

Global | Inflation and Bottlenecks Chartbook

April 2023

Summary

- Driven mainly by lower energy prices, headline inflation extended its moderating trend in US and Euro Area in March. However, core inflation remained stubborn, especially in Europe.
- In the US, March headline inflation fell to 5% YoY, the lowest print in almost two years, although the core component ticked up. Housing services inflation stood out, staying elevated but extending its moderating trend, which we expect to continue in the coming months.
- In Europe, inflation eased, mainly due to lower energy prices, while core inflation surprised on the upside, against expectations of a fall, which implies an upward bias to our forecast. Overall the moderation in headline inflation has been a general trend across most geographies.
- Synchronicity and persistence indicators continue to show inflation cooling in the US, and early signs of easing in Europe in March, although still, a significant share of items depict high inflation and with frequent upward adjustment.
- Inflation expectations in the US and the Eurozone remain well anchored. In the US, analysts have adjusted down their long-term average inflation expectations. Market-based medium-term inflation expectations have also edged lower.
- Our supply bottlenecks indicators suggests that supply disruptions continued to ease in Europe during March, led by easing shortage of equipment. The US indicator remained steady at low levels, suggesting a slack in manufacturing activity in March.

Summary indicators

	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23		
Inflation	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	US	IPC Headline (%YoY, SA)
	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		IPC Core (%YoY, SA)
	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		IPC Headline (%MoM, SA)
	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		IPC Core (%MoM, SA)
	4.0	4.4	4.5	4.3	3.6	3.4	3.0	2.5	3.1	2.8	2.5	2.3	0.0		Inf exp (2Y inf. Swap)
	2.6	2.7	2.7	2.7	2.6	2.5	2.5	2.7	2.6	2.6	2.5	2.6	2.5		Inf exp (5Y5Y inf. Swap)
	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	EZ	IPC Headline (%YoY, SA)
	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		IPC Core (%YoY, SA)
	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		IPC Headline (%MoM, SA)
	0.3	0.4	0.5	0.1	0.5	0.5	0.7	0.5	0.5	0.4	0.6	0.5	0.4		IPC Core (%MoM, SA)
	3.4	4.5	4.8	4.6	4.1	4.6	4.9	3.5	3.9	3.5	3.4	2.3	0.0		Inf exp (2Y inf. Swap)
	2.2	2.4	2.2	2.2	2.1	2.0	2.2	2.3	2.4	2.4	2.3	2.5	2.4		Inf exp (5Y5Y inf. Swap)
Bottlenecks	53.8	53.5	55.1	54.9	48.6	50.4	47.3	48.2	46.8	45.1	42.5	47.0	44.3	US manuf.	ISM New Orders
	60.0	56.0	58.7	58.7	51.3	53.0	50.9	45.3	40.0	41.4	43.4	45.1	43.9		Backlog of Orders
	54.5	53.6	54.2	54.4	53.3	51.1	51.0	51.9	50.9	48.6	48.0	47.3	47.8		Production Index
	65.4	67.2	65.7	57.3	55.2	55.1	52.4	46.8	47.2	45.1	45.6	45.2	44.8		Suppliers' delivery times
	34.1	37.1	32.7	35.2	39.5	38.9	41.6	41.6	48.7	48.2	47.4	46.9	48.9		Customer Inventories
	19.7	18.2	7.00	13.2	4.2	-3.2	-3.9	-5.3	-11.4	-12	-8.4	-8.6	-8.6	EZ manuf.	Order books
	10.4	10.2	3.4	7.5	2.6	-0.9	1.0	0.4	-3.8	1.0	0.5	5.0	3.7		Production trend
	31.4	31.7	29.1	27.2	26.3	25.6	26.0	24.9	23.6	22.4	22.5	20.3	17.9	EZ const.	Equip shortage
	65.6	67.4	61.7	54.8	49.3	45.6	44.2	44.3	42.7	44.1	46.4	44.5	44.8	Taiwan	Suppliers' delivery times
	627	640	634	619	580	587	568	558	560	558	557	553	546	Input costs	CRB Spot Comdty. Price
	4407	4580	4407	4401	4467	4449	4163	1905	1405	1372	1229	1100	1059		Container freight

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

Source: BBVA Research and Haver Analytics

Inflation continued to moderate in March but is still far from returning to pre-covid levels in most countries; core inflation shows much more stickiness

INFLATION, YOY%

Headline Inflation

	2021							2022														
	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	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
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
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
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
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
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
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
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
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
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
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

Core Inflation

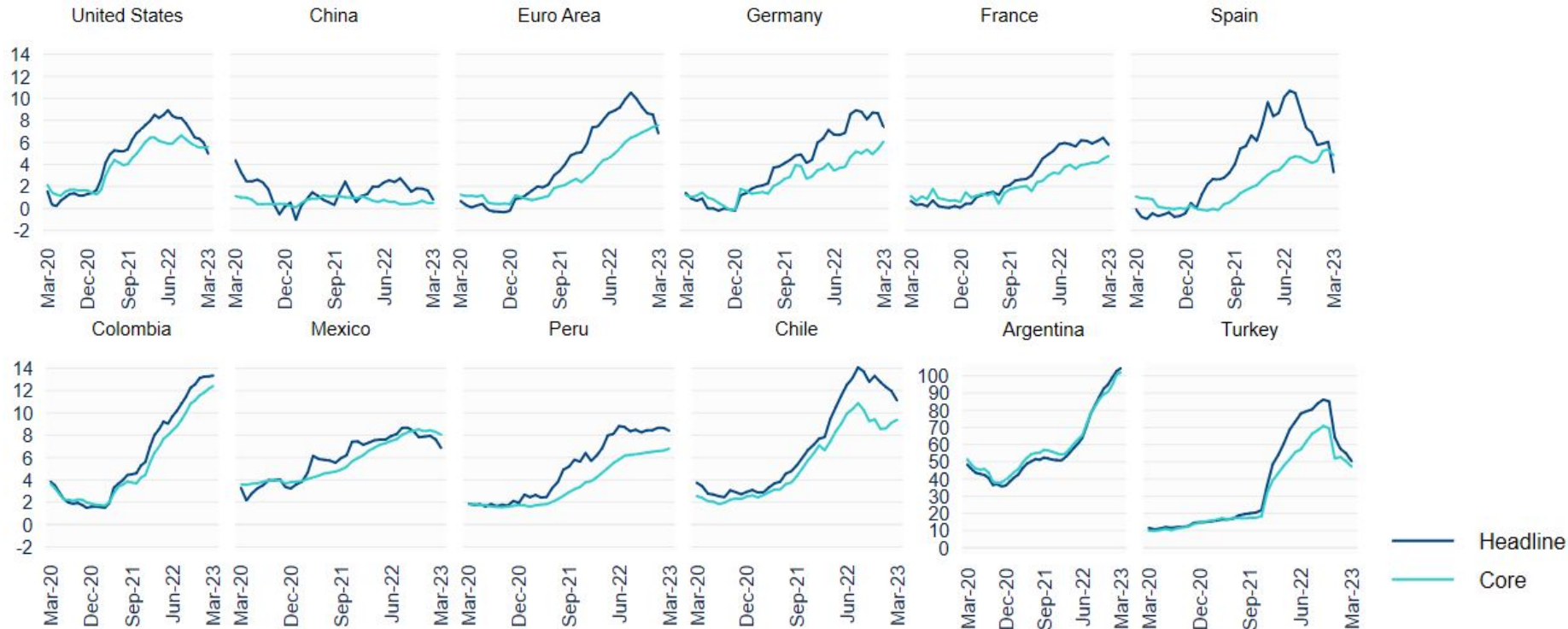
US	4.4	4.2	3.9	4.0	4.6	5.0	5.5	6.1	6.4	6.5	6.1	6.0	5.9	5.9	6.3	6.6	6.3	6.0	5.7	5.5	5.5	5.6
China	0.9	1.2	1.1	1.1	1.1	1.0	1.0	0.9	1.1	0.9	0.7	0.6	0.8	0.6	0.6	0.4	0.4	0.4	0.5	0.7	0.5	0.5
Eurozone	0.9	0.7	1.6	1.9	2.1	2.6	2.6	2.2	2.6	3.0	3.5	3.8	3.7	4.0	4.3	4.8	5.0	5.0	5.2	5.3	5.6	5.7
Germany	1.8	3.0	3.0	3.4	3.4	3.4	3.8	3.0	3.1	3.3	4.1	4.6	4.3	4.8	5.2	6.1	6.5	6.9	7.0	7.3	7.6	7.8
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
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
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
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
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
Peru	2.0	2.3	2.6	2.9	3.2	3.4	3.8	3.9	4.2	4.6	5.1	5.5	5.8	6.2	6.3	6.3	6.4	6.5	6.5	6.6	6.6	6.8

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.

Headline inflation continues to moderate in BBVA footprint countries (ex-Arg and slightly in Per), but core inflation pressures persist

INFLATION, YOY%



Source: BBVA Research, Haver Analytics.

Sequentially, while headline inflation moderated, the let up in food, services, and non-energy industrial goods inflation has been limited

INFLATION, MOM% (SA)

Headline Inflation

Headline Inflation	2021							2022														
	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	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
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
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
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
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
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
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
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
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
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

Core Inflation

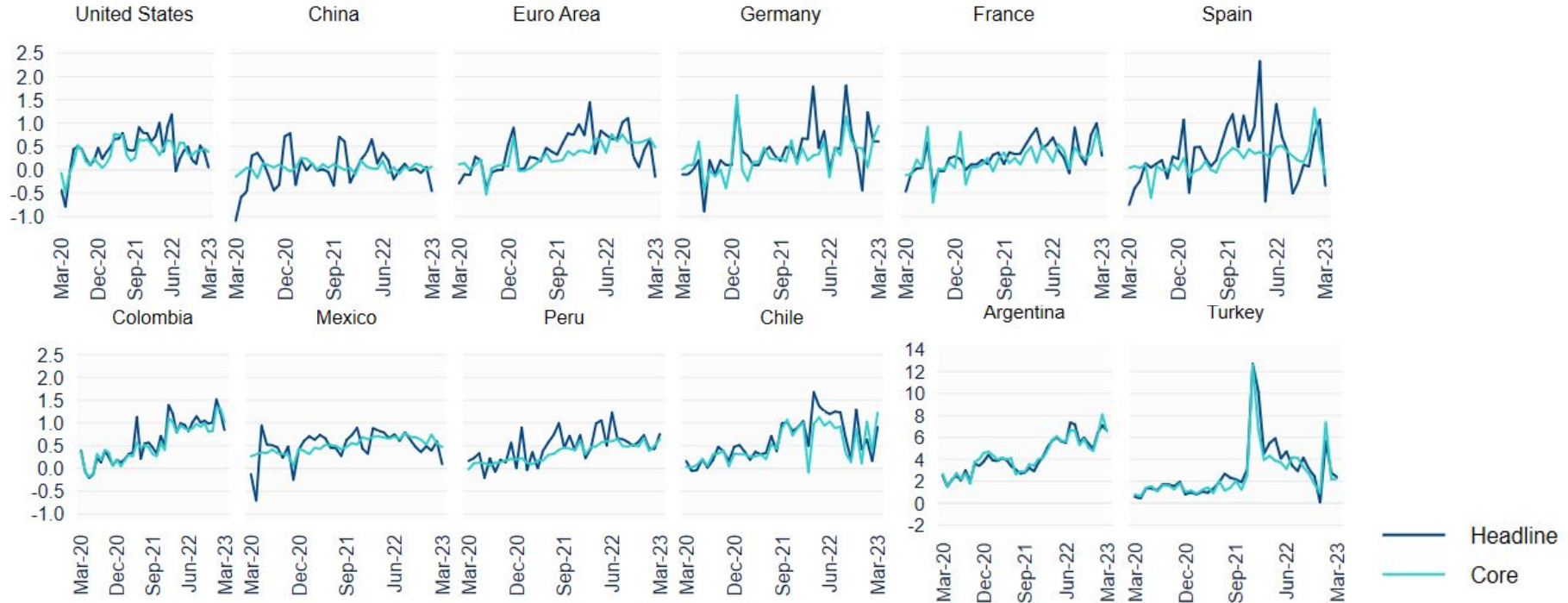
US	0.7	0.3	0.2	0.3	0.7	0.6	0.7	0.6	0.5	0.3	0.5	0.6	0.6	0.3	0.6	0.6	0.3	0.3	0.4	0.4	0.5	0.4			
China	0.0	0.1	0.0	0.1	0.1	0.0	0.0	-0.1	0.2	0.1	0.0	0.0	0.2	-0.1	0.0	-0.1	0.1	0.0	0.1	0.1	0.0	0.1			
Eurozone	0.1	0.2	0.3	0.2	0.3	0.6	0.1	0.5	0.2	0.3	0.4	0.5	0.1	0.5	0.5	0.7	0.5	0.5	0.4	0.6	0.5	0.4			
Germany	0.3	0.4	0.2	0.3	0.2	0.2	0.4	0.3	0.4	0.5	0.9	0.6	0.0	0.8	0.6	1.2	0.5	0.5	0.5	0.5	0.7	0.6			
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			
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			
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			
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			
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			
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			

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 for the EA and Spain: excludes unprocessed food and energy, France excludes government tariffs and volatile prices, Germany excludes energy prices.

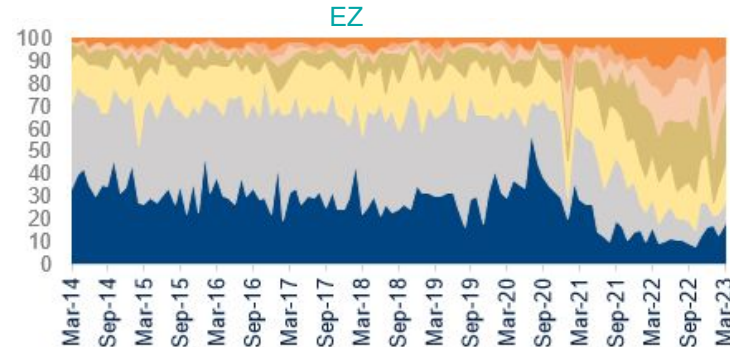
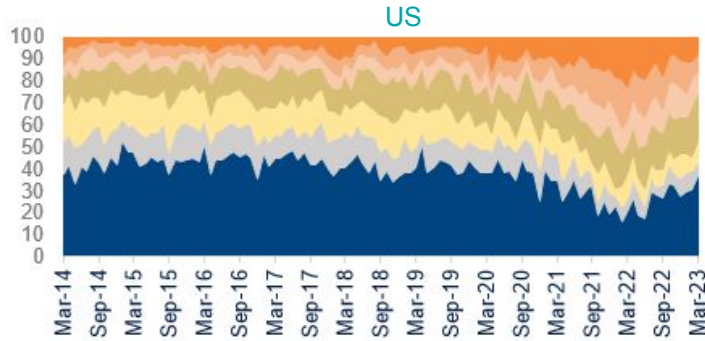
Sequential inflation trends highlight sticky underlying inflation; most economies saw persistent sequential core inflation pressures in March

INFLATION, MOM% (SA)



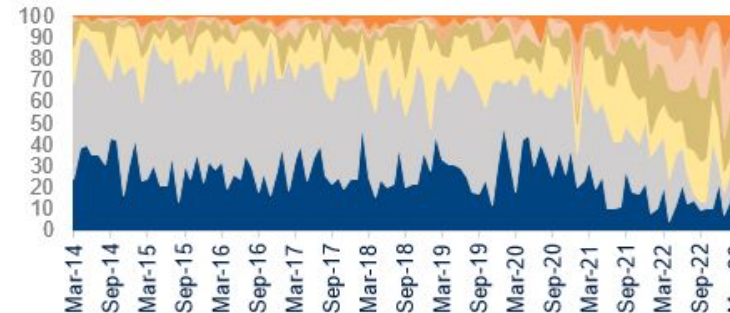
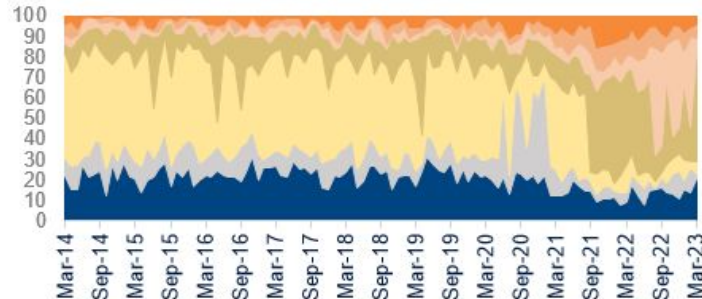
Synchronicity measures show a lower percentage of items with high annual inflation in the US (around 40%), in contrast to the EZ (still around 60%)

PERCENTAGE OF ITEMS WITHIN DIFFERENT INFLATIONARY BRACKETS



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

WEIGHTED* PERCENTAGE OF ITEMS WITHIN DIFFERENT INFLATIONARY BRACKETS



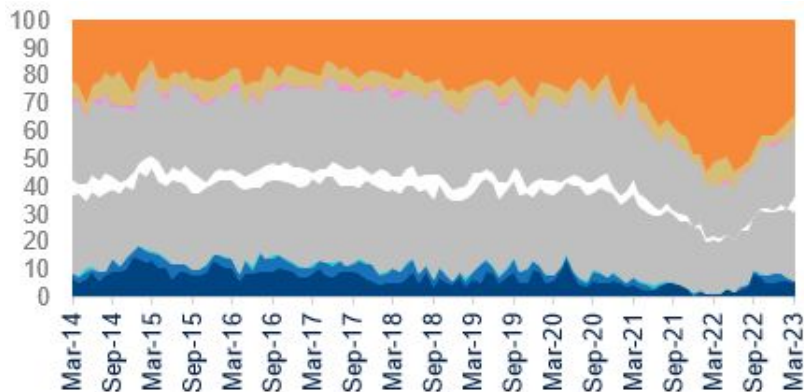
- (20 and more)
- (12 to 20)
- (8 to 12)
- (4 to 8)
- (2 to 4)
- (0 to 2)
- (Less than 0)

*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 EZ

US



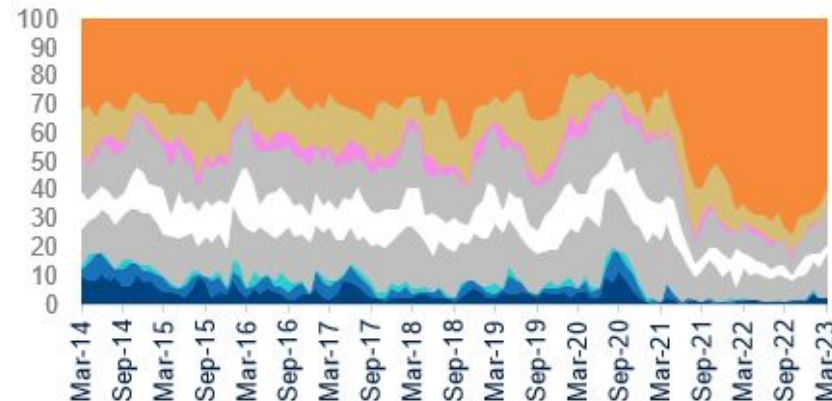
3 consecutive months rising

Medium upwards trend

Noise

Slight downward trend

EZ



Slight upwards trend

No signal

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.

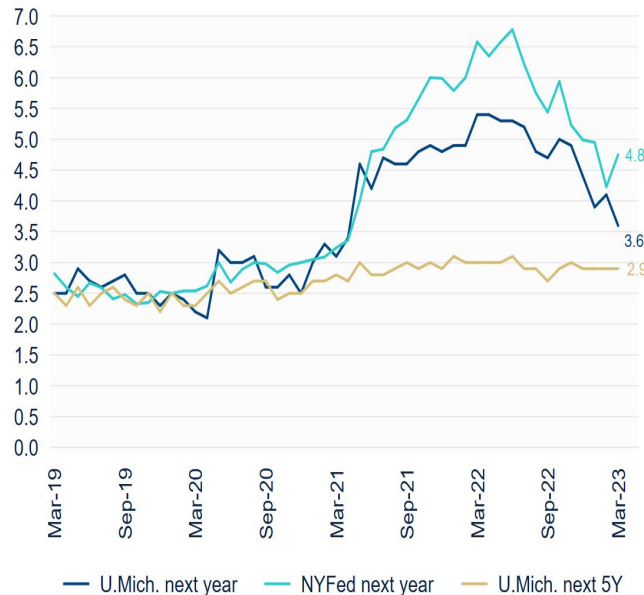
In all of the above, price changes of less than 0.05% annualized inflation are considered insignificant.

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

Source: BBVA Research, Haver Analytics.

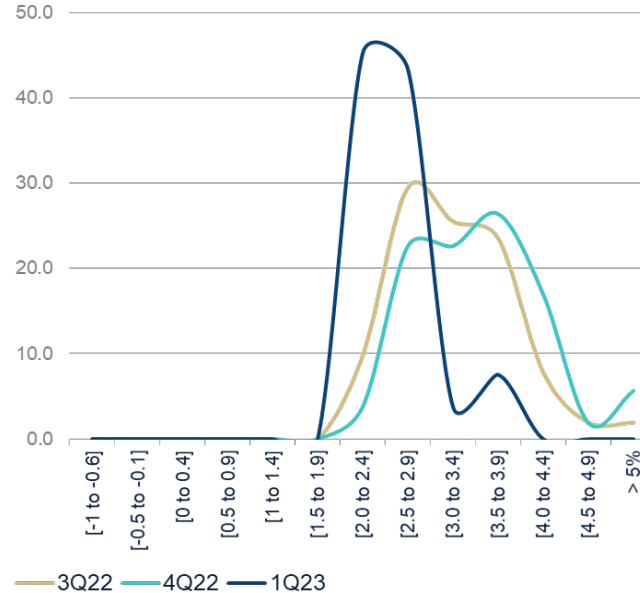
US 5Y consumer inflation expectations steady below 3%, while analysts' lowered long-term expectations; markets' long-term expectations held steady

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



Source: BBVA Research, Haver Analytics.

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



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

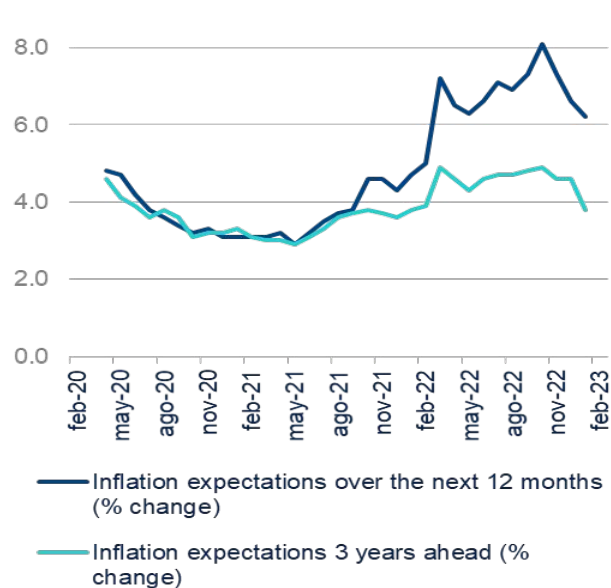
Source: Federal Reserve Bank of Philadelphia.

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

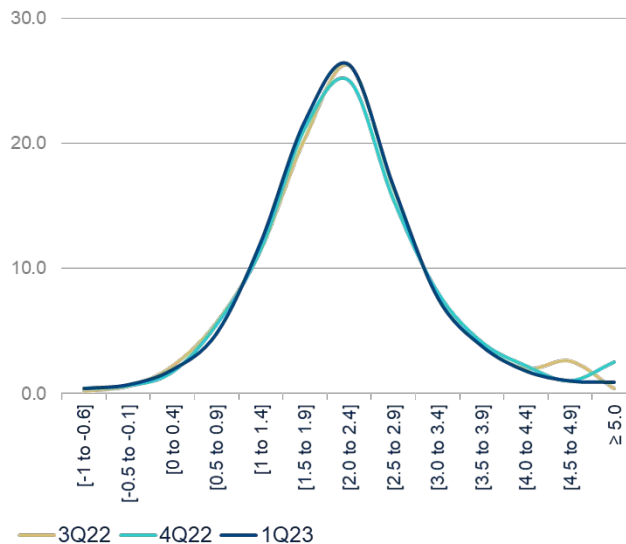


EZ short-term consumer expectations moderated, while long-term analysts' remain around 2.5% and slightly below market's expectations

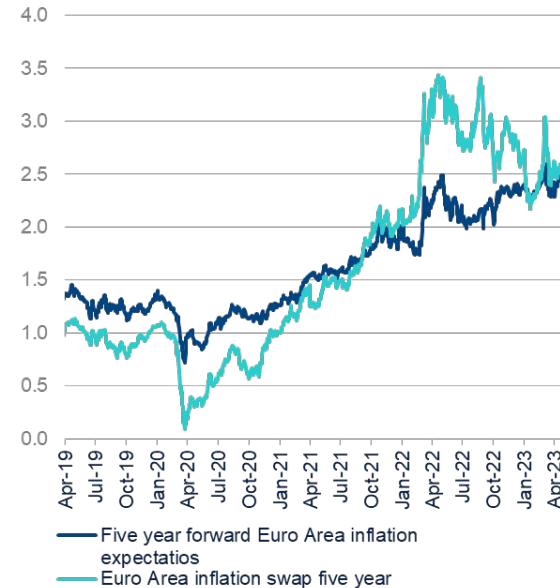
EXPECTATIONS: CONSUMERS SURVEY (NEXT YEAR, 3Y AHEAD)



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



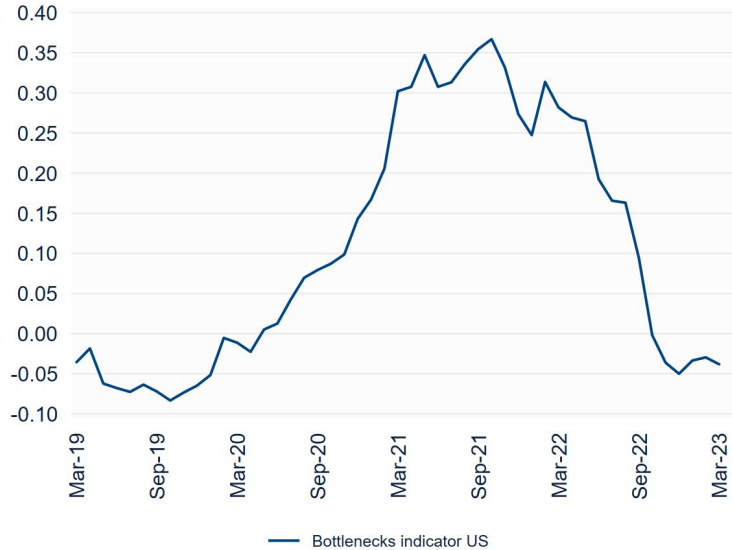
EXPECTATIONS MARKET (5Y5Y FORWARD, 5Y SWAP)



Our supply bottlenecks indicator suggests supply disruption eased further in the Euro Area, while remaining steady at low levels in the US

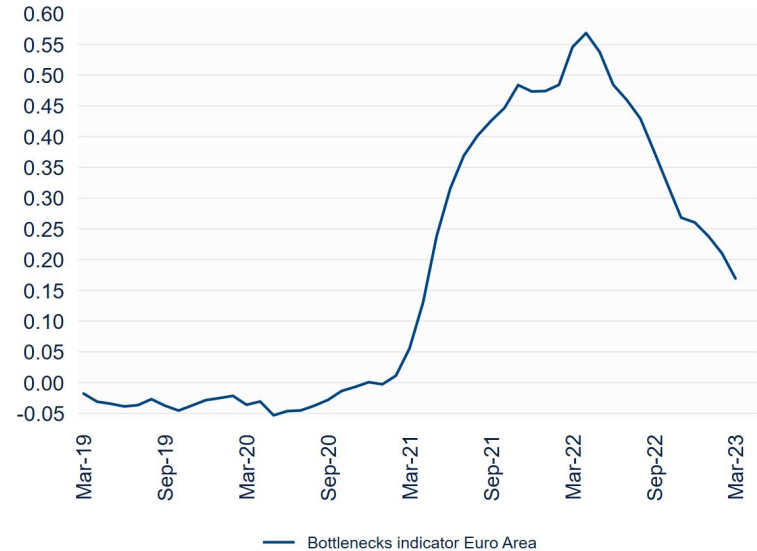
US SUPPLY BOTTLENECKS INDICATOR

(INDEX; LAST AVAILABLE DATA: MARCH 2023)



EZ: SUPPLY BOTTLENECKS INDICATOR

(INDEX; LAST AVAILABLE DATA: mARCH 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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