

Global | Inflation and Bottlenecks Chartbook

Updated September 2023

Summary

- In the US, September headline inflation came in higher than expected, at 3.7% y/y, the same as the previous month. Core inflation also declined from 4.3% y/y to 4.1 y/y. While the report showed stronger than expected inflation in some core subindices, particularly in housing prices, core inflation excluding shelter continued to ease markedly.
- Eurozone inflation slowed significantly (to sub-5% y/y) and below consensus estimates (headline 4.3%/y/y, down -0.9pp; core inflation at 4.5% y/y, -0.8pp). By country, the easing price pressures were centered in Germany, led by the elimination of transport and fuel subsidies.
- The synchronicity indicators reflected a slight rebound in the percentage of goods with high inflation in September in the United States and stability in Europe. Approximately 40% of the CPI basket in the United States remains with monthly inflation higher than 4%, in contrast to 30% in the Eurozone. Persistence indicators point to stagnation in the US and downward trend in Europe.
- Consumer inflation expectations, both medium and long-term, moderated in the US suggesting that the downward trend in inflation is filtering down to consumers. Meanwhile analysts' and market-based inflation expectations were broadly unchanged but slightly above 2.5% and above Fed's target (2%)
- Consumers' inflation expectations in the Eurozone inched up in for medium and long-term and remained above the ECB target (median long-term 2.5%). Analysts' inflation expectations were steady and close to the ECB target for 2025, whereas market-based long-term inflation expectations hovered around 2.5%.
- Our supply bottlenecks indicators suggests that production chains are now working at normalized levels in the US and the Eurozone.

Summary indicators

	Jul-22	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	Sep-23		
Inflation	8.5	8.3	8.2	7.7	7.1	6.5	6.4	6.0	5.0	4.9	4.0	3.0	3.2	3.7	3.7	US	IPC Headline (%YoY, SA)
	5.9	6.3	6.6	6.3	6.0	5.7	5.6	5.5	5.6	5.5	5.3	4.8	4.7	4.3	4.1		IPC Core (%YoY, SA)
	3.4	3.0	2.5	3.1	2.8	2.5	2.3	2.8	2.6	2.4	2.3	2.4	2.5	2.4	2.5		Inf exp (2Y inf. Swap)
	2.6	2.5	2.5	2.7	2.6	2.6	2.5	2.6	2.6	2.5	2.5	2.6	2.6	2.6	2.7		Inf exp (5Y5Y inf. Swap)
	8.9	9.1	9.9	10.6	10.1	9.2	8.6	8.5	6.9	7.0	6.1	5.5	5.3	5.2	4.3	EZ	IPC Headline (%YoY, SA)
	4.0	4.3	4.8	5.0	5.0	5.2	5.3	5.6	5.7	5.6	5.3	5.5	5.5	5.3	4.5		IPC Core (%YoY, SA)
	4.6	4.9	3.5	3.9	3.5	3.4	2.3	2.8	3.0	2.8	2.5	2.5	2.7	2.7	2.6		Inf exp (2Y inf. Swap)
	2.1	2.0	2.2	2.3	2.4	2.4	2.3	2.5	2.3	2.5	2.5	2.5	2.6	2.5	2.5		Inf exp (5Y5Y inf. Swap)
Bottlenecks	48.6	50.4	47.3	48.2	46.8	45.1	42.5	47.0	44.3	45.7	42.6	45.6	47.3	46.8	49.2	US manuf.	ISM New Orders
	51.3	53.0	50.9	45.3	40.0	41.4	43.4	45.1	43.9	43.1	37.5	38.7	42.8	44.1	42.4		Backlog of Orders
	53.3	51.1	51.0	51.9	50.9	48.6	48.0	47.3	47.8	48.9	51.1	46.7	48.3	50.0	52.5		Production Index
	55.2	55.1	52.4	46.8	47.2	45.1	45.6	45.2	44.8	44.6	43.5	45.7	46.1	48.6	46.4		Suppliers' delivery times
	39.5	38.9	41.6	41.6	48.7	48.2	47.4	46.9	48.9	51.3	51.4	46.2	48.7	48.7	47.1		Customer Inventories
	4.5	-2.2	-3.6	-4.9	-11.1	-12	-8.8	-9.2	-9.7	-14	-21.9	-26.2	-30.1	-39.9	-39.4		EZ manuf.
	2.8	0.5	1.2	0.7	-3.6	0.6	-0.1	4.1	2.3	3.1	-6.6	-3.9	-4.6	-10.1	-7.8	Production trend	
	27.2	26.6	26.2	24.9	23.3	21.8	21.7	19.2	16.4	12.9	11.0	10.1	9.9	9.2	9.9	EZ const.	Equip shortage
	49.3	45.6	44.2	44.3	42.7	44.1	46.4	44.5	44.8	42.2	43.5	44.1	43.8	44.2	43.8	Taiwan	Suppliers' delivery times
	580	587	568	558	560	558	557	553	546	549	543	549	559	554	552	Input costs	CRB Spot Comdty. Price
4467	4449	4163	1905	1405	1372	1229	1100	1059	1108	1217	1238	1227	1227	1053	Container freight		

Note: US and Taiwan (SA, 50+=Increasing); EZ Percent Balance (SA, %).

Source: BBVA Research and Haver Analytics

Headline inflation halted its decline in the US and parts of Euro Area; core inflation eased further; FX passthrough boosts inflation in Argentina, Türkiye

Headline Inflation Y/Y%, NSA

	2022												2023									
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	
US	7.5	7.9	8.5	8.3	8.6	9.1	8.5	8.3	8.2	7.7	7.1	6.5	6.4	6.0	5.0	4.9	4.0	3.0	3.2	3.7	3.7	US
China	0.8	0.8	1.3	2.0	2.0	2.4	2.6	2.4	2.7	2.1	1.5	1.8	2.2	1.1	0.8	0.3	0.3	0.1	-0.2	0.2	0.1	China
Eurozone	5.1	5.9	7.4	7.4	8.1	8.6	8.9	9.1	9.9	10.6	10.1	9.2	8.6	8.5	6.9	7.0	6.1	5.5	5.3	5.2	4.3	Eurozone
Germany	4.2	4.3	5.9	6.3	7.0	6.7	6.7	7.0	8.6	8.8	8.8	8.1	8.7	8.7	7.4	7.2	6.1	6.4	6.2	6.1	4.5	Germany
France	2.9	3.6	4.5	4.8	5.2	5.8	6.1	5.9	5.6	6.2	6.2	5.9	6.0	6.3	5.7	5.9	5.1	4.5	4.3	4.9	4.9	France
Spain	6.1	7.6	9.8	8.3	8.7	10.2	10.8	10.5	8.9	7.3	6.8	5.7	5.9	6.0	3.3	4.1	3.2	1.9	2.3	2.6	3.5	Spain
UK	5.5	6.2	7.0	9.0	9.1	9.4	10.1	9.9	10.1	11.1	10.7	10.5	10.1	10.4	10.1	8.7	8.7	7.9	6.8	6.7	6.7	UK
Turkey	48.7	54.4	61.1	70.0	73.5	78.6	79.6	80.2	83.5	85.5	84.4	64.3	57.7	55.2	50.5	43.7	39.6	38.2	47.8	58.9	61.5	Turkey
Argentina	50.7	52.3	55.1	58.0	60.7	64.0	71.0	78.5	83.0	88.0	92.4	94.8	98.8	102.5	104.3	108.8	114.2	115.6	113.4	124.4	138.3	Argentina
Colombia	6.9	8.0	8.5	9.2	9.1	9.7	10.2	10.8	11.4	12.2	12.5	13.1	13.3	13.3	13.3	12.8	12.4	12.1	11.8	11.4	11.0	Colombia
Mexico	7.1	7.3	7.5	7.7	7.7	8.0	8.2	8.7	8.7	8.4	7.8	7.8	7.9	7.6	6.8	6.3	5.8	5.1	4.8	4.6	4.5	Mexico
Peru	5.7	6.1	6.8	8.0	8.1	8.8	8.7	8.4	8.5	8.3	8.4	8.5	8.7	8.6	8.4	8.0	7.9	6.5	5.9	5.6	5.0	Peru
Brazil	10.4	10.5	11.3	12.1	11.7	11.9	10.1	8.7	7.2	6.5	5.9	5.8	5.8	5.6	4.7	4.2	3.9	3.2	4.0	4.6	5.2	Brazil
Chile	7.7	7.8	9.4	10.5	11.5	12.5	13.1	14.1	13.7	12.8	13.3	12.8	12.3	11.9	11.1	9.9	8.7	7.6	6.5	5.3	5.1	Chile

Core Inflation Y/Y%, NSA

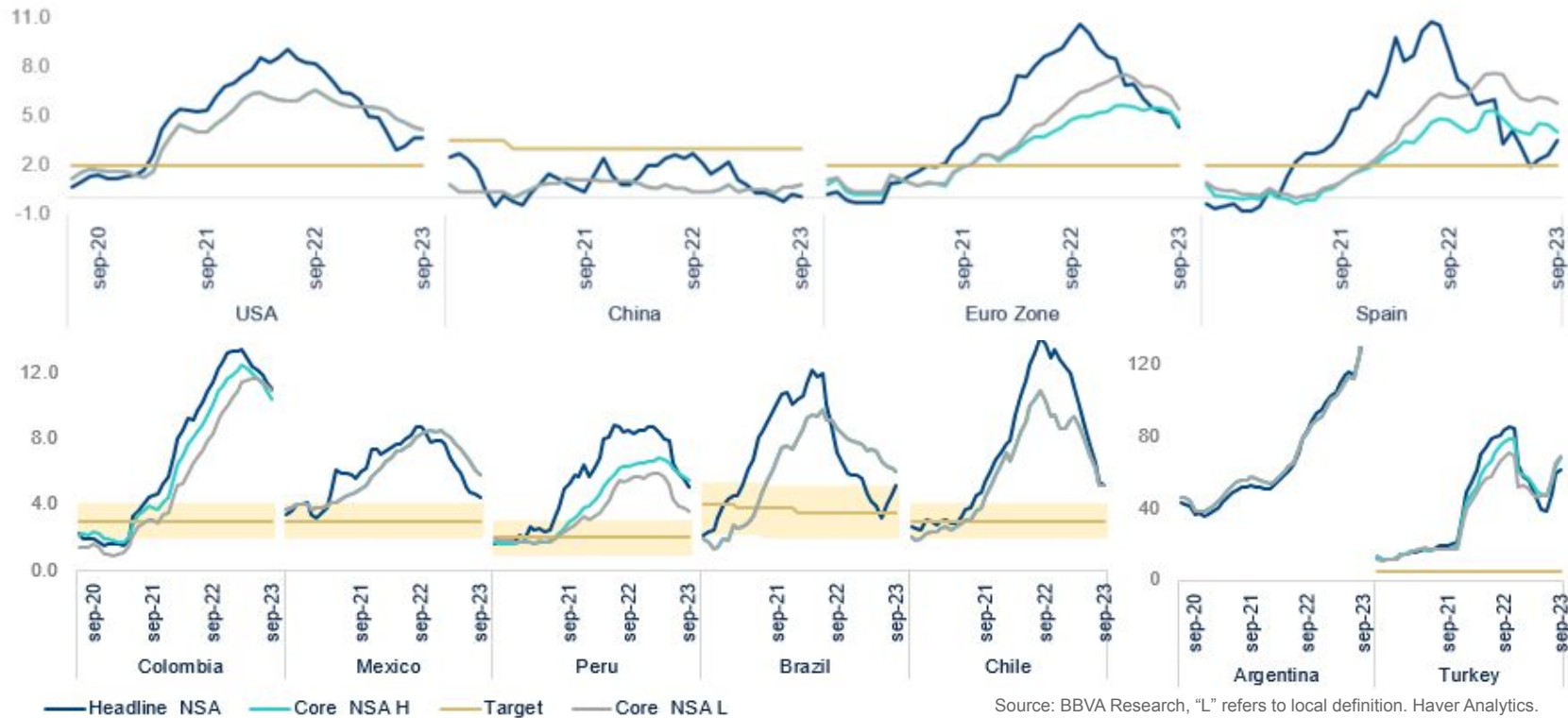
US	6.0	6.4	6.5	6.2	6.0	5.9	5.9	6.3	6.6	6.3	6.0	5.7	5.6	5.5	5.6	5.5	5.3	4.8	4.7	4.3	4.1	US
China	1.0	1.0	0.9	0.7	0.6	0.8	0.6	0.6	0.4	0.4	0.4	0.5	0.8	0.4	0.5	0.5	0.5	0.3	0.7	0.7	0.8	China
Eurozone	2.3	2.7	3.0	3.5	3.8	3.7	4.0	4.3	4.8	5.0	5.0	5.2	5.3	5.6	5.7	5.6	5.3	5.5	5.5	5.3	4.5	Eurozone
Germany	3.0	3.1	3.3	3.8	4.1	3.2	3.4	3.6	4.7	5.2	5.1	5.5	5.1	5.5	6.1	5.9	5.3	6.3	6.3	6.4	5.1	Germany
France	1.6	2.4	2.5	3.0	3.2	3.1	3.8	4.0	3.6	4.0	4.0	4.1	4.2	4.5	4.7	4.9	4.6	4.7	4.5	4.3	3.9	France
Spain	2.2	2.6	3.0	3.4	3.4	3.9	4.6	4.8	4.8	4.4	4.0	4.3	5.3	5.3	4.8	4.3	4.0	3.9	4.5	4.5	4.1	Spain
UK	4.3	5.1	5.7	6.1	6.1	6.1	6.6	6.7	7.1	7.2	7.0	7.1	6.7	7.2	7.2	7.9	8.1	7.9	7.7	7.1	6.9	UK
Turkey	43.3	47.4	51.8	58.3	63.1	66.4	71.0	74.9	76.5	78.6	78.4	60.1	58.4	56.6	53.4	48.7	47.8	47.0	54.5	63.4	67.6	Turkey
Argentina	54.0	54.5	57.3	60.5	63.2	65.5	72.2	78.4	82.3	86.4	89.1	90.6	94.4	100.4	102.0	105.2	110.3	113.1	111.5	125.3	142.2	Argentina
Colombia	5.6	6.4	6.9	7.7	8.0	8.4	8.8	9.4	10.0	10.8	11.1	11.6	11.8	12.2	12.4	12.2	11.9	11.6	11.3	10.8	10.3	Colombia
Mexico	6.2	6.6	6.8	7.2	7.3	7.5	7.7	8.1	8.3	8.4	8.5	8.3	8.5	8.3	8.1	7.7	7.4	6.9	6.6	6.1	5.8	Mexico
Peru	3.9	4.2	4.6	5.0	5.5	5.8	6.2	6.3	6.3	6.4	6.5	6.5	6.6	6.6	6.8	6.7	6.5	6.2	5.9	5.6	5.4	Peru
Brazil	8.0	8.6	9.2	9.4	9.3	9.7	9.1	9.1	8.6	8.3	8.0	7.8	7.7	7.6	7.2	7.3	7.2	6.6	6.2	6.1	6.0	Brazil
Chile	7.1	6.6	7.4	8.3	9.0	9.9	10.3	10.9	10.3	9.3	9.5	8.6	8.6	9.1	9.4	8.7	7.9	6.9	6.2	5.2	5.2	Chile

Period considered: 2015-2019
 StDev below: + than 3 2 to 3 1 to 2 -1 to +1 1 to 2 2 to 3 + than 3
 StDev above:

Source: BBVA Research, Haver Analytics. We report here harmonised core inflation excluding food and energy. These measures may differ from local measures of core inflation where EA and Spain: excludes unprocessed food and energy, France excludes government tariffs and volatile prices, Germany excludes energy prices.

Inflation remains above central banks' target across the board (ex-China); in Mexico and Brazil headline inflation is close to target but the core rate not yet

INFLATION, Y/Y%



Source: BBVA Research, "L" refers to local definition. Haver Analytics.

Sequentially, September inflation continued to soften; core inflation eased in the Euro Area, was steady in the US, but picked up in Mexico

Headline Inflation M/M%, SA

	2022												2023									
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A		S
US	0.6	0.7	1.0	0.4	0.9	1.2	0.0	0.2	0.4	0.5	0.2	0.1	0.5	0.4	0.1	0.4	0.1	0.2	0.2	0.6	0.4	US
China	0.0	0.2	0.4	0.6	0.1	0.4	0.2	-0.2	0.0	0.1	0.0	0.0	-0.1	0.1	-0.5	0.1	0.1	0.1	-0.1	0.2	-0.1	China
Eurozone	1.0	0.7	1.4	0.3	0.8	0.7	0.7	0.7	1.0	1.1	0.3	0.1	0.4	0.7	-0.1	0.5	0.0	0.2	0.5	0.6	0.1	Eurozone
Germany	0.7	0.7	1.7	0.5	0.9	0.0	0.5	0.5	1.8	0.8	0.4	-0.5	1.2	0.5	0.6	0.2	-0.1	0.3	0.2	0.5	0.3	Germany
France	0.5	0.7	0.9	0.5	0.5	0.7	0.4	0.3	-0.1	0.9	0.3	0.1	0.8	1.0	0.3	0.6	-0.2	0.0	0.0	0.8	0.3	France
Spain	0.6	0.9	2.3	-0.7	0.5	1.4	0.7	0.4	-0.5	-0.3	0.1	0.1	0.7	1.1	-0.3	0.1	-0.3	0.1	1.1	0.7	0.4	Spain
UK	0.6	0.7	1.0	2.0	0.5	0.8	0.9	0.5	0.5	1.6	0.4	0.5	0.1	1.1	0.7	0.7	0.5	0.1	-0.2	0.4	0.5	UK
Turkey	10.2	4.5	5.5	5.9	4.1	4.7	3.4	2.9	4.2	3.1	2.4	0.1	5.7	2.8	2.4	1.1	0.8	3.9	10.7	10.8	5.9	Turkey
Argentina	4.2	5.1	5.7	6.0	5.6	5.5	7.4	7.2	5.6	6.0	5.4	5.0	6.4	7.1	6.6	8.3	8.4	6.1	6.3	12.6	12.2	Argentina
Colombia	1.4	1.2	0.8	1.0	1.0	0.8	1.0	1.1	1.0	1.1	1.0	1.0	1.5	1.2	0.8	0.5	0.5	0.6	0.7	0.8	0.6	Colombia
Mexico	0.3	0.9	0.8	0.8	0.6	0.7	0.6	0.8	0.6	0.5	0.4	0.5	0.4	0.6	0.1	0.3	0.2	0.0	0.4	0.7	0.5	Mexico
Peru	0.2	0.4	1.0	1.1	0.5	1.2	0.7	0.6	0.6	0.5	0.6	0.7	0.4	0.4	0.8	0.7	0.4	-0.1	0.1	0.3	0.1	Peru
Brazil	0.5	1.0	1.5	1.0	0.5	0.7	-0.6	-0.3	-0.2	0.6	0.4	0.5	0.4	0.8	0.6	0.6	0.3	0.0	0.2	0.3	0.3	Brazil
Chile	1.0	0.5	1.7	1.4	1.3	1.2	1.3	1.2	0.7	0.2	1.3	0.4	0.6	0.2	0.9	0.3	0.2	0.1	0.2	0.1	0.5	Chile

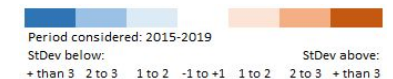
* The Eurozone core inflation data shown in the table are seasonally adjusted using Haver Analytics, as the Eurostat does not provide seasonally adjusted figures, and the ECB does it but not for members States.

Core Inflation M/M%, SA

US	0.6	0.5	0.3	0.5	0.6	0.6	0.3	0.6	0.6	0.3	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.2	0.2	0.3	0.3	US
China	-0.1	0.2	0.1	0.0	0.0	0.2	-0.1	0.0	-0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0	China
Eurozone *	0.5	0.2	0.3	0.4	0.5	0.2	0.5	0.5	0.7	0.5	0.5	0.3	0.6	0.5	0.3	0.4	0.2	0.3	0.5	0.3	-0.1	Eurozone *
Germany	0.5	0.2	0.3	0.3	0.6	-0.2	0.5	0.3	1.1	0.6	0.5	0.5	0.1	0.7	0.9	0.2	-0.1	1.0	0.5	0.5	-0.3	Germany
France	0.4	0.5	0.1	0.5	0.4	0.2	0.5	0.4	0.0	0.5	0.3	0.2	0.3	0.8	0.4	0.7	0.1	0.2	0.4	0.1	-0.3	France
Spain	0.4	0.3	0.4	0.3	0.3	0.5	0.5	0.4	0.3	0.2	0.2	0.4	1.3	0.5	-0.1	-0.2	0.1	0.3	1.0	0.3	-0.1	Spain
UK	0.5	0.6	0.7	0.6	0.4	0.5	0.5	0.5	0.6	0.5	0.4	0.5	0.0	1.0	0.6	1.1	0.8	0.3	0.5	-0.1	0.4	UK
Turkey	6.7	3.9	4.3	3.9	3.7	3.1	4.2	4.1	3.3	2.7	1.7	1.0	7.4	2.2	2.2	2.6	4.1	4.2	10.4	10.0	5.8	Turkey
Argentina	4.1	4.8	5.7	6.1	5.7	5.6	6.7	6.6	5.3	5.8	5.1	4.8	6.2	8.1	6.5	7.7	8.3	7.1	5.8	13.6	13.3	Argentina
Colombia	1.1	1.0	0.8	0.9	0.9	0.8	0.9	1.0	0.9	1.0	0.8	0.8	1.3	1.3	1.0	0.8	0.6	0.6	0.6	0.6	0.5	Colombia
Mexico	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.8	0.7	0.7	0.6	0.5	0.7	0.6	0.5	0.4	0.3	0.2	0.4	0.2	0.4	Mexico
Peru	0.3	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.7	0.4	0.5	0.7	0.5	0.4	0.3	0.3	0.3	0.3	Peru
Brazil	0.7	0.9	0.9	0.7	0.6	0.9	0.3	0.6	0.5	0.5	0.4	0.5	0.6	0.8	0.5	0.8	0.5	0.3	0.0	0.5	0.3	Brazil
Chile	1.0	-0.1	1.0	1.1	0.9	1.0	0.9	0.9	0.3	0.1	0.9	0.1	1.0	0.4	1.2	0.5	0.2	0.2	0.2	-0.1	0.3	Chile

The ECB data point to a 0.15% rise seasonally adjusted core inflation in September.

Eurostat non-seasonal adjusted Eurozone core inflation was 0.2% in September.



Source: BBVA Research, Haver Analytics. We report here harmonised core inflation excluding food and energy. These measures may differ from local measures of core inflation for the EA and Spain: excludes unprocessed food and energy, France excludes government tariffs and volatile prices, Germany excludes energy prices.

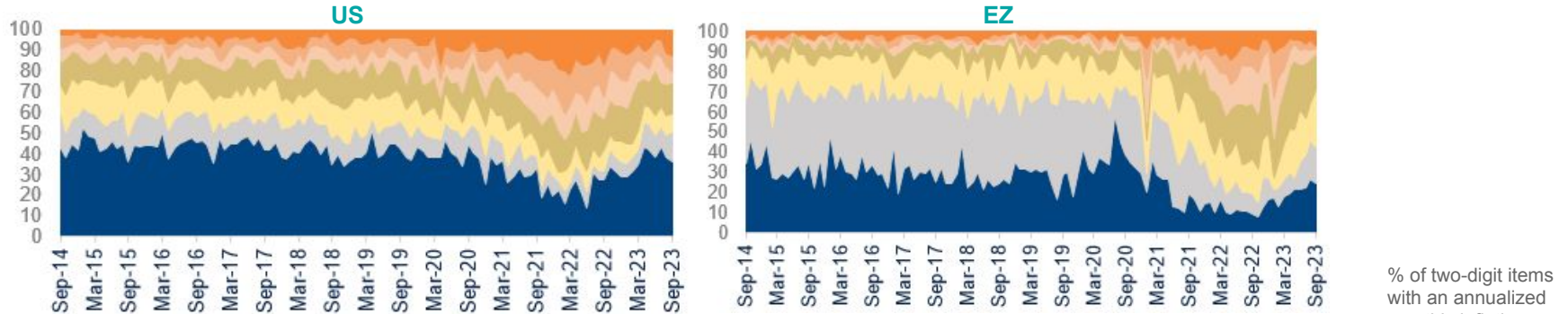
Euro area inflation approaching normalized levels in sequential terms, while the improvement seems to have stalled in the US and the EMs

INFLATION, M/M% (SA)

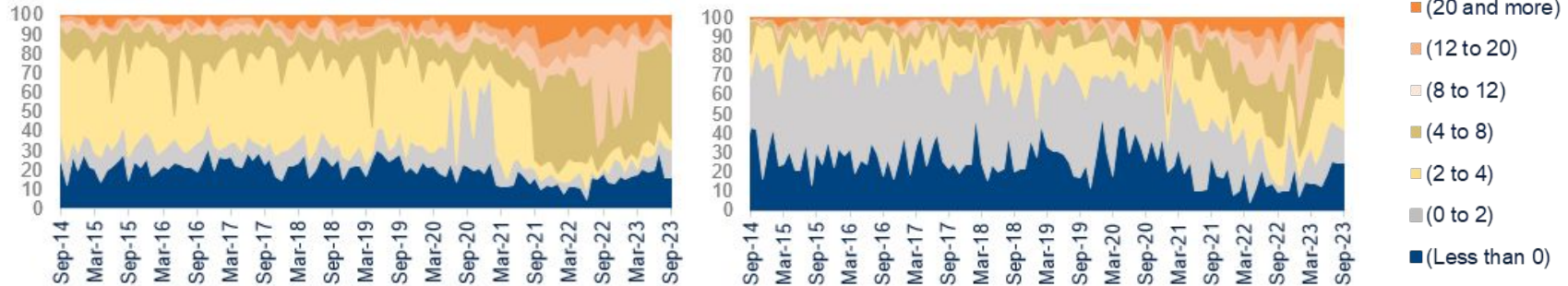


Synchronicity indicators suggest that still a number of items in the CPI basket are above pre-pandemic levels, despite the recent improvement

PERCENTAGE OF ITEMS WITHIN DIFFERENT INFLATIONARY BRACKETS



WEIGHTED* PERCENTAGE OF ITEMS WITHIN DIFFERENT INFLATIONARY BRACKETS

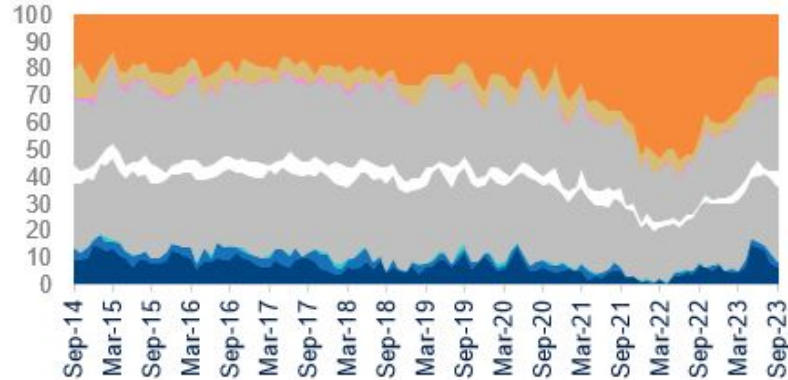


*weighted by each item's level of expenditure within the CPI basket.

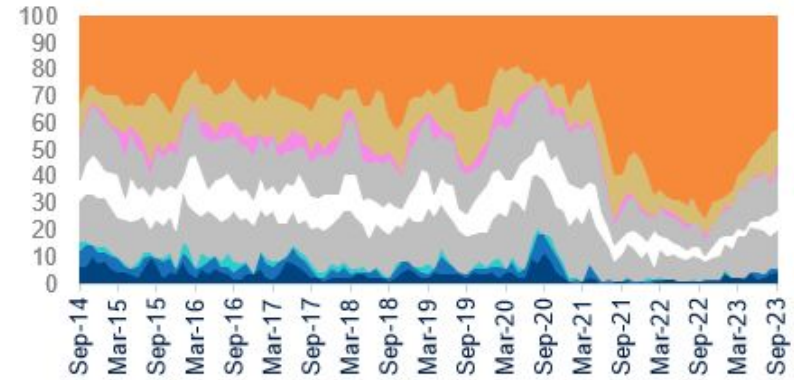
Source: BBVA Research based on Haver Analytics

The number of items with frequent price revisions moderated in the US and the EZ but still remain above pre-pandemic levels

PERCENTAGE OF ITEMS WITH FREQUENT ADJUSTMENTS US



EZ



■ 3 consecutive months rising

■ Medium upwards trend

■ Slight upwards trend

□ No signal

■ Noise

■ Slight downward trend

■ Medium downward trend

■ 3 consecutive months falling

Medium downward trend refers to 3 price reductions and no increases in the last three months.

Slight downward trend refers to 2 price reduction and no increases in the last three months:

Noise: refers to both price increases AND reductions in the last three months.

No signal: refers to no significant change in prices in the last three months

Slight upward trend refers to 2 price increase and no reduction in the last three months:

Medium upwards trend refers to 3 price increases and no reductions in the last three months.

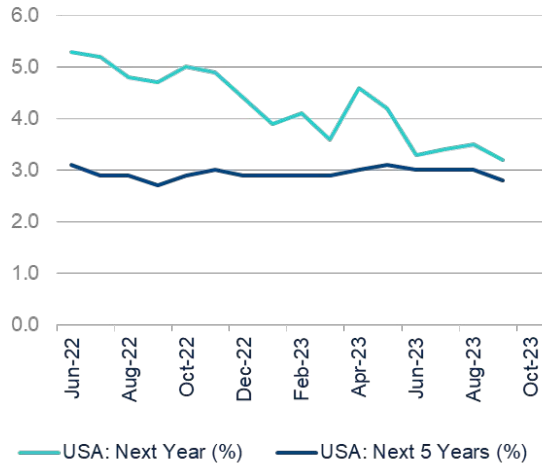
In all of the above, price changes of less than 0.05% annualized inflation are considered insignificant.

% of items* with prices signaling; * items within the CPI basket (2 digits) and where.

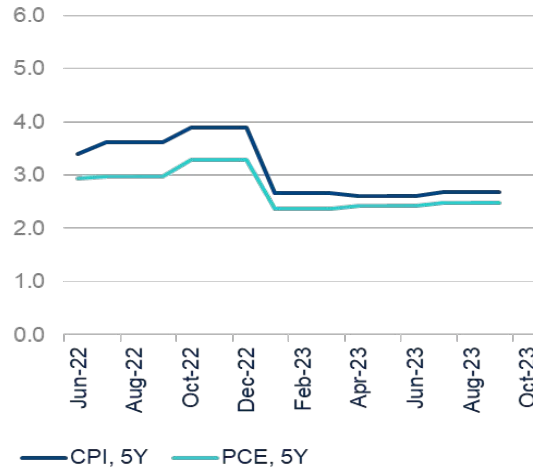
Source: BBVA Research, Haver Analytics.

In the US, consumers' short-term inflation expectations fell to a two-year low (3.1%) while markets and analysts' expectations remained close to 2.5%

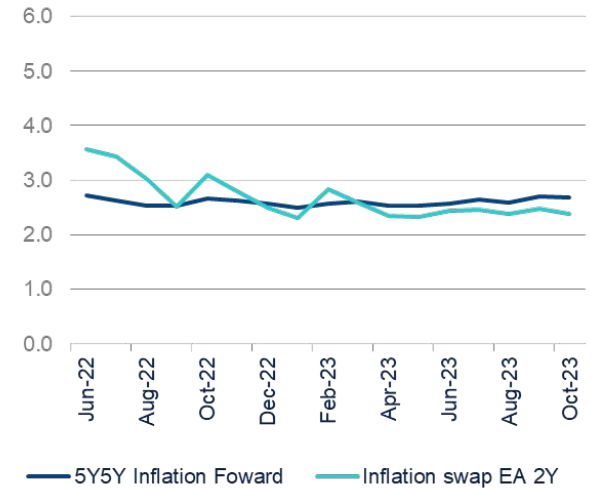
**EXPECTATIONS:
CONSUMERS SURVEY**
(NEXT YEAR, NEXT 5 YEARS)



**EXPECTATIONS:
PROFESSIONAL FORECASTERS**
(LONG-TERM*, %)



**EXPECTATIONS:
MARKET**
(5Y5Y FORWARD, 5Y SWAP)



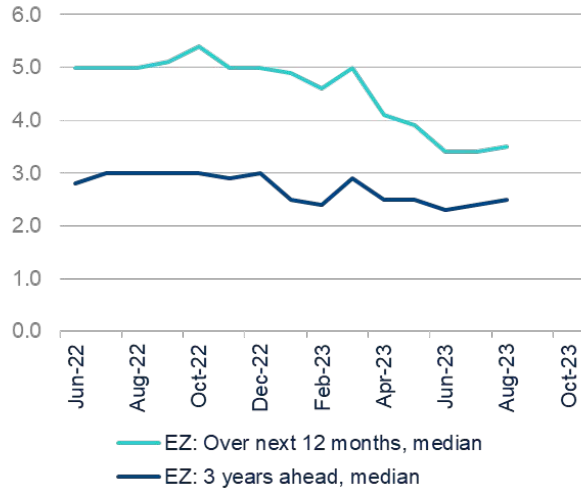
Source: BBVA Research, Haver Analytics.

*/ This refers to an average of 5 and 10-year ahead expected rate of inflation

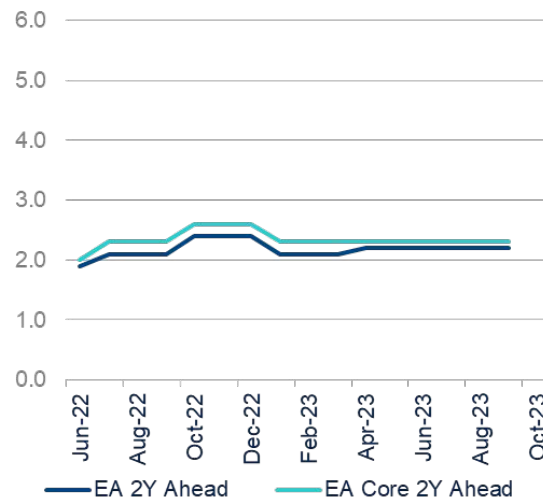
Source: Federal Reserve Bank of Philadelphia.

EZ consumers' inflation expectations increased slightly, while analysts' are close to ECB's target (for 2025) and markets' remains above the target

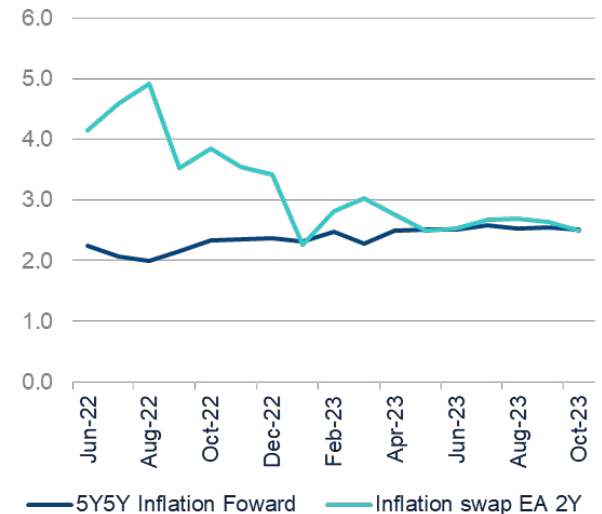
**EXPECTATIONS:
CONSUMERS SURVEY**
(NEXT YEAR, 3Y AHEAD)



**EXPECTATIONS:
PROFESSIONAL FORECASTERS**
(LONG-TERM*, %) (%)



**EXPECTATIONS
MARKET**
(5Y5Y FORWARD, 5Y SWAP)



Source: BBVA Research, ECB, consumer survey

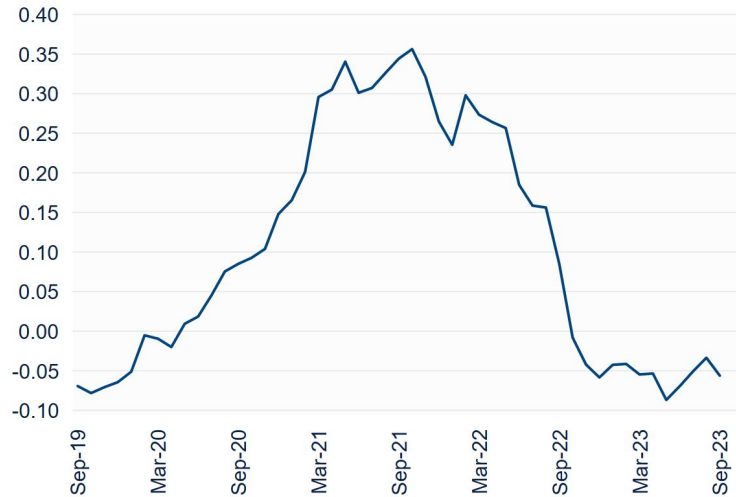
*/ Long-Term CPI Inflation refers to 2027 expected headline inflation

Source: ECB

Our supply bottlenecks indicator suggests that production chains are working at normalized levels in the US as well as the Euro Area

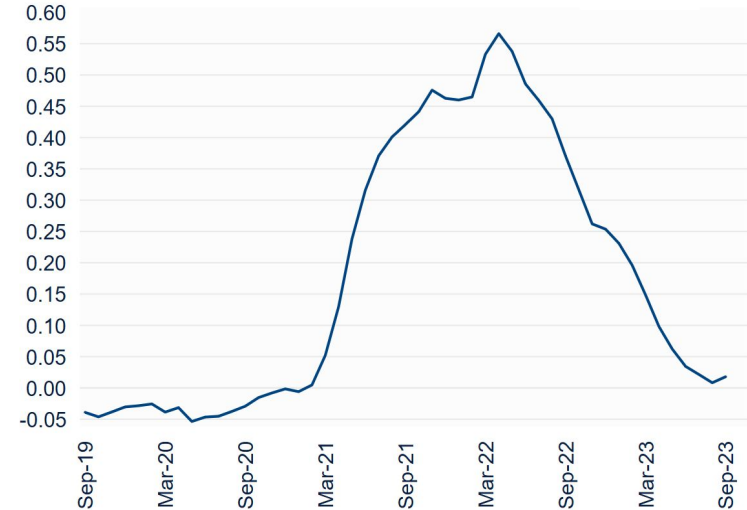
US SUPPLY BOTTLENECKS INDICATOR

(INDEX; LAST AVAILABLE DATA: SEPTEMBER 2023)



EZ: SUPPLY BOTTLENECKS INDICATOR

(INDEX; LAST AVAILABLE DATA: SEPTEMBER 2023)



Principal Component Analysis (PCA) has been the methodology followed in the construction of the supply bottlenecks indicator for United States and the Euro Area, whereby the first principal component has been considered as the corresponding supply bottlenecks indicator.

Variables included in the indicator: EA19: factors limiting production - Equipment (Percent Balance SA); EA19: Material shortage construction (Percent Balance SA); IFO: Germany: Material shortage in construction (Percent Balance SA); Ea 19: Retail Inventories (Percent Balance SA); Harpex Shipping Index; Vessel Size in TEU - Rates in US\$.

Source: BBVA Research, Haver Analytics.

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