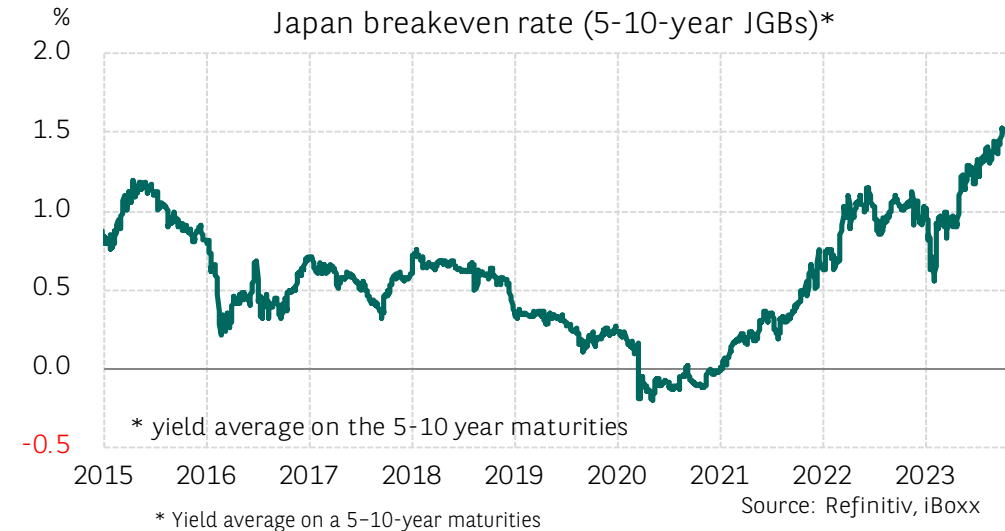
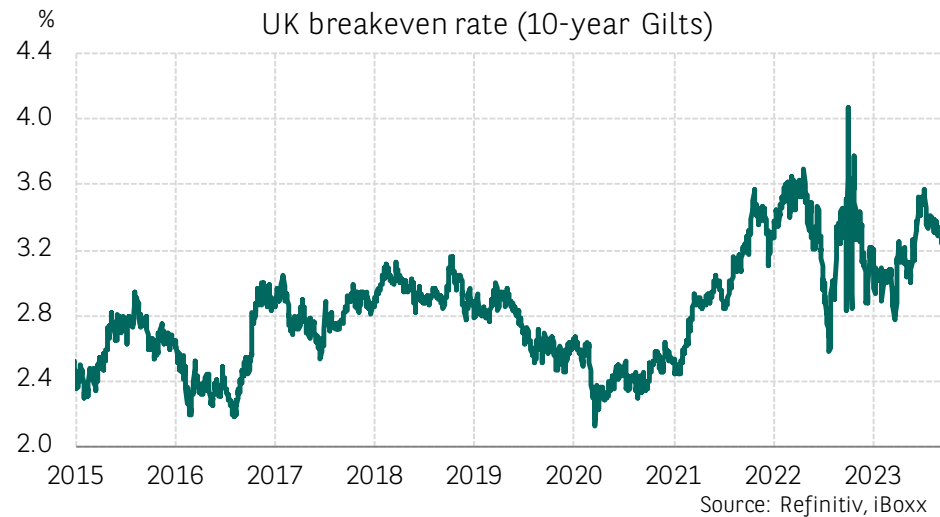
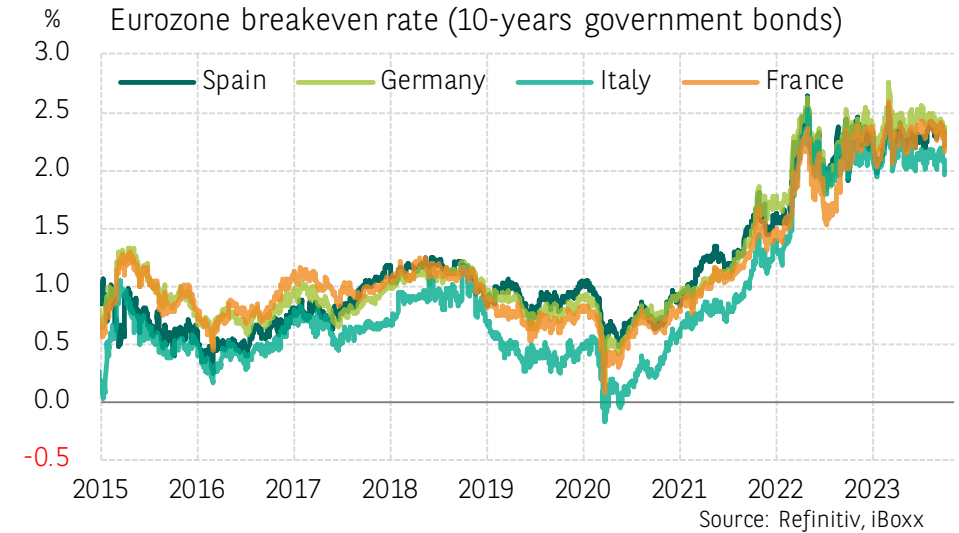
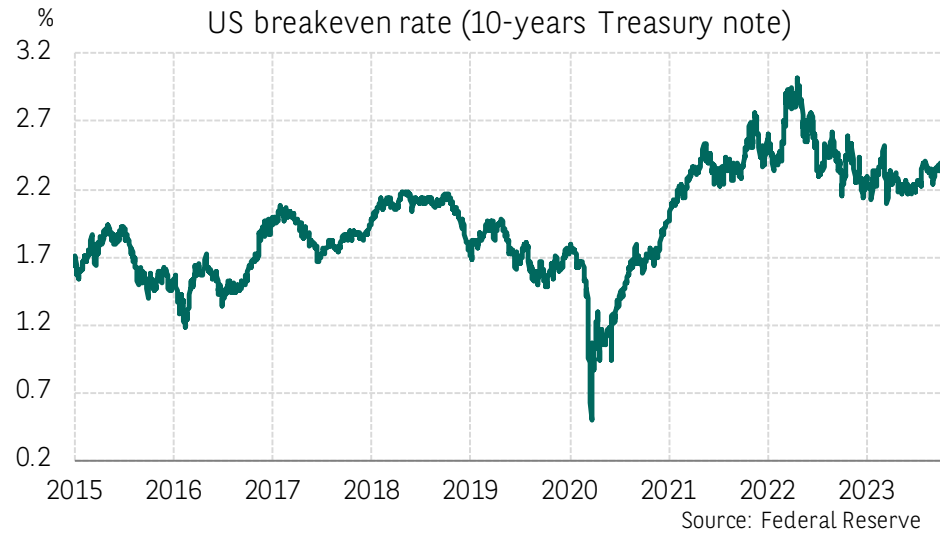


\* Weighted average of respondents' answers from the consumer confidence survey (Cabinet Office)





# Market expectations: breakeven inflation rate



# Raw materials



# Raw materials

WTI crude oil price, USD/barrel



Natural gas price, USD/million BTU



S&P GSCI industrial metal spot price index



S&P GSCI agriculture spot price index

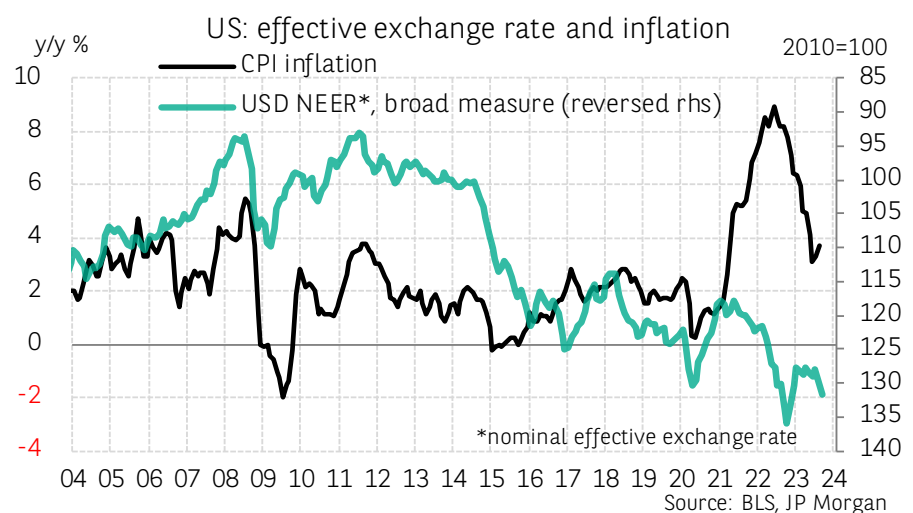
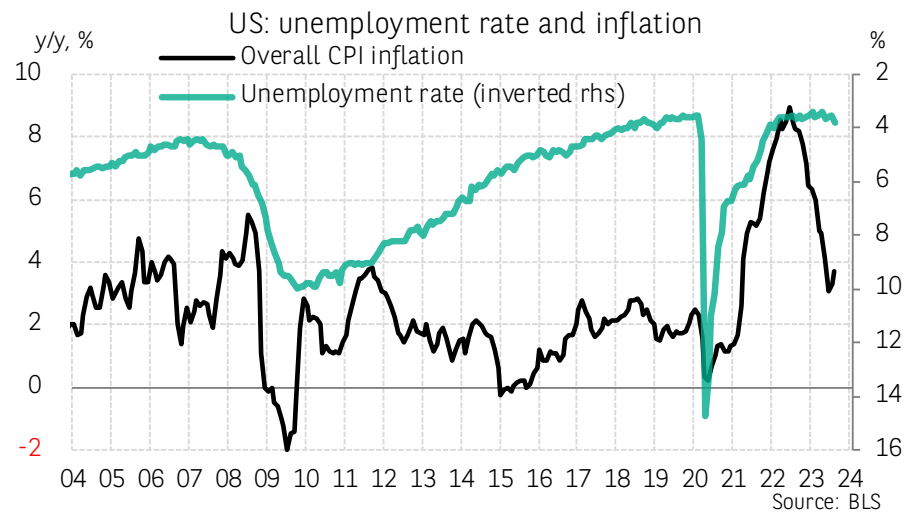
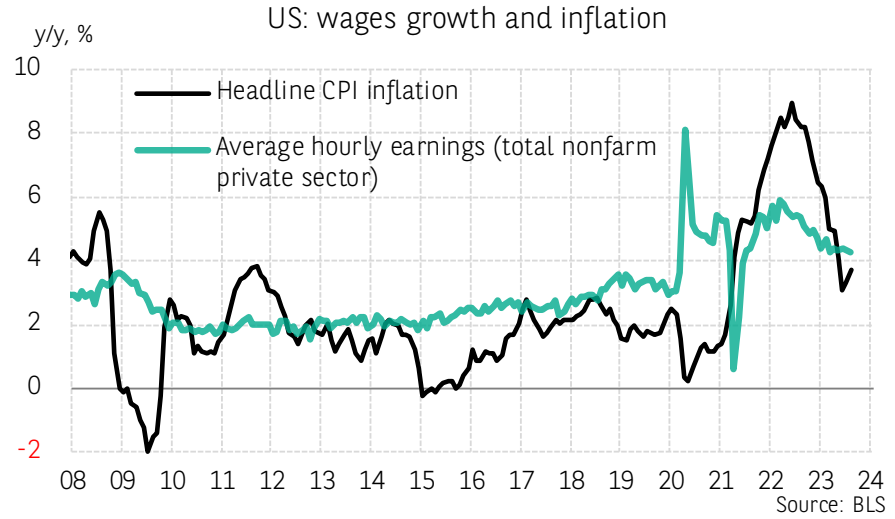
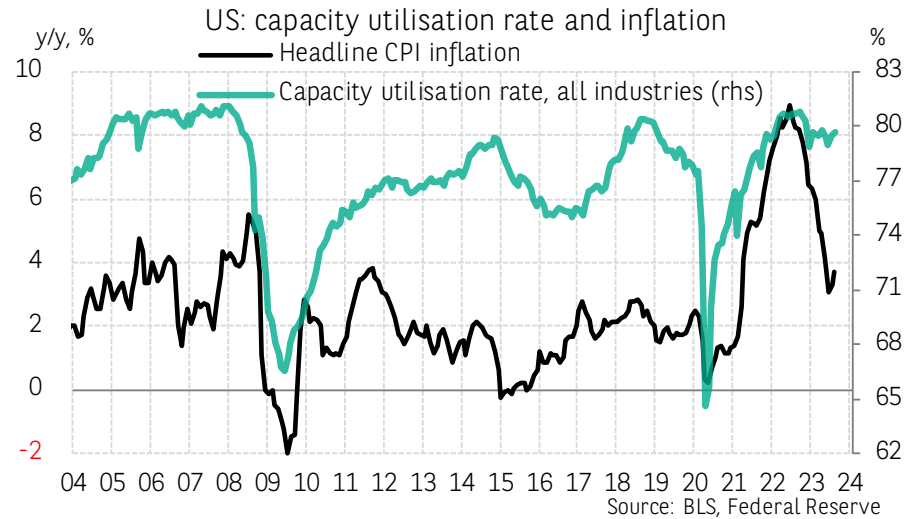


# Macroeconomic determinants of inflation

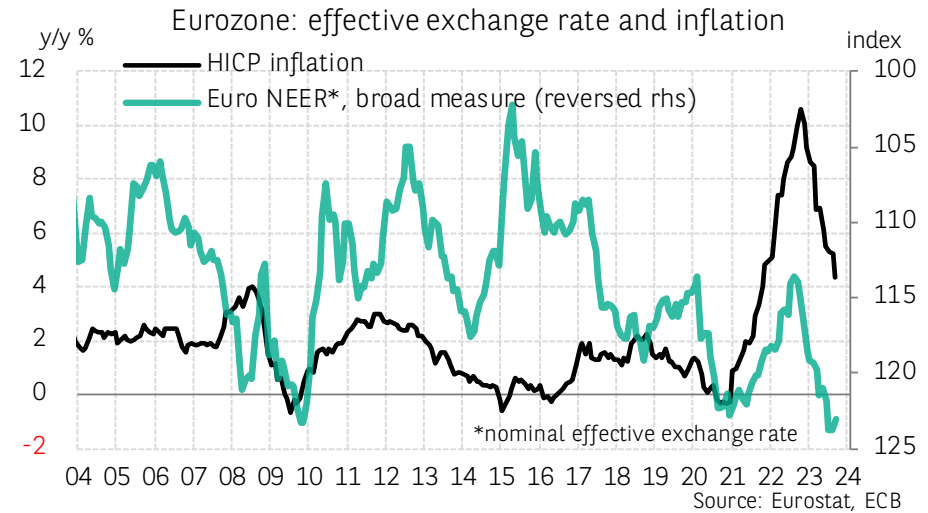
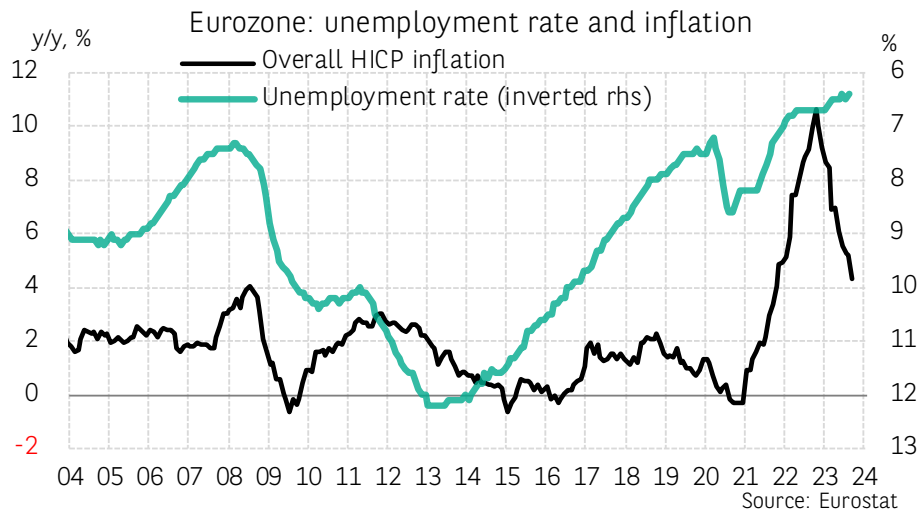
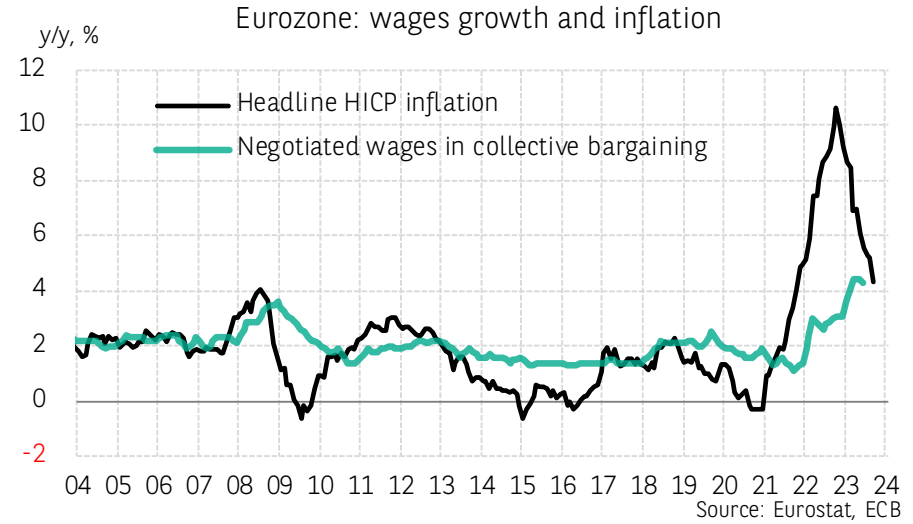
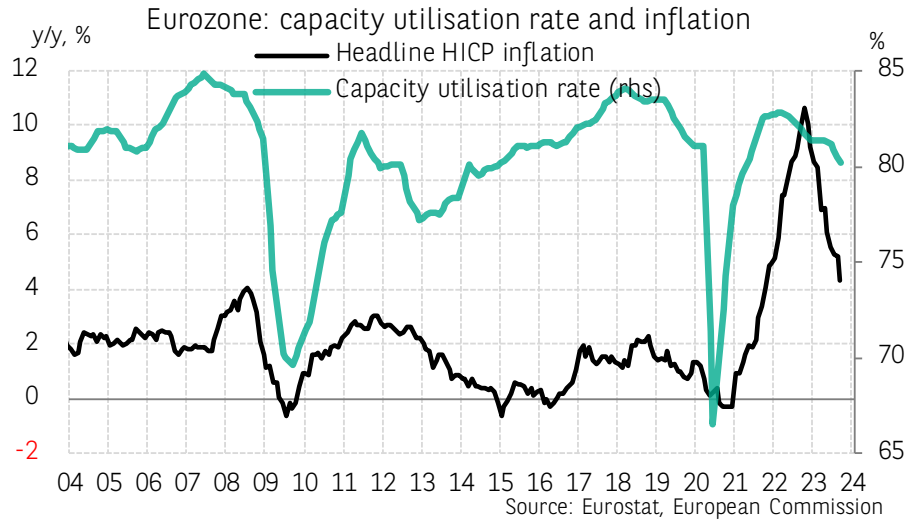
(wages, unemployment rate, capacity utilisation rate, exchange rate)



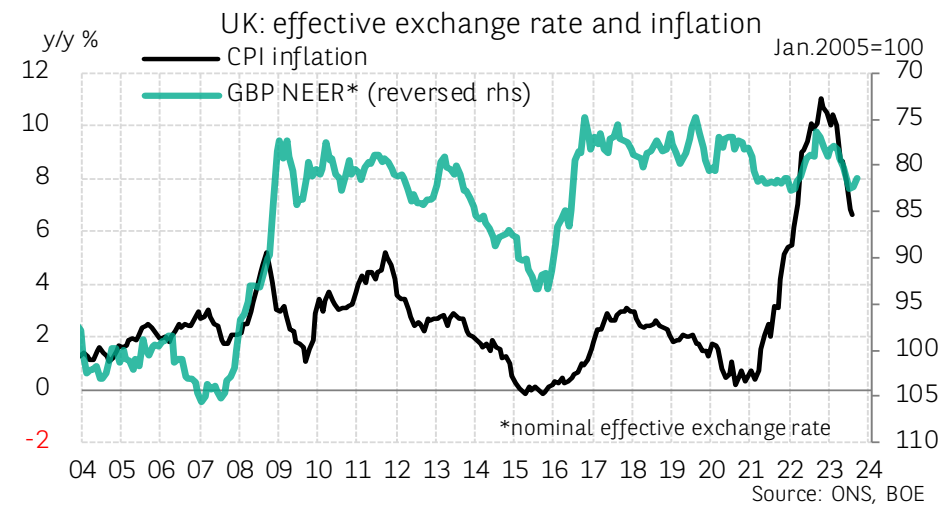
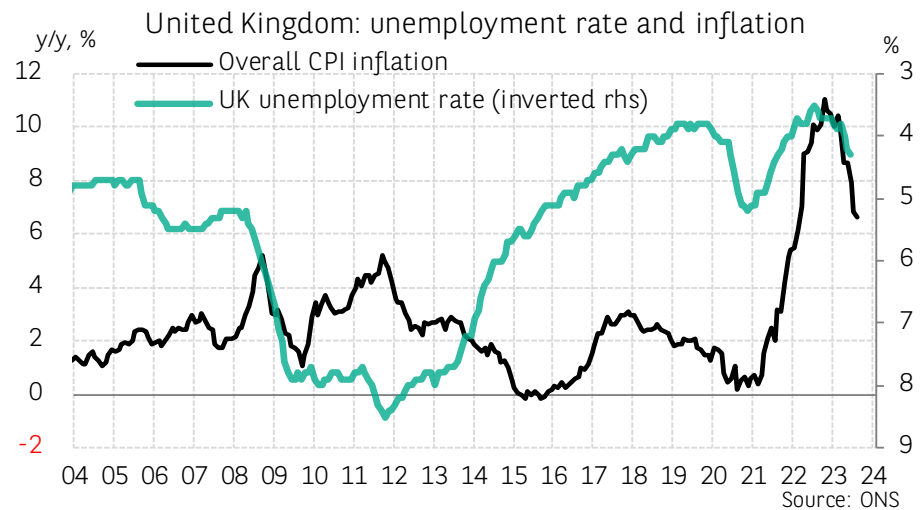
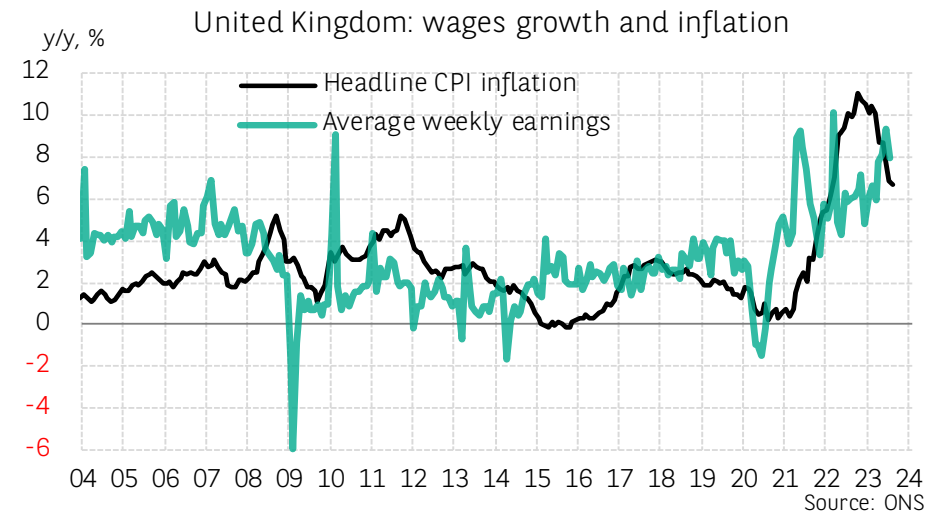
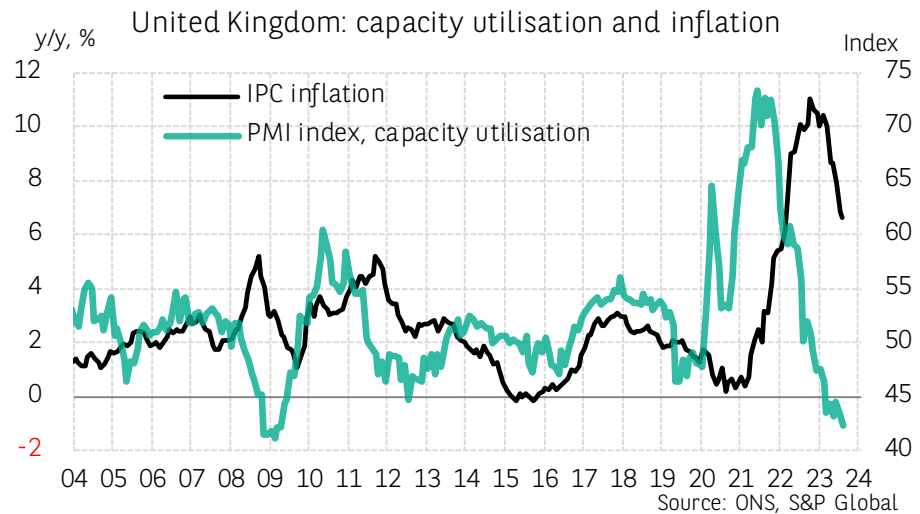
# Determinants of inflation in the United States



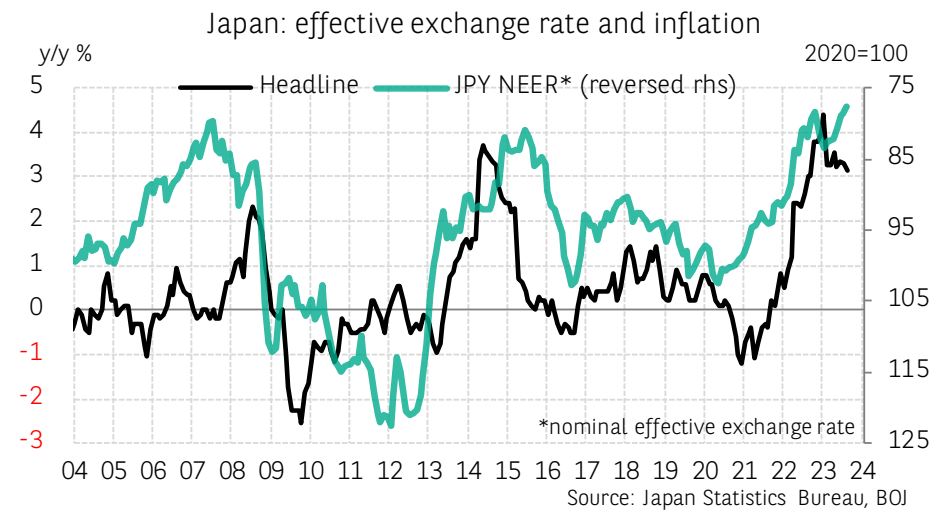
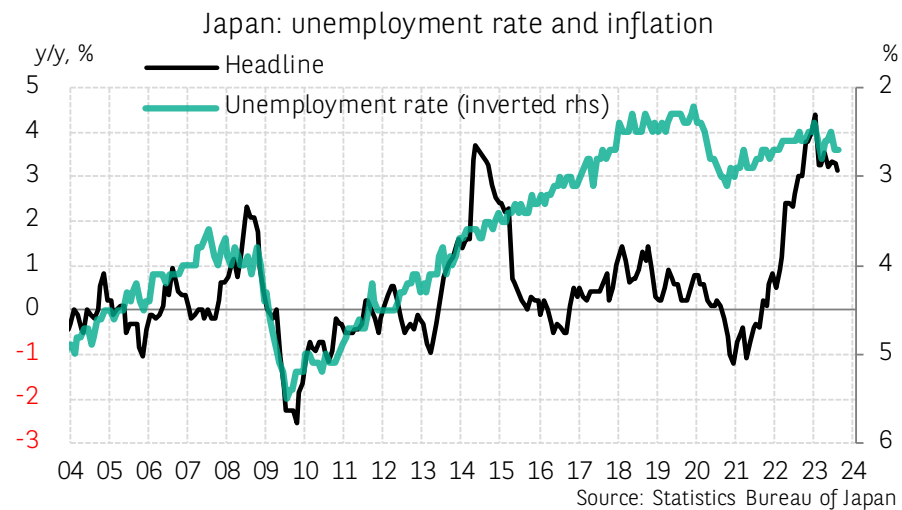
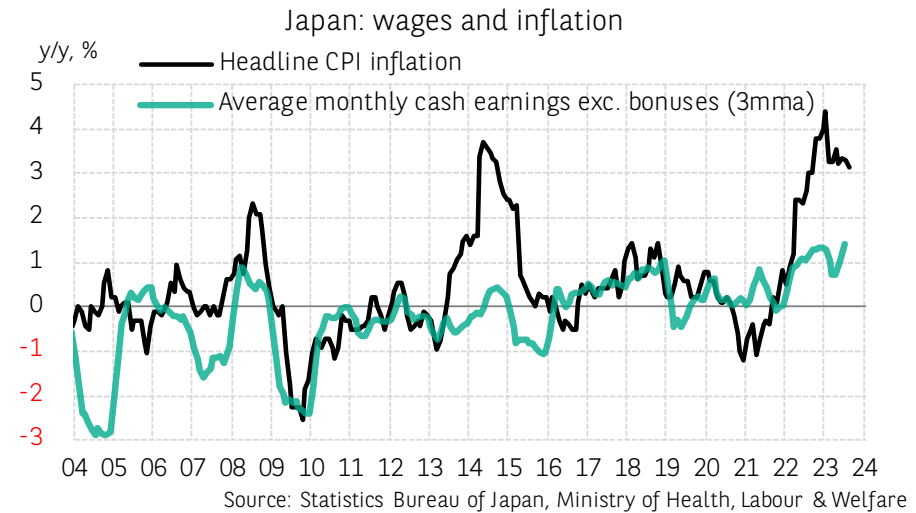
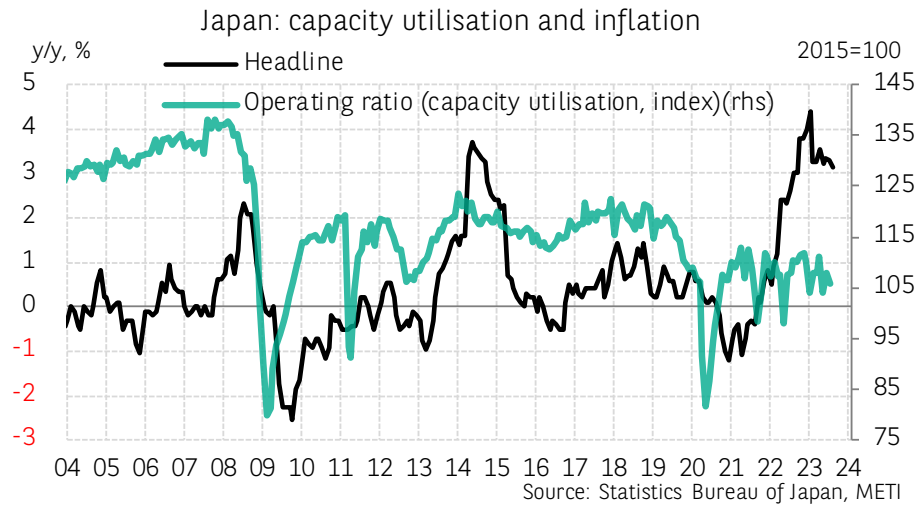
# Determinants of inflation in the Eurozone



# Determinants of inflation in the United Kingdom



# Determinants of inflation in Japan





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