

Global | Inflation and Bottlenecks Chartbook

May 2023

Summary

- **Headline inflation eased further in the US in April**, while **May data for the Euro Area showed price pressures eased** after having picked up in April. That said, **core inflation remains sticky** overall. In contrast, inflation slowed markedly **in China**.
- **In the US, headline inflation edged down below** to 5% YoY in **April**, notwithstanding a pick up in gasoline prices. **Core inflation remained sticky** (5.5% YoY), led by a rebound in core goods and slower moderation in housing-related inflation.
- **In the Euro Area, inflation surprised on the upside in April** led mainly by services, despite lower commodity prices. Core inflation eased a notch but was still close to the all-time high. Reassuringly, **flash inflation data for May suggested broad-based easing** in price pressures, although still at elevated levels (Headline 6.1% YoY, Core 5.3% YoY), weighed by a fall in energy prices and softening services inflation.
- **Synchronicity and persistence indicators reaffirm the slowing inflation trends in the US, while in Europe they show early signs of cooling inflation**, as more and more components move to the lower range within the high inflation bracket. Yet items with low inflation records still account for less than half of the total items.
- **Consumer inflation expectations inched up in the US and the Eurozone**. In the US and the Euro Area, analysts' long-term inflation expectations are around 2.5%, while market-based long-term inflation expectations are around 2.6%.
- **Our supply bottlenecks indicators trends towards normalization in the Euro Area**, driven by fewer material shortages. In the US, the weakness in manufacturing sector has meant that supply disruptions have diminished to pre-pandemic levels.

Summary indicators

	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23		
Inflation	8.5	8.9	8.4	8.2	8.2	7.8	7.1	6.4	6.3	6.0	5.0	5.0	.	US	IPC Headline (%YoY, SA)
	6.0	5.9	5.9	6.3	6.6	6.3	6.0	5.7	5.5	5.5	5.6	5.5	.		IPC Core (%YoY, SA)
	0.9	1.2	0.0	0.2	0.4	0.5	0.2	0.1	0.5	0.4	0.1	0.4	.		IPC Headline (%MoM, SA)
	0.6	0.6	0.3	0.6	0.6	0.3	0.3	0.4	0.4	0.5	0.4	0.4	.		IPC Core (%MoM, SA)
	4.3	3.6	3.4	3.0	2.5	3.1	2.8	2.5	2.3	2.8	2.6	2.4	2.3		Inf exp (2Y inf. Swap)
	2.7	2.7	2.6	2.5	2.5	2.7	2.6	2.6	2.5	2.6	2.6	2.5	2.6		Inf exp (5Y5Y inf. Swap)
	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	EZ	IPC Headline (%YoY, SA)
	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		IPC Core (%YoY, SA)
	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		IPC Headline (%MoM, SA)
	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		IPC Core (%MoM, SA)
	4.7	4.1	4.6	4.9	3.5	3.9	3.5	3.4	2.3	2.8	3.0	2.8	2.5		Inf exp (2Y inf. Swap)
	2.2	2.2	2.1	2.0	2.2	2.3	2.4	2.4	2.3	2.5	2.3	2.5	2.5		Inf exp (5Y5Y inf. Swap)
Bottlenecks	55.1	54.9	48.6	50.4	47.3	48.2	46.8	45.1	42.5	47.0	44.3	45.7	42.6	US manuf.	ISM New Orders
	58.7	58.7	51.3	53.0	50.9	45.3	40.0	41.4	43.4	45.1	43.9	43.1	37.5		Backlog of Orders
	54.2	54.4	53.3	51.1	51.0	51.9	50.9	48.6	48.0	47.3	47.8	48.9	51.1		Production Index
	65.7	57.3	55.2	55.1	52.4	46.8	47.2	45.1	45.6	45.2	44.8	44.6	43.5		Suppliers' delivery times
	32.7	35.2	39.5	38.9	41.6	41.6	48.7	48.2	47.4	46.9	48.9	51.3	51.4		Customer Inventories
	7.20	13.3	4.6	-2.7	-3.5	-5	-11.2	-12	-8.7	-9.2	-9.6	-13.8	-21.7	EZ manuf.	Order books
	5.0	7.8	3.2	0.0	1.4	0.7	-3.8	0.6	-0.2	4.0	2.3	3.2	-6.6		Production trend
	30.7	27.9	26.8	25.9	26.0	24.7	23.2	21.9	21.8	19.4	16.7	13.2	.	EZ const.	Equip shortage
	61.7	54.8	49.3	45.6	44.2	44.3	42.7	44.1	46.4	44.5	44.8	42.2	43.5	Taiwan	Suppliers' delivery times
	634	619	580	587	568	558	560	558	557	553	546	546	546	Input costs	CRB Spot Comdty. Price
4407	4401	4467	4449	4163	1905	1405	1372	1229	1100	1059	1108	1217	Container freight		

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

Source: BBVA Research and Haver Analytics

Headline inflation was stable in the US but edged up in the Euro Area in April; core inflation still sticky despite easing; disinflationary trends persist in China

INFLATION, YOY%

Headline Inflation

	2021							2022												2023				
	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M
US	5.3	5.2	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	.
China	1.1	0.8	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	.
Eurozone	1.9	2.2	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
Germany	2.3	3.7	3.8	4.1	4.4	4.8	4.9	4.1	4.4	6.0	6.4	7.1	6.7	6.7	6.9	8.6	8.9	8.8	8.1	8.7	8.7	7.4	7.1	6.0
France	1.5	1.2	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	.
Spain	2.6	2.8	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	3.1
Turkey	17.1	18.8	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	.
Argentina	50.2	51.6	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	.
Colombia	3.6	4.0	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	.
Mexico	5.8	5.7	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	.
Peru	3.3	3.8	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

Core Inflation

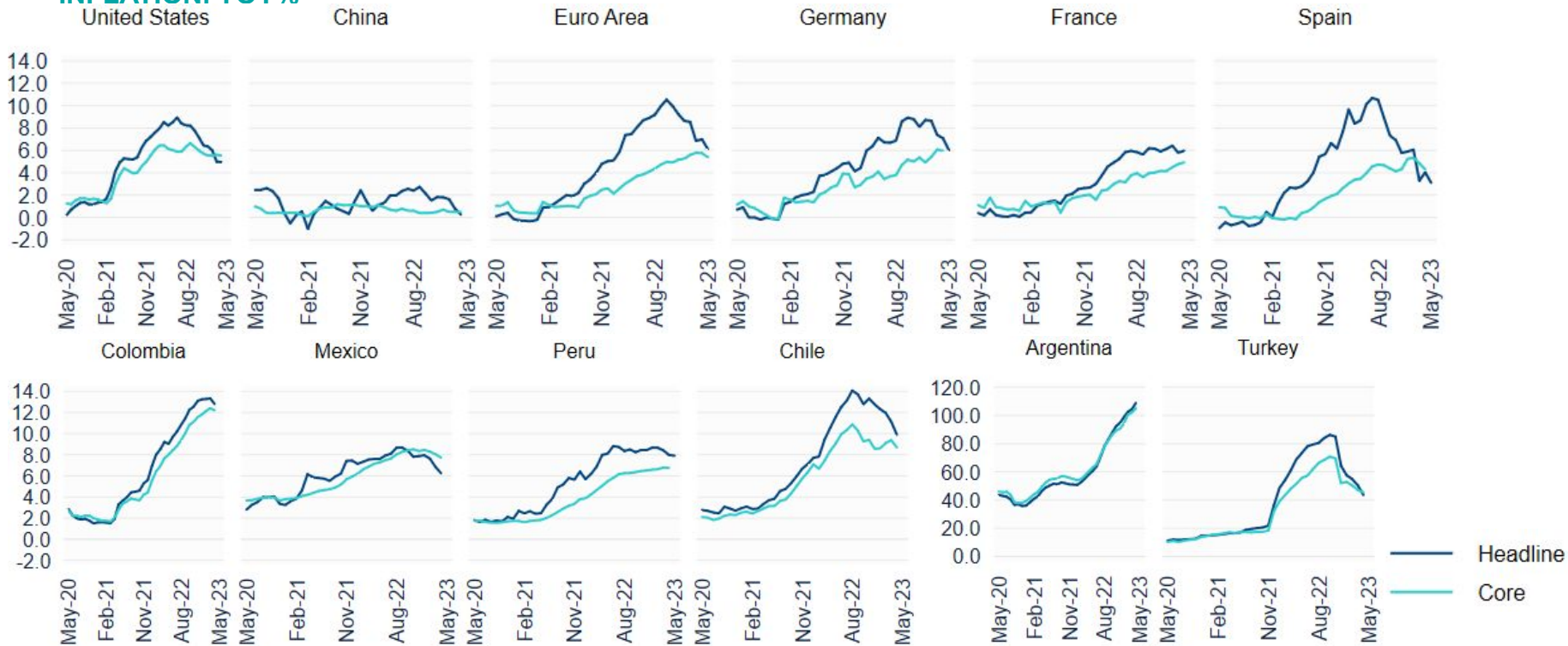
US	4.4	4.2	3.9	4.0	4.6	5.0	5.5	6.1	6.4	6.5	6.1	6.0	5.9	5.9	6.3	6.6	6.3	6.0	5.7	5.5	5.5	5.6	5.5	.
China	0.9	1.2	1.1	1.1	1.1	1.0	1.0	0.9	1.1	0.9	0.7	0.6	0.8	0.6	0.6	0.4	0.4	0.4	0.5	0.7	0.5	0.5	0.5	.
Eurozone	1.0	0.9	1.7	1.9	2.1	2.5	2.6	2.1	2.6	3.0	3.4	3.7	3.8	4.1	4.4	4.7	5.0	4.9	5.2	5.2	5.6	5.8	5.7	5.3
Germany	1.4	2.0	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	.
France	1.4	0.4	1.4	1.7	1.9	2.0	2.0	1.6	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	.
Spain	-0.2	0.4	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	4.7	4.4	4.1	4.3	5.2	5.4	4.8	4.3	.
Turkey	17.2	17.3	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	.
Argentina	54.4	55.0	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	.
Colombia	3.4	3.6	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	.
Mexico	4.6	4.7	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	.
Peru	2.0	2.3	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	.



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 inched down in most BBVA footprint countries. Core inflation started to edge down or level off (ex-Arg) but persist at high levels

INFLATION. YOY%



Source: BBVA Research, Haver Analytics.

Sequentially, gains in headline inflation have normalized to benign levels for the moment, although, the pass-through to core prices remains weak

INFLATION, MOM% (SA)

Headline Inflation

	2021							2022							2023									
	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M
US	0.8	0.4	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	.
China	0.0	0.0	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	.
Eurozone	0.2	0.5	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
Germany	0.4	0.5	0.3	0.2	0.5	0.5	0.2	0.7	0.7	1.8	0.5	0.8	0.0	0.5	0.5	1.8	0.8	0.4	-0.4	1.2	0.6	0.6	0.2	-0.2
Spain	0.1	0.2	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	-0.4
Turkey	1.9	2.7	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	.
Argentina	3.4	3.1	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	.
Colombia	0.2	0.6	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	.
Mexico	0.5	0.4	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	.
Peru	0.6	0.7	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

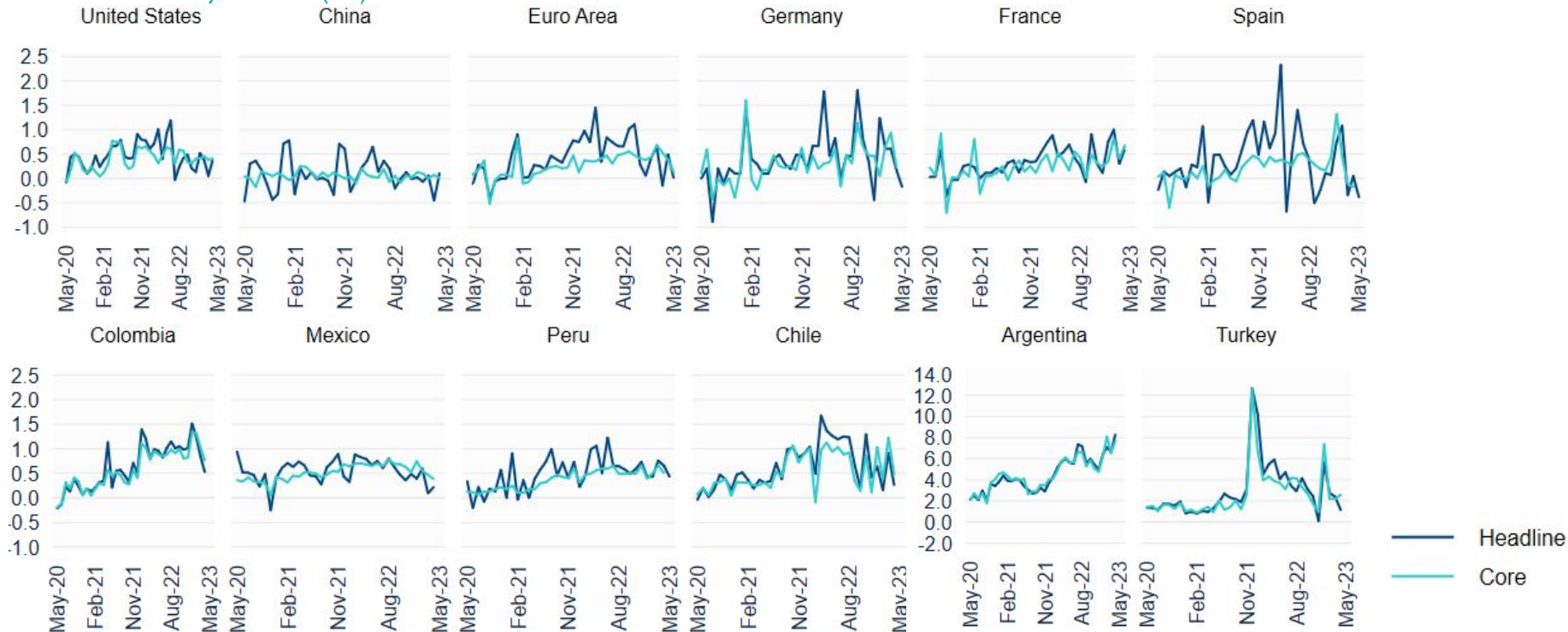
Core Inflation

US	0.7	0.3	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	.
China	0.0	0.1	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	.
Eurozone	0.2	0.2	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
Germany	0.5	0.2	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	.
Spain	0.0	-0.1	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	.
Turkey	2.0	1.1	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	.
Argentina	4.1	2.6	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	.
Colombia	0.5	0.5	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	.
Mexico	0.5	0.5	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	.
Peru	0.3	0.3	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	.

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:

Sequential inflation trends suggests underlying inflation began softening in most country in April, but still remain at high levels

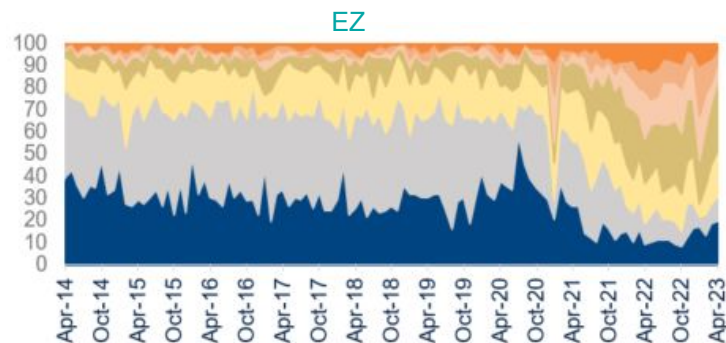
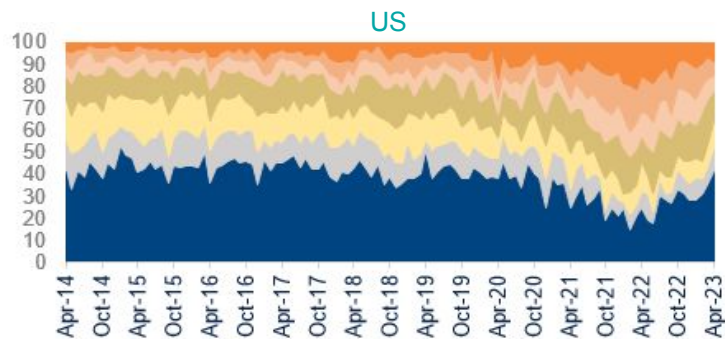
INFLATION, MOM% (SA)



Source: BBVA Research, Haver Analytics.

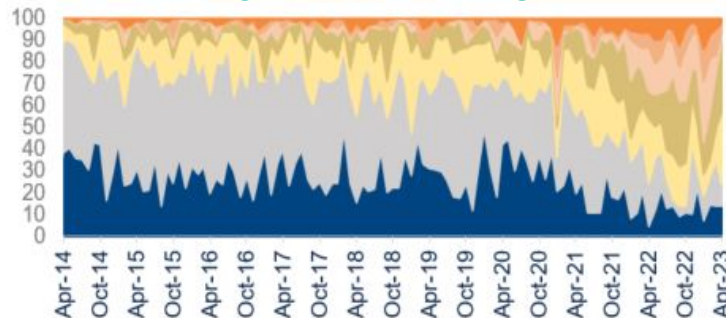
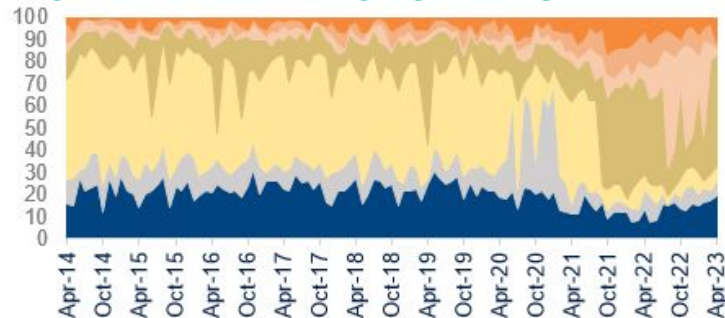
Synchronicity measures show a lower percentage of items with high annual inflation in the US (around 30%), in contrast to the Euro Area (still at 60%)

PERCENTAGE OF ITEMS WITHIN DIFFERENT INFLATIONARY BRACKETS



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

WEIGHTED* PERCENTAGE OF ITEMS WITHIN DIFFERENT INFLATIONARY BRACKETS



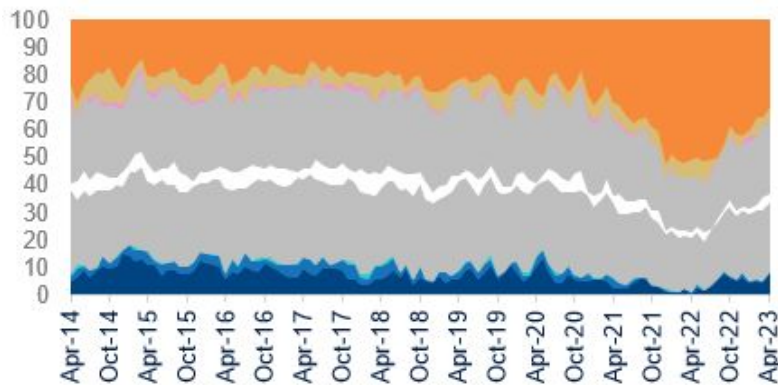
- (20 and more)
- (12 to 20)
- (8 to 12)
- (4 to 8)
- (2 to 4)
- (0 to 2)
- (Less than 0)

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

Source: BBVA Research based on Haver Analytics

Prices with frequent upward adjustments maintain the moderating trend in the US but show resistance in the Euro Area

PERCENTAGE OF ITEMS WITH FREQUENT ADJUSTMENTS US



3 consecutive months rising

Medium upwards trend

Noise

Slight downward trend

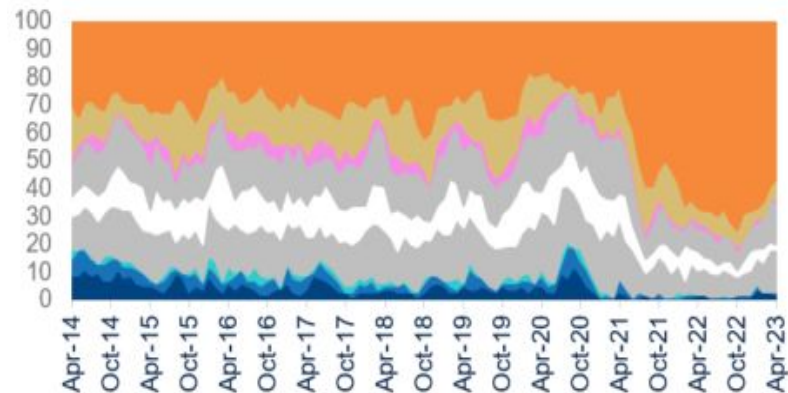
Slight upwards trend

No signal

Medium downward trend

3 consecutive months falling

EZ



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.

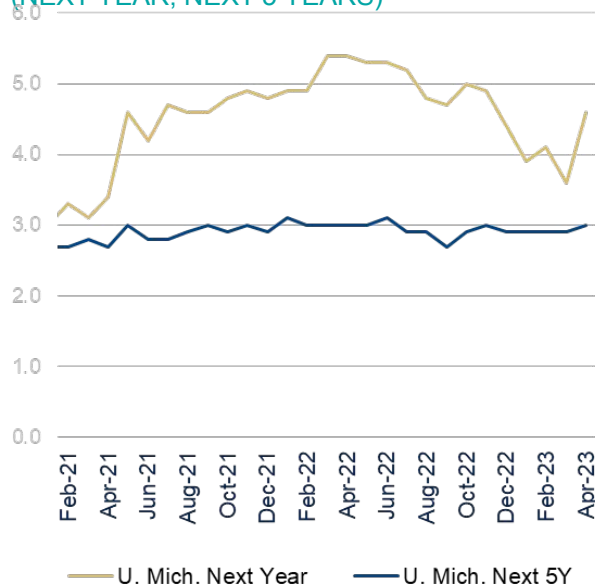
In all of the above, price changes of less than 0.05% annualized inflation are considered insignificant.

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

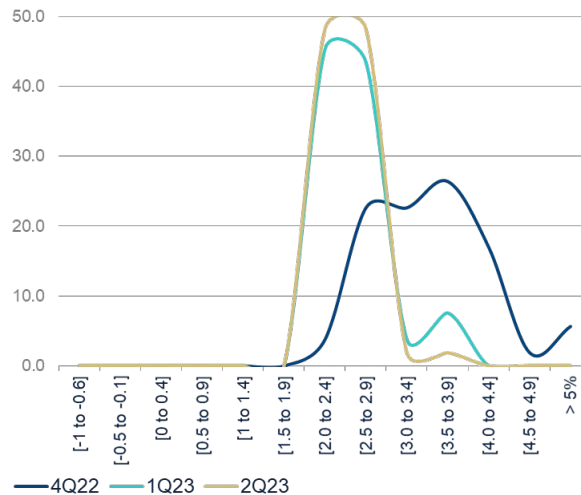
Source: BBVA Research, Haver Analytics.

US consumer long-term inflation expectations climb to 3%, above analysts' forecast range (2-2.9%); markets' long-term expectations held above 2.5%

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



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



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



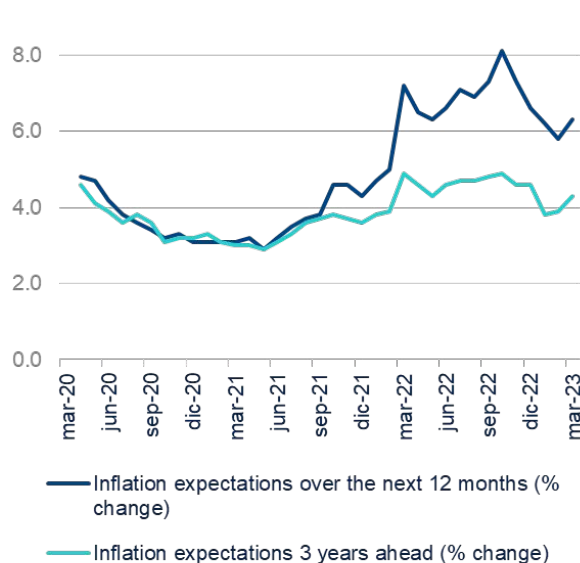
Source: BBVA Research, Haver Analytics.

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

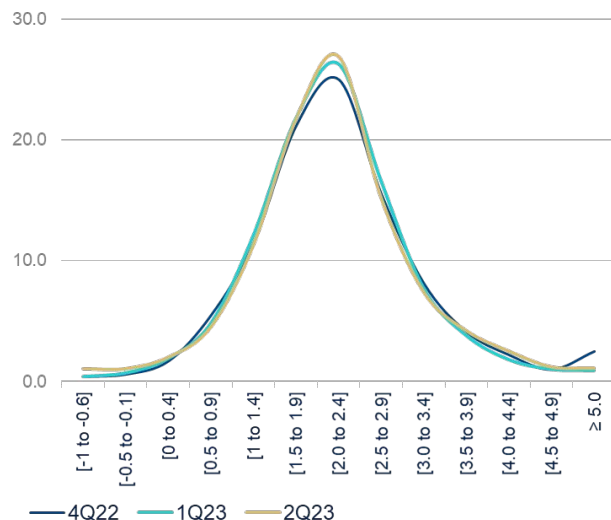
Source: Federal Reserve Bank of Philadelphia.

EZ consumer inflation expectations rose from already elevated levels; analysts' expectations remain steady (2.5%) slightly below that of the market

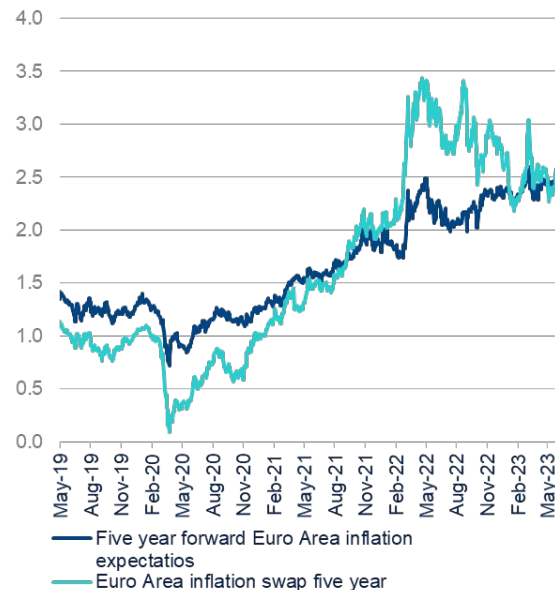
**EXPECTATIONS:
CONSUMERS SURVEY**
(NEXT YEAR, 3Y AHEAD)



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



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



Source: BBVA Research, ECB, consumer survey

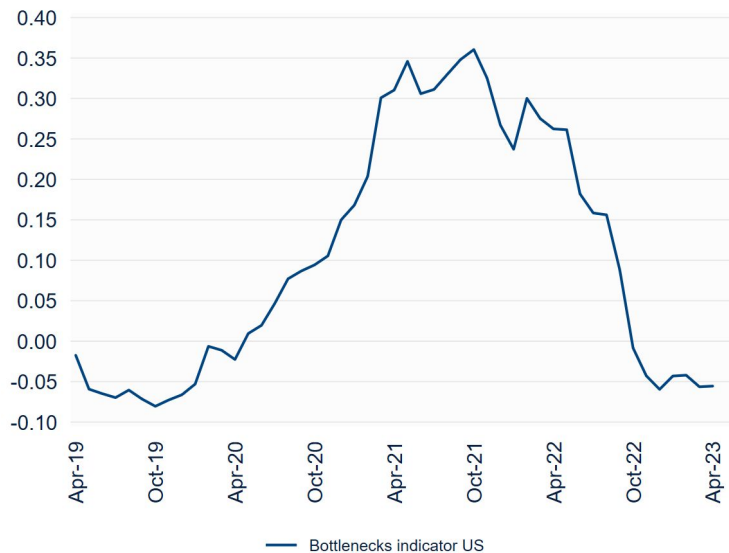
* / Long-Term CPI Inflation refers to 2027 expected headline inflation

Source: ECB

Our supply bottlenecks indicator indicates the normalization trend continued in the Euro Area and have reached pre-pandemic levels in the US

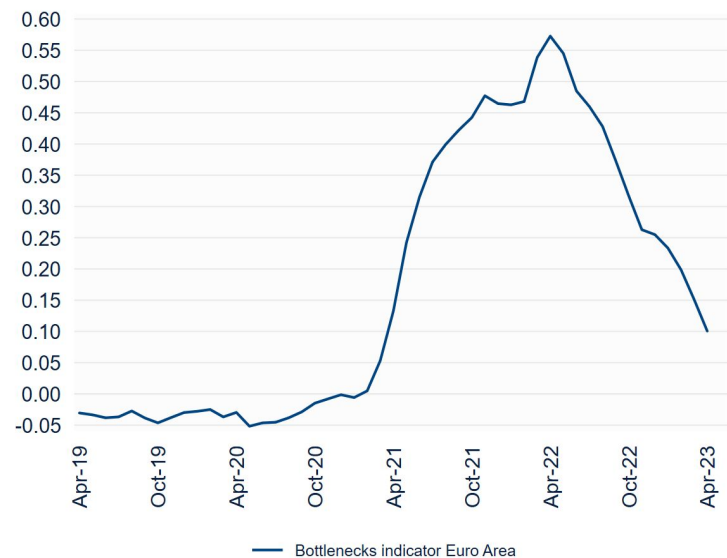
US SUPPLY BOTTLENECKS INDICATOR

(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); Harpex Shipping Index; Vessel Size in TEU - Rates in US\$.

Source: BBVA Research, Haver Analytics.

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