

Global | Inflation and Bottlenecks Chartbook

Updated July 2023

Summary

- Declines in headline annual inflation pick up speed in the US and in most BBVA footprint countries (ex. ARG) and it is expected to slow further in coming months. Core inflation moderated in a more measured way and unevenly across countries. Sequentially (monthly rates), the US and some Latam countries show already low core inflation rates, in some cases also helped by FX appreciation. China's inflation continues to moderate and in June was close to 0%.
- US inflation fell more than expected in June, with the headline rate at 3.1% and core inflation at 4.9% YoY. Rents and owner-equivalent rents are the main drivers of core inflation but are expected to decline later in 2023. The labor market is softening, with slower job growth and stable wages.
- Euro Area headline inflation was 5.5% YoY in June. Core inflation also increased less than expected. Food prices contributed the most to inflation, followed by non-energy industrial goods and services. Energy inflation decelerated significantly due to base effects. EA core inflation was affected by a one-off base effect on German inflation.
- Synchronicity and persistence indicators improved in the Euro Area, with an increasing number of items in the CPI basket with low inflation.
- Consumer one-year ahead inflation expectations have intensified the downward trend in both US and EA, suggesting lower inflation starts filtering to consumers. However, consumer long-term inflation expectations remained broadly stable (US 3%, EA 4%), and above central banks' targets, analyst expectations and market-based inflation outlook.
- Our supply bottlenecks indicator suggests that disruptions in production chain loosened in both US and Europe due to the manufacturing downturn.

Summary indicators

	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23		
Inflation	8.9	8.4	8.2	8.2	7.8	7.1	6.4	6.3	6.0	5.0	5.0	4.1	3.1	US	IPC Headline (%YoY, SA)
	5.9	5.9	6.3	6.6	6.3	6.0	5.7	5.5	5.5	5.6	5.5	5.3	4.9		IPC Core (%YoY, SA)
	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		IPC Headline (%MoM, SA)
	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		IPC Core (%MoM, SA)
	3.6	3.4	3.0	2.5	3.1	2.8	2.5	2.3	2.8	2.6	2.4	2.3	2.4		Inf exp (2Y inf. Swap)
	2.7	2.6	2.5	2.5	2.7	2.6	2.6	2.5	2.6	2.6	2.5	2.6	2.6		Inf exp (5Y5Y inf. Swap)
	8.7	8.9	9.2	9.9	10.5	10.0	9.2	8.6	8.5	6.8	7.0	6.1	5.5	EZ	IPC Headline (%YoY, SA)
	5.9	5.9	6.3	6.6	6.3	6.0	5.7	5.5	5.5	5.6	5.5	5.3	4.9		IPC Core (%YoY, SA)
	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		IPC Headline (%MoM, SA)
	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		IPC Core (%MoM, SA)
4.1	4.6	4.9	3.5	3.9	3.5	3.4	2.3	2.8	3.0	2.8	2.5	2.5	Inf exp (2Y inf. Swap)		
2.2	2.1	2.0	2.2	2.3	2.4	2.4	2.3	2.5	2.3	2.5	2.5	2.5	Inf exp (5Y5Y inf. Swap)		
Bottlenecks	54.9	48.6	50.4	47.3	48.2	46.8	45.1	42.5	47.0	44.3	45.7	42.6	45.6	US manuf.	ISM New Orders
	58.7	51.3	53.0	50.9	45.3	40.0	41.4	43.4	45.1	43.9	43.1	37.5	38.7		Backlog of Orders
	54.4	53.3	51.1	51.0	51.9	50.9	48.6	48.0	47.3	47.8	48.9	51.1	46.7		Production Index
	57.3	55.2	55.1	52.4	46.8	47.2	45.1	45.6	45.2	44.8	44.6	43.5	45.7		Suppliers' delivery times
	35.2	39.5	38.9	41.6	41.6	48.7	48.2	47.4	46.9	48.9	51.3	51.4	46.2		Customer Inventories
	13.3	4.6	-2.7	-3.5	-5	-11.2	-12	-8.7	-9.2	-9.6	-13.8	-21.7	-26.1	EZ manuf.	Order books
	7.8	3.2	0.0	1.4	0.7	-3.8	0.6	-0.2	4.0	2.3	3.2	-6.6	-3.8		Production trend
	28.5	27.1	26.0	26.1	24.8	23.2	21.8	21.7	19.3	16.5	13.0	11.1	10.3	EZ const.	Equip shortage
	54.8	49.3	45.6	44.2	44.3	42.7	44.1	46.4	44.5	44.8	42.2	43.5	44.1	Taiwan	Suppliers' delivery times
	619	580	587	568	558	560	558	557	553	546	549	543	549	Input costs	CRB Spot Comdty. Price
4401	4467	4449	4163	1905	1405	1372	1229	1100	1059	1108	1217	1238	Container freight		

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

Source: BBVA Research and Haver Analytics

Inflation continued trending down thanks to the base effect and lower commodity prices; China's inflation is close to zero

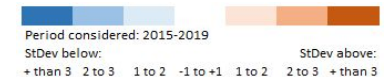
INFLATION, YoY% Seasonal Adjusted

Headline Inflation

	2021					2022											2023							
	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M		J
US	5.2	5.4	6.2	6.9	7.2	7.6	8.0	8.5	8.2	8.5	8.9	8.4	8.2	8.2	7.8	7.1	6.4	6.3	6.0	5.0	5.0	4.1	3.1	US
China	0.6	0.3	1.5	2.4	1.4	0.6	1.1	1.3	2.0	2.0	2.4	2.6	2.4	2.7	2.1	1.5	1.8	1.8	1.6	0.8	0.3	0.3	0.1	China
Eurozone	3.0	3.4	4.0	4.8	5.0	5.1	5.9	7.4	7.5	8.1	8.7	8.9	9.2	9.9	10.5	10.0	9.2	8.6	8.5	6.8	7.0	6.1	5.5	Eurozone
Germany	3.8	4.1	4.4	4.8	4.9	4.1	4.4	5.9	6.3	7.1	6.6	6.7	6.9	8.6	8.9	8.8	8.1	8.7	8.7	7.5	7.1	6.0	6.4	Germany
France	2.0	2.1	2.5	2.6	2.7	3.0	3.7	4.5	4.9	5.3	5.8	6.0	5.8	5.6	6.2	6.1	5.9	6.1	6.4	5.8	6.0	5.2	4.5	France
Spain	3.2	4.0	5.4	5.7	6.6	6.2	7.7	9.7	8.4	8.7	10.1	10.7	10.5	8.9	7.3	6.9	5.8	5.9	6.1	3.3	4.0	3.2	1.9	Spain
UK	3.3	3.1	4.1	5.1	5.4	5.5	6.2	7.1	9.0	9.1	9.4	10.1	9.9	10.2	11.0	10.6	10.5	10.1	10.5	10.1	8.6	8.7	7.9	UK
Turkey	19.5	20.1	20.5	21.9	36.2	48.6	54.1	60.9	68.8	73.4	78.1	79.5	80.5	84.1	86.2	85.1	64.3	57.6	54.9	50.4	43.6	39.0	38.0	Turkey
Argentina	51.2	52.5	51.9	51.2	51.0	50.8	52.5	55.2	58.1	60.7	64.0	70.8	78.2	83.1	87.9	92.5	94.9	98.9	102.6	104.4	108.8	114.2	115.5	Argentina
Colombia	4.4	4.5	4.6	5.3	5.6	6.9	8.0	8.5	9.2	9.0	9.7	10.2	10.8	11.4	12.3	12.6	13.1	13.3	13.3	13.3	12.8	12.4	12.1	Colombia
Mexico	5.5	5.9	6.2	7.4	7.4	7.1	7.3	7.5	7.7	7.6	7.9	8.1	8.7	8.7	8.4	7.8	7.9	8.0	7.6	6.9	6.2	5.8	5.0	Mexico
Peru	4.9	5.2	5.8	5.6	6.4	5.7	6.2	6.9	8.0	8.1	8.8	8.7	8.4	8.5	8.3	8.4	8.4	8.7	8.7	8.4	8.0	7.9	6.5	Peru
Brazil	9.7	10.3	10.7	10.7	10.0	10.3	10.5	11.2	12.0	11.6	11.8	10.0	8.6	7.1	6.4	5.9	5.8	5.7	5.6	4.6	4.2	3.9	3.1	Brazil

Core Inflation

US	3.9	4.0	4.6	5.0	5.5	6.1	6.4	6.5	6.1	6.0	5.9	5.9	6.3	6.6	6.3	6.0	5.7	5.5	5.5	5.6	5.5	5.3	4.9	US
China	1.1	1.1	1.1	1.0	1.0	0.9	1.1	0.9	0.7	0.6	0.8	0.6	0.6	0.4	0.4	0.4	0.5	0.7	0.5	0.5	0.5	0.5	0.3	China
Eurozone	1.7	1.9	2.1	2.5	2.6	2.1	2.6	3.0	3.4	3.7	3.8	4.1	4.4	4.7	5.0	4.9	5.2	5.2	5.6	5.8	5.7	5.3	5.3	Eurozone
Germany	2.3	2.7	2.9	3.9	3.9	2.7	2.9	3.5	3.6	4.1	3.4	3.7	3.8	4.7	5.2	5.0	5.4	4.9	5.4	6.1	6.0	5.3	6.4	Germany
France	1.4	1.7	1.9	2.0	2.0	1.8	2.4	2.5	3.0	3.2	3.2	3.8	4.0	3.6	4.0	4.0	4.2	4.2	4.5	4.8	4.9	4.6	4.7	France
Spain	0.5	0.9	1.4	1.7	1.9	2.1	2.6	3.0	3.4	3.5	4.0	4.6	4.7	4.4	4.1	4.3	5.2	5.4	4.8	4.3	4.1	3.9	Spain	
UK	3.1	2.9	3.3	4.0	4.2	4.4	5.2	5.7	6.2	5.9	5.8	6.2	6.3	6.5	6.5	6.3	6.3	5.8	6.2	6.2	6.8	7.1	6.9	UK
Turkey	17.1	17.5	17.5	18.4	31.9	39.2	43.5	47.9	51.5	55.6	57.3	62.0	66.4	68.5	70.9	69.5	51.9	52.9	50.3	47.2	45.4	45.9	47.4	Turkey
Argentina	55.3	57.0	56.6	55.8	54.9	54.1	54.8	57.4	60.4	63.0	65.4	71.9	78.2	82.3	86.4	89.3	90.7	94.5	100.6	102.1	105.1	110.2	113.1	Argentina
Colombia	3.9	3.8	3.7	4.2	4.4	5.5	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	Colombia
Mexico	4.7	4.9	5.2	5.7	5.9	6.2	6.6	6.9	7.1	7.3	7.5	7.6	8.0	8.3	8.4	8.5	8.3	8.5	8.3	8.0	7.7	7.4	6.9	Mexico
Peru	2.6	2.9	3.2	3.4	3.8	3.9	4.2	4.7	5.1	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	Peru
Brazil	6.1	7.0	7.4	7.6	7.3	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	Brazil

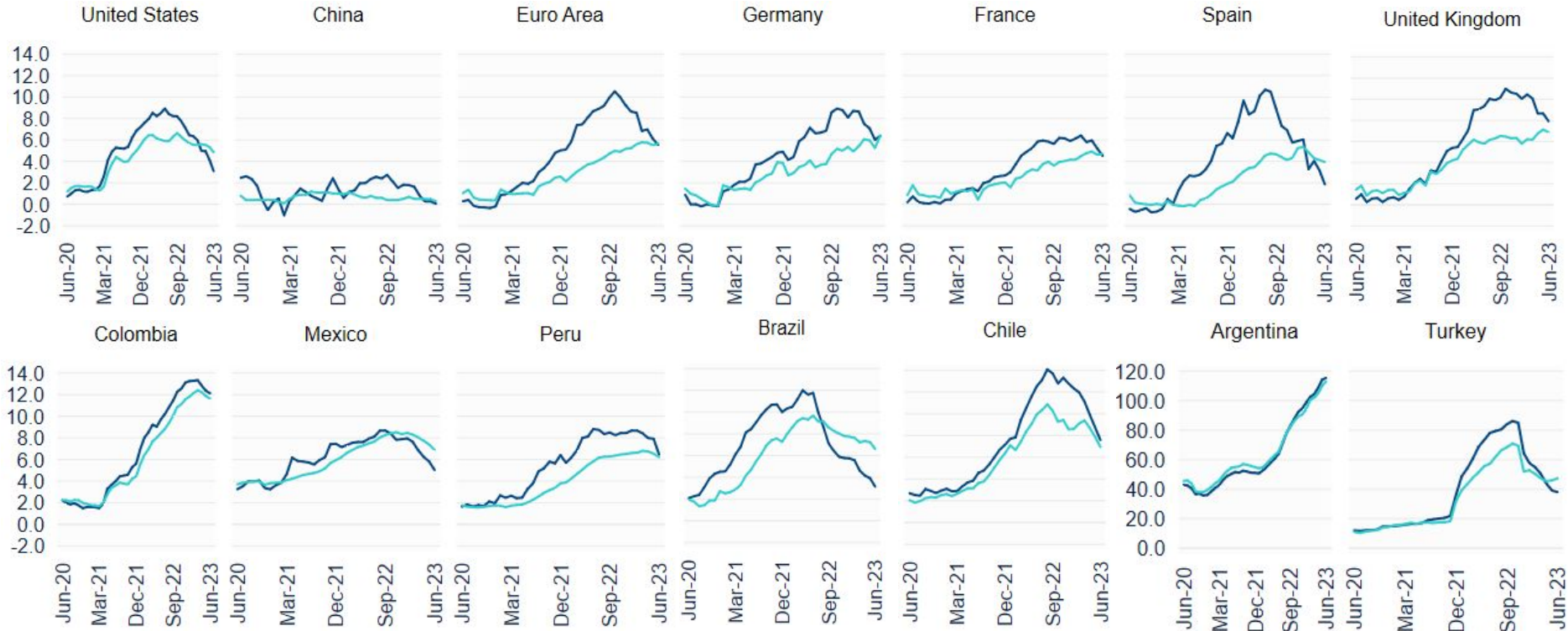


Source: BBVA Research, Haver Analytics. We report here harmonised core inflation excluding food and energy. These measures may differ from local measures of core inflation where EA and Spain: excludes unprocessed food and energy, France excludes government tariffs and volatile prices, Germany excludes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

Headline inflation intensified the pace of decline in June (ex-Arg). Core inflation has barely diminished

INFLATION, YOY%

— Headline
— Core



Source: BBVA Research, IHS Markit Analytics.

In June, monthly changes of CPI showed moderate growth; monthly core inflation is low in the US and several Latam countries but not yet in Europe

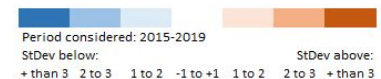
INFLATION, MoM% Seasonal Adjusted

Headline Inflation

	2021					2022											2023							
	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M		J
US	0.4	0.4	0.9	0.8	0.8	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	US
China	0.0	-0.3	0.7	0.6	-0.3	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	China
Eurozone	0.4	0.3	0.6	0.8	0.7	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	Eurozone
Germany	0.3	0.2	0.5	0.5	0.2	0.7	0.7	1.7	0.5	0.9	0.0	0.5	0.5	1.8	0.8	0.4	-0.4	1.2	0.6	0.6	0.1	-0.1	0.3	Germany
Spain	0.6	1.0	1.2	0.5	1.2	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	Spain
UK	0.7	0.3	0.9	0.8	0.6	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	UK
Turkey	2.3	2.2	1.9	3.1	12.7	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	Turkey
Argentina	2.7	2.8	3.2	2.9	3.7	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	Argentina
Colombia	0.6	0.5	0.3	0.7	0.5	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	Colombia
Mexico	0.3	0.6	0.7	0.9	0.4	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	Mexico
Peru	1.0	0.5	0.7	0.4	0.7	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	Peru
Brazil	0.9	1.2	1.2	0.9	0.6	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	Brazil

Core Inflation

US	0.2	0.3	0.7	0.6	0.7	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	US
China	0.0	0.1	0.1	0.0	0.0	-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	China
Eurozone	0.3	0.2	0.2	0.5	0.1	0.4	0.4	0.3	0.4	0.5	0.3	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.7	0.5	0.4	0.2	0.5	Eurozone
Germany	0.2	0.3	0.2	0.6	0.1	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	Germany
Spain	0.2	0.4	0.5	0.4	0.2	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	Spain
UK	0.4	0.3	0.5	0.6	0.4	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	UK
Turkey	1.4	2.0	1.2	2.5	12.6	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	Turkey
Argentina	2.9	2.9	3.5	3.4	4.0	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	Argentina
Colombia	0.5	0.3	0.3	0.6	0.4	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	Colombia
Mexico	0.4	0.5	0.6	0.5	0.7	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	Mexico
Peru	0.4	0.5	0.4	0.4	0.6	0.3	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.7	0.4	0.5	0.7	0.5	0.4	0.3	Peru
Brazil	0.6	1.0	0.8	0.7	0.7	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	Brazil

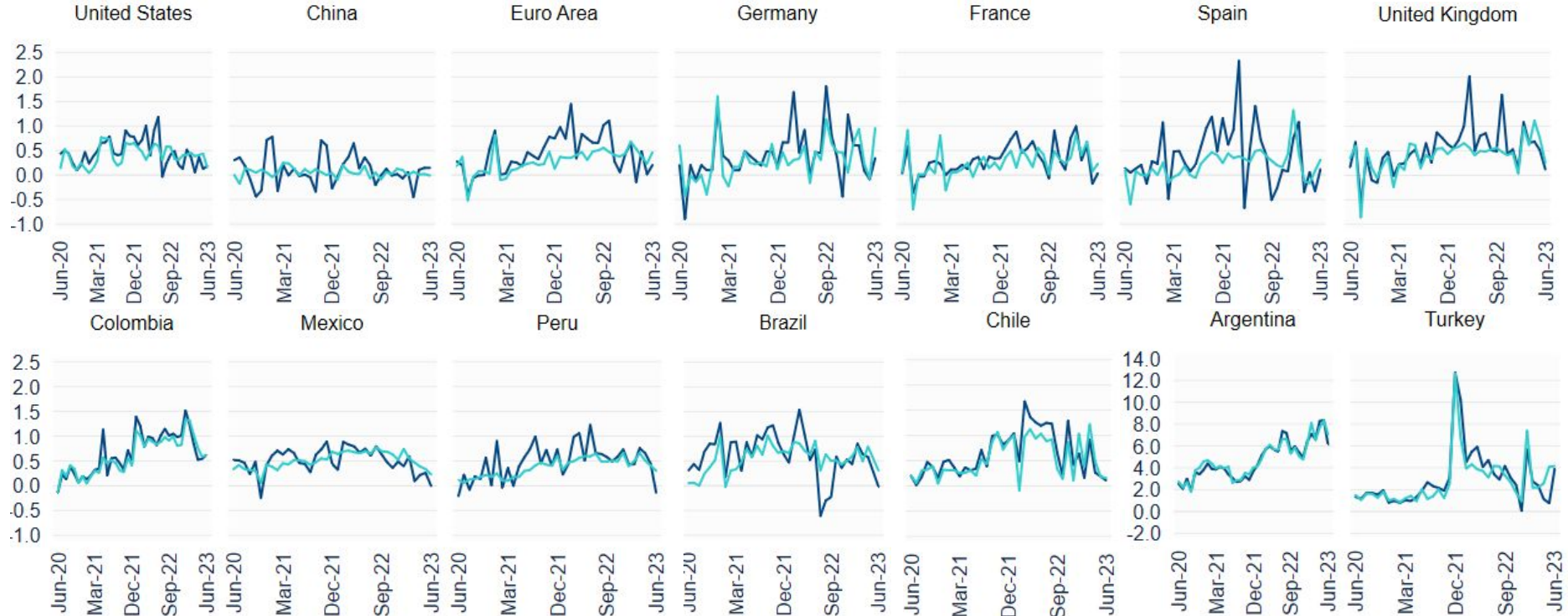


Source: BBVA Research, Haver Analytics. We report here harmonised core inflation excluding food and energy. These measures may differ from local measures of core inflation for the EA and Spain: excludes unprocessed food and energy, France excludes government tariffs and volatile prices, Germany excludes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

In monthly terms both headline and core inflation picked up slightly in EA, in contrast to most of Latam and UK

INFLATION, MOM% (SA)

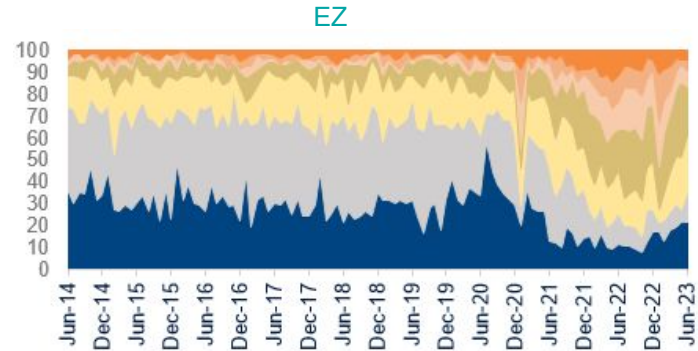
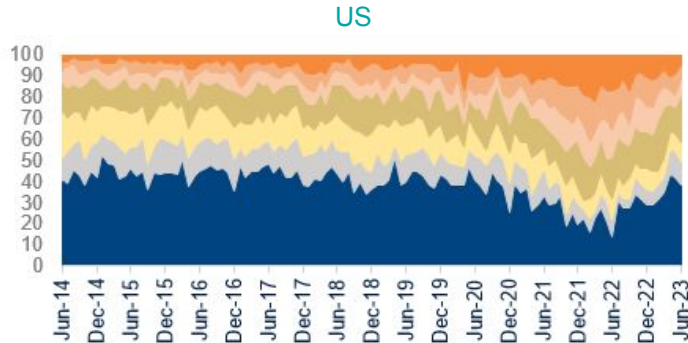
— Headline
— Core



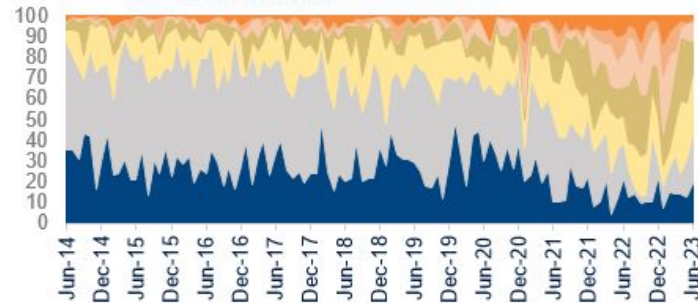
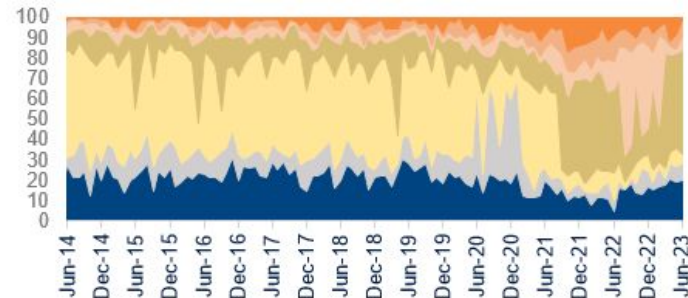
Source: BBVA Research, Haver Analytics.

Synchronicity indicators have improved in the EZ, with the number of items with low inflation rates increasing

PERCENTAGE OF ITEMS WITHIN DIFFERENT INFLATIONARY BRACKETS



WEIGHTED* PERCENTAGE OF ITEMS WITHIN DIFFERENT INFLATIONARY BRACKETS



% of two-digit items with an annualized monthly inflation:

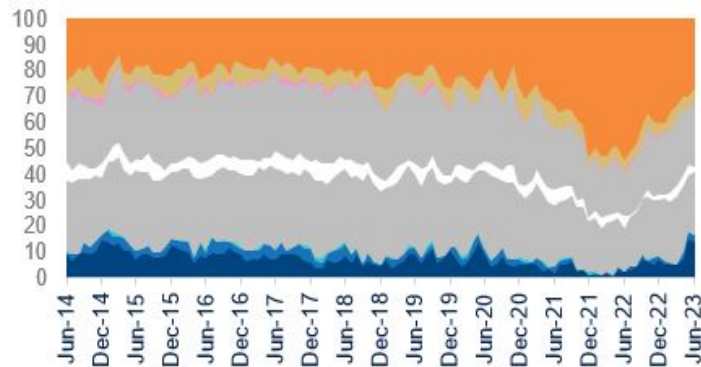
- (20 and more)
- (12 to 20)
- (8 to 12)
- (4 to 8)
- (2 to 4)
- (0 to 2)
- (Less than 0)

*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 further in the US and the EZ

PERCENTAGE OF ITEMS WITH FREQUENT ADJUSTMENTS US



■ 3 consecutive months rising
■ Noise

■ Medium upwards trend
■ Slight downward trend

■ Slight upwards trend
■ Medium downward trend

□ No signal
■ 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

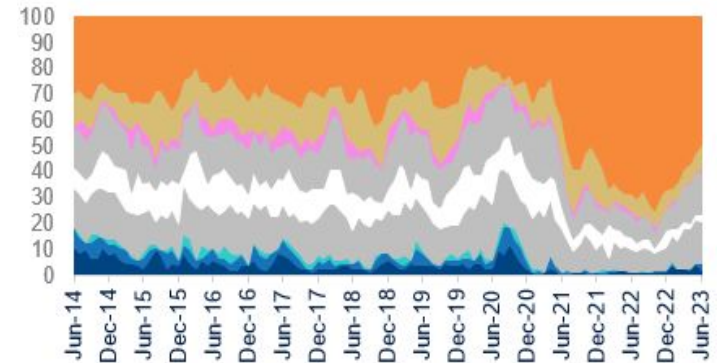
Slight upward trend refers to 2 price increase and no reduction in the last three months:

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

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

Source: BBVA Research, Haver Analytics.

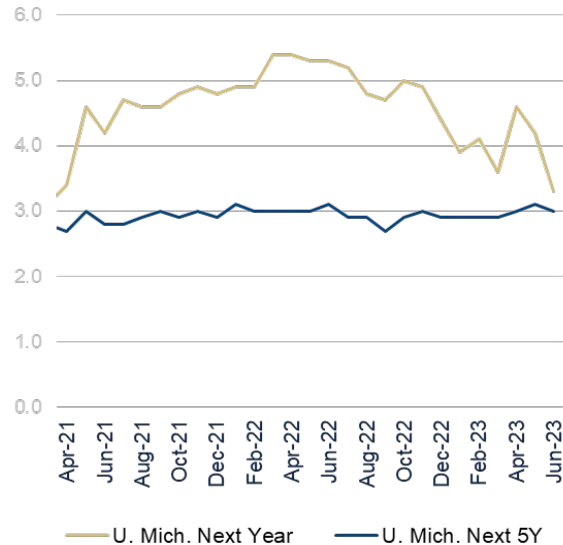
EZ



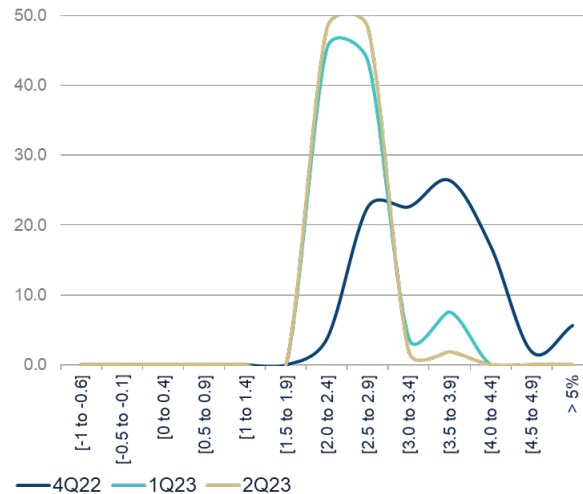
In all of the above, price changes of less than 0.05% annualized inflation are considered insignificant.

In the US markets and analysts' expectations are close to 2.5% while consumers' short-term inflation expectations fell to a two-year minimum (3.3%)

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



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



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

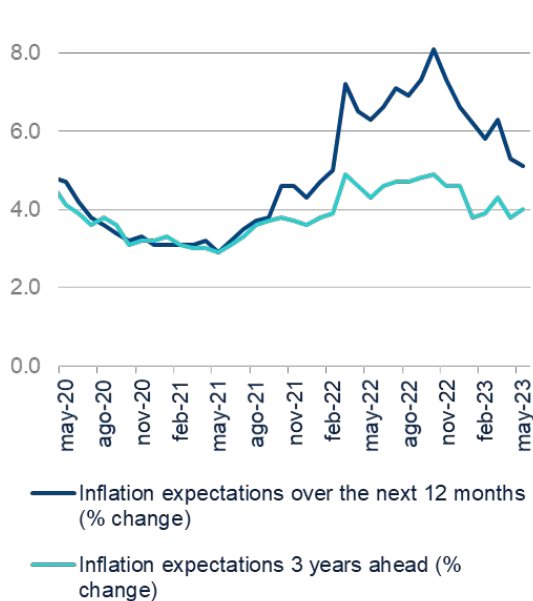


Source: BBVA Research, Haver Analytics.

*/ This refers to an average of 5 and 10-year ahead expected rate of inflation
Source: Federal Reserve Bank of Philadelphia.

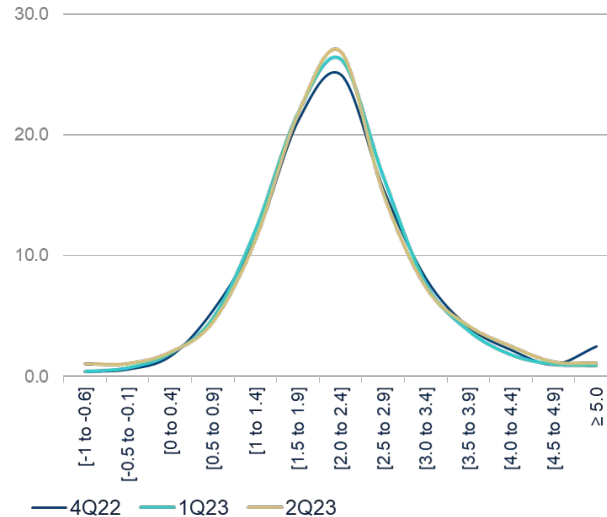
In the EZ, analysts' and market expectations remain stable (2-2.25%) while consumer expectations for next year are falling

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



Source: BBVA Research, ECB, consumer survey

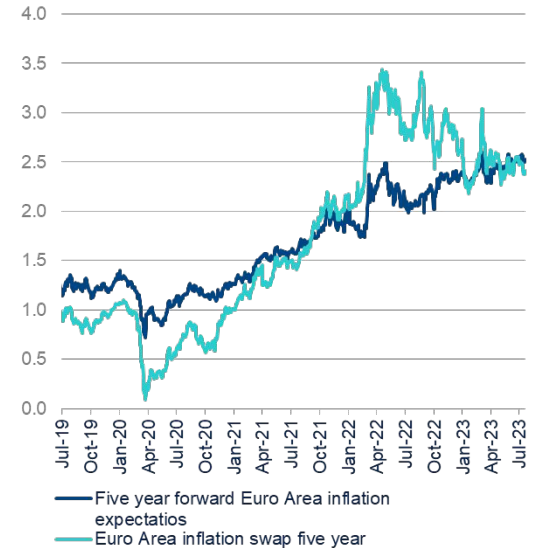
EXPECTATIONS: PROFESSIONAL FORECASTERS (LONG-TERM*, %)



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

Source: ECB

EXPECTATIONS MARKET (5Y5Y FORWARD, 5Y SWAP)



Our supply bottlenecks indicator reflects the ongoing slack in US manufacturing, while the EA supply chains are working without major strains

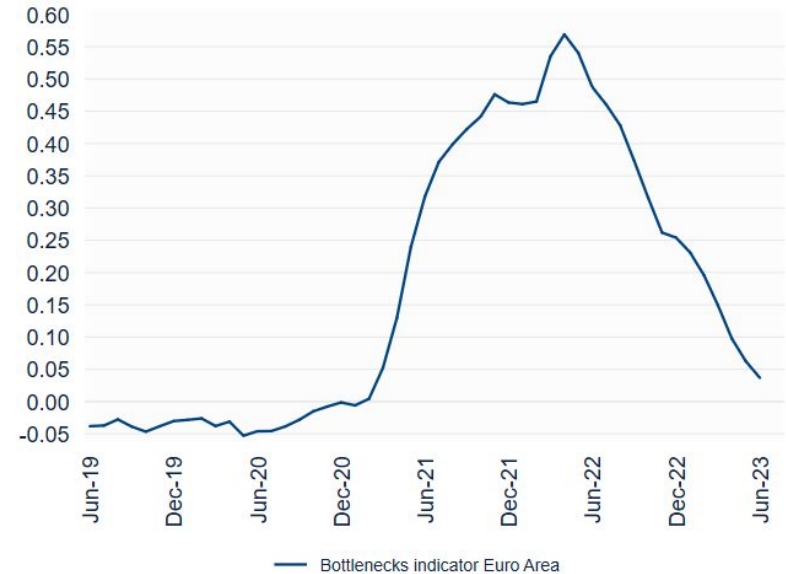
US SUPPLY BOTTLENECKS INDICATOR

(INDEX; LAST AVAILABLE DATA: APRIL 2023)



EZ: SUPPLY BOTTLENECKS INDICATOR

(INDEX; LAST AVAILABLE DATA: APRIL 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);Harper Shipping Index;Vessel Size in TEU - Rates in US\$.

Source: BBVA Research, Haver Analytics.

Disclaimer

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