

Global | Inflation and Bottlenecks Chartbook

January 2023

Summary

- Inflationary pressures ease as December inflation continued to fall in the US and surprised to the downside in the Eurozone (although core inflation is still trending up). Within the EZ, inflation in Spain was the lowest (5.7%), helped by lower energy prices.
- Synchronicity and persistence indicators continue to show moderation in US but less so in Europe, where the signal of high price moderation has remained at a relatively constant level in recent months.
- Both in the US and the EZ, long-term consumer inflation expectations remain between 3% and 4% and 4Q22 analyst surveys point to a slight rebound in the US and no change in Europe.
- Our supply bottlenecks indicator suggests that supply pressures eased further in the US as demand waned. In the EZ supply disruptions declined marginally as production improved, slightly narrowing the production-orders gap.
- China's supplier deliveries times jumped in December, as the zero-covid policy was lifted. Although this factor introduces some uncertainty on global supply disruptions in coming months, the current rebound in China's supplier deliveries times is lower than in both February 20 and April 22 peaks, suggesting a lower impact than in previous episodes.
- Ports congestion continued declining but in China, while container freights moderated on lower energy prices and softer demand.

Summary indicators

	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22		
Inflation	7.1	7.5	7.9	8.6	8.2	8.5	9.0	8.5	8.2	8.2	7.8	7.1	6.4	US	IPC Headline (%YoY)
	5.5	6.0	6.4	6.4	6.1	6.0	5.9	5.9	6.3	6.7	6.3	6.0	5.7		IPC Core (%YoY)
	0.6	0.6	0.8	1.2	0.3	1.0	1.3	0.0	0.1	0.4	0.4	0.1	-0.1		IPC Headline (%MoM)
	0.6	0.6	0.5	0.3	0.6	0.6	0.7	0.3	0.6	0.6	0.3	0.2	0.3		IPC Core (%MoM)
	3.4	3.4	3.5	4.5	4.4	4.2	4.2	3.6	3.5	3.0	2.6	3.1	2.6		Inf exp (2Y inf. Swap)
	2.5	2.5	2.4	2.6	2.7	2.7	2.6	2.4	2.6	2.6	2.4	2.6	2.5		Inf exp (5Y5Y inf. Swap)
	4.9	5.1	5.8	7.4	7.4	8.1	8.6	8.9	9.2	10.0	10.6	10.0	9.2	EZ	IPC Headline S.A (%YoY)
	2.7	2.4	2.8	3.2	3.9	4.4	4.6	5.0	5.4	6.0	6.4	6.6	6.9		IPC Core S.A (%YoY)
	0.2	1.3	0.6	1.7	0.2	0.9	0.7	0.6	0.7	1.0	1.3	0.2	-0.6		IPC Headline S.A (%MoM)
	0.3	0.5	0.4	0.3	0.7	0.6	0.4	0.8	0.6	0.7	0.6	0.6	0.6		IPC Core S.A (%MoM)
Bottlenecks	61	57.9	61.7	53.8	53.5	55.1	55.1	48	51.3	47.1	49.2	47.2	45.2	US manuf.	ISM New Orders
	62.8	56.4	65.0	60.0	56.0	58.7	58.7	51.3	53.0	50.9	45.3	40.0	41.4		Backlog of Orders
	59.4	57.8	58.5	54.5	53.6	54.2	54.9	53.5	50.4	50.6	52.3	51.5	48.5		Production Index
	64.9	64.6	66.1	65.4	67.2	65.7	57.3	55.2	55.1	52.4	46.8	47.2	45.1		Supplier Deliveries
	31.7	33.0	31.8	34.1	37.1	32.7	35.2	39.5	38.9	41.6	41.6	48.7	48.2	EZ manuf.	Customer Inventories
	19.3	21.9	22.4	19.7	18.2	7.60	13.1	4.6	-3.4	-4.2	-5.4	-11.5	-12.6		Order books
	13.7	13.9	12.8	10.4	10.3	3.7	7.4	2.7	-1.0	0.6	-0.2	-4.5	0.0		Production trend
	65.0	65.6	61.7	65.6	67.4	61.7	54.8	49.3	45.6	44.2	44.3	42.7	44.1	Taiwan	Supplier Deliveries
	580	583	598	627	640	634	619	580	587	568	558	560	558	Input costs	CRB Spot Comdty. Price
	3745	3805	4109	4407	4580	4407	4401	4467	4449	4163	1905	1905	1905		Container freight

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

Source: BBVA Research and Haver Analytics

Inflationary pressures eased in the US and surprised to the downside in the EZ's headline being energy the main driver. EZ's core inflation still trending up

INFLATION, YOY%

Headline Inflation (YoY%)

	2021											2022										
	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
US	2.7	4.2	4.9	5.3	5.3	5.2	5.4	6.2	6.8	7.1	7.5	7.9	8.6	8.2	8.5	9.0	8.5	8.2	8.2	7.8	7.1	6.4
China	0.3	0.9	1.5	1.2	0.9	0.6	0.3	1.5	2.4	1.4	0.6	1.0	1.3	2.0	2.0	2.4	2.6	2.4	2.7	2.1	1.5	1.8
Eurozone	1.3	1.6	2.0	1.9	2.2	3.0	3.4	4.1	4.9	4.9	5.1	5.8	7.4	7.4	8.1	8.6	8.9	9.2	10.0	10.6	10.0	9.2
Germany	1.8	2.1	2.4	2.4	3.6	3.9	4.2	4.5	5.3	5.3	5.0	5.1	7.2	7.3	8.0	7.4	7.6	7.9	9.9	10.4	10.1	8.5
France	1.1	1.3	1.4	1.5	1.3	2.0	2.1	2.6	2.7	2.8	2.9	3.7	4.5	4.9	5.3	5.9	6.0	5.9	5.6	6.2	6.1	5.8
Spain	1.3	2.2	2.7	2.7	2.9	3.3	4.0	5.4	5.6	6.5	6.1	7.6	9.8	8.3	8.7	10.2	10.8	10.6	8.9	7.3	6.8	5.7
Turkey	16.0	16.9	16.8	17.4	19.0	19.5	19.8	20.2	21.5	35.7	48.5	54.2	61.1	69.5	73.7	78.6	79.6	80.4	83.7	85.8	84.5	64.0
Argentina	42.5	46.2	48.8	50.2	51.8	51.4	52.7	52.2	51.3	51.0	50.6	52.3	55.0	58.0	60.6	63.9	71.0	78.4	83.2	88.1	92.6	94.8
Colombia	1.5	2.0	3.3	3.6	4.0	4.4	4.5	4.6	5.3	5.6	7.0	8.0	8.5	9.2	9.1	9.7	10.2	10.8	11.4	12.2	12.5	13.1
Mexico	4.7	6.1	5.9	5.8	5.7	5.6	6.0	6.2	7.4	7.4	7.1	7.3	7.5	7.7	7.6	8.0	8.1	8.7	8.7	8.4	7.8	7.8
Peru	2.6	2.4	2.5	3.3	3.8	4.9	5.2	5.8	5.6	6.4	5.7	6.2	6.8	8.0	8.1	8.8	8.7	8.4	8.5	8.3	8.4	8.4

Core Inflation (YoY%)

US	1.7	3.0	3.8	4.4	4.2	4.0	4.0	4.6	5.0	5.5	6.0	6.4	6.4	6.1	6.0	5.9	5.9	6.3	6.7	6.3	6.0	5.7
China	0.5	0.8	0.9	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
Eurozone	0.9	0.7	0.9	0.9	0.7	1.6	1.9	2.1	2.6	2.6	2.2	2.7	3.0	3.5	3.8	3.7	4.0	4.3	4.8	5.0	5.0	5.2
Germany	1.5	1.4	1.7	1.8	2.9	2.9	3.1	3.1	3.5	3.9	3.2	3.1	3.6	4.2	4.6	3.9	4.3	4.7	6.0	6.5	6.6	6.7
Spain	-0.1	-0.2	-0.1	-0.1	0.5	0.7	1.0	1.4	1.6	1.8	2.1	2.6	3.0	3.4	3.4	3.9	4.7	4.9	4.8	4.4	4.0	4.3
Turkey	16.2	17.4	17.0	17.0	17.5	17.2	17.6	17.6	18.3	31.3	39.0	43.5	48.0	51.9	55.9	57.2	61.9	66.4	68.4	70.9	69.3	51.5
Argentina	45.5	49.5	52.3	54.3	55.3	55.5	57.3	56.9	55.9	54.9	53.9	54.4	57.2	60.3	63.1	65.4	72.2	78.3	82.5	86.6	89.4	90.6
Colombia	1.7	2.0	2.8	3.4	3.6	3.9	3.8	3.7	4.1	4.4	5.6	6.4	6.9	7.7	8.0	8.4	8.8	9.4	10.0	10.8	11.1	11.6
Mexico	4.1	4.2	4.4	4.6	4.7	4.8	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
Peru	1.7	1.8	1.8	2.0	2.3	2.6	2.9	3.2	3.4	3.8	3.9	4.2	4.6	5.0	5.5	5.8	6.2	6.3	6.3	6.4	6.5	6.5

Period considered: 2015-2019

StDev below:

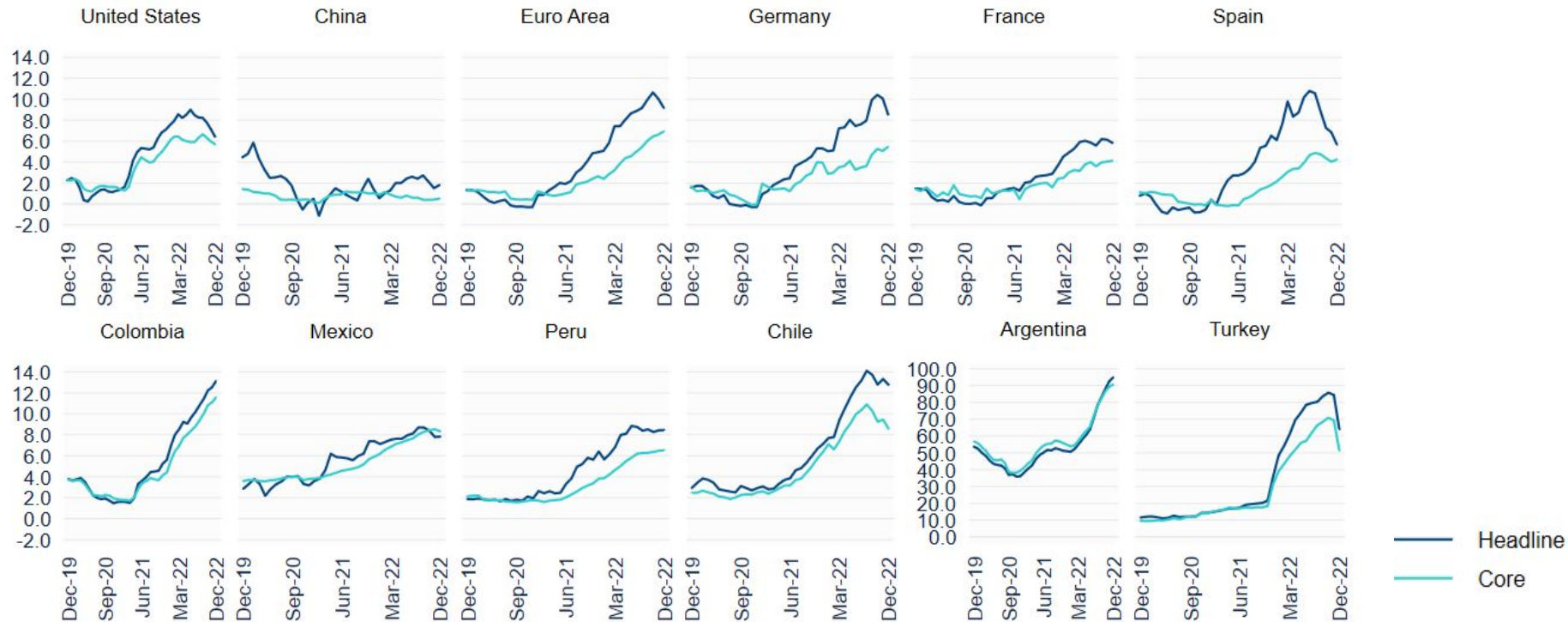
+ than 3 2 to 3 1 to 2 -1 to +1 1 to 2 2 to 3 + than 3

StDev above:

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 inflationary pressures have tended to ease (except in Col, Arg), while core inflation is more reluctant to decline

INFLATION, YOY%



Sequentially, inflation fell (-)0.1% in the US and surprised by a (-)0.6% in the EZ, highlighting the contraction in Germany related to fiscal measures

INFLATION, MOM% (SA)

Headline Inflation (MoM%)

	2021										2022											
	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
US	0.6	0.6	0.7	0.9	0.5	0.3	0.4	0.9	0.7	0.6	0.6	0.8	1.2	0.3	1.0	1.3	0.0	0.1	0.4	0.4	0.1	-0.1
China	0.4	0.1	0.1	0.0	0.1	-0.2	-0.4	0.7	0.6	-0.4	-0.2	0.1	0.6	0.9	0.1	0.5	0.2	-0.3	-0.1	0.1	-0.1	-0.1
Eurozone	0.2	0.2	0.3	0.2	0.4	0.4	0.3	0.7	0.7	0.2	1.3	0.6	1.7	0.2	0.9	0.7	0.6	0.7	1.0	1.3	0.2	-0.6
Germany	0.4	0.2	0.3	0.4	0.4	0.3	0.3	0.5	0.6	0.2	1.1	0.4	2.4	0.3	0.9	-0.2	0.5	0.6	2.1	1.0	0.3	-1.2
Spain	0.8	0.5	0.4	0.4	0.2	0.5	0.7	1.0	0.3	1.1	0.6	1.0	2.8	-0.8	0.7	1.7	0.7	0.3	-0.8	-0.5	-0.1	0.0
Turkey	1.5	1.7	1.4	2.1	2.3	1.7	1.5	1.4	2.9	12.3	10.9	5.2	6.0	7.0	3.9	5.0	2.9	2.1	3.3	2.5	2.2	-0.2
Argentina	4.0	4.2	3.9	3.6	3.5	3.0	2.8	3.2	2.6	3.4	3.7	5.0	5.8	6.2	5.6	5.7	8.0	7.5	5.6	5.9	5.0	4.6
Colombia	0.3	0.4	1.1	0.1	0.6	0.6	0.4	0.2	0.7	0.6	1.4	1.2	0.8	1.0	0.9	0.7	1.0	1.2	1.0	0.9	1.0	1.1
Mexico	0.8	0.8	0.7	0.5	0.4	0.3	0.6	0.7	0.7	0.3	0.5	0.8	1.0	1.0	0.6	0.8	0.6	0.9	0.6	0.4	0.2	0.3
Peru	0.4	0.1	0.3	0.7	0.7	1.0	0.4	0.7	0.4	0.7	0.0	0.5	1.0	1.2	0.5	1.4	0.7	0.6	0.6	0.4	0.6	0.7

Core Inflation (MoM%)

US	0.3	0.9	0.7	0.8	0.3	0.2	0.3	0.6	0.5	0.6	0.6	0.5	0.3	0.6	0.6	0.7	0.3	0.6	0.6	0.3	0.2	0.3
China	0.3	0.2	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	-0.2	0.2	0.1	0.0	0.0	0.2	-0.1	0.0	-0.1	0.1	0.0	0.2
Eurozone	-0.1	-0.1	0.2	0.1	0.2	0.3	0.3	0.3	0.5	0.1	0.6	0.1	0.2	0.4	0.5	0.1	0.5	0.5	0.7	0.5	0.5	0.3
Germany	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.2	0.5	0.5	0.3	0.1	0.6	0.7	0.7	-0.3	0.6	0.6	1.4	0.7	0.5	0.5
Spain	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.8	0.1	0.4	0.3	0.1	0.7	0.9	0.4	0.2	-0.1	-0.1	0.4
Turkey	1.4	1.8	1.1	1.8	1.5	1.6	1.9	1.0	2.1	11.3	7.3	4.4	4.5	4.4	3.8	2.7	4.6	4.4	3.1	2.5	1.2	-0.4
Argentina	4.0	4.7	4.1	3.9	3.6	3.4	2.8	3.2	3.0	3.7	3.5	4.6	5.8	6.8	5.8	5.5	7.8	7.0	5.2	5.5	4.5	4.4
Colombia	0.3	0.3	0.6	0.4	0.5	0.5	0.3	0.2	0.5	0.4	1.3	1.1	0.8	1.0	0.9	0.8	0.9	1.0	0.9	0.9	0.7	0.8
Mexico	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.9	0.7	0.7	0.6	0.4
Peru	0.1	0.2	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.2	0.5	0.5	0.5	0.6	0.7	0.7	0.5	0.5	0.5	0.5	0.7

Period considered: 2015-2019

StDev below:

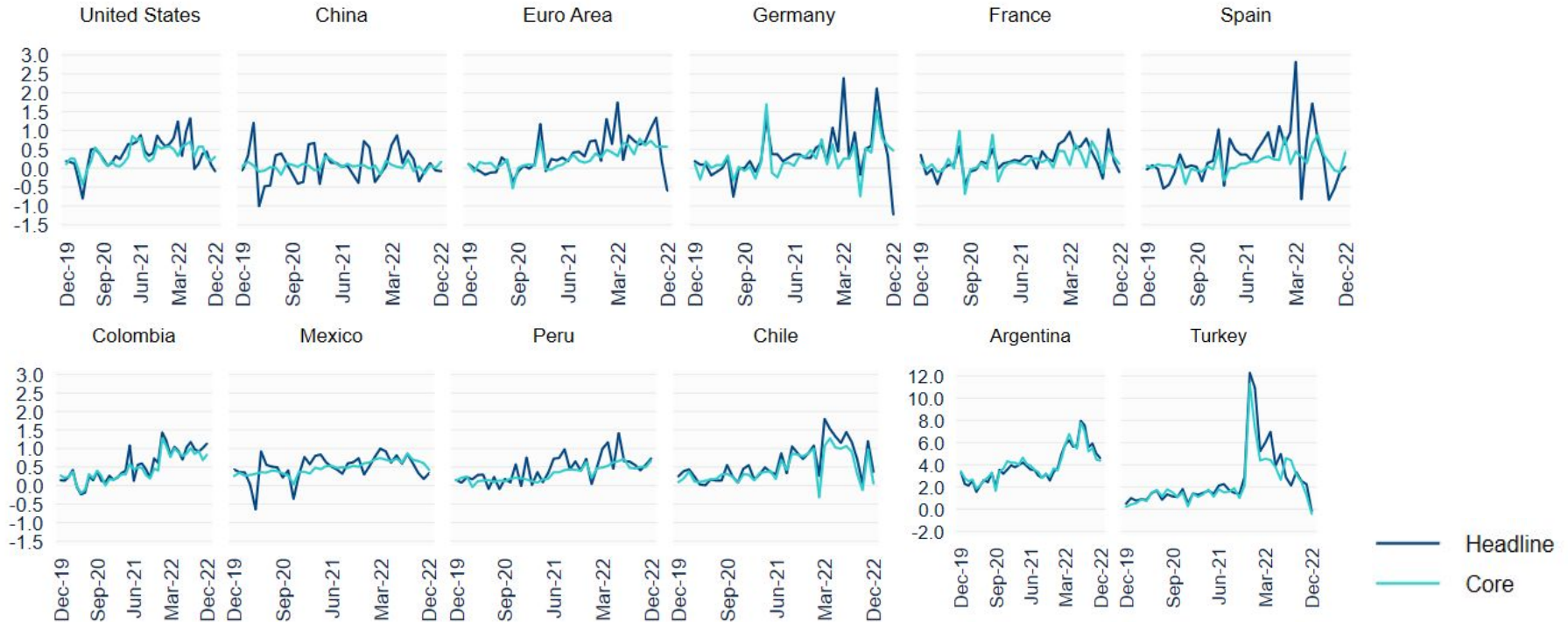
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StDev above:

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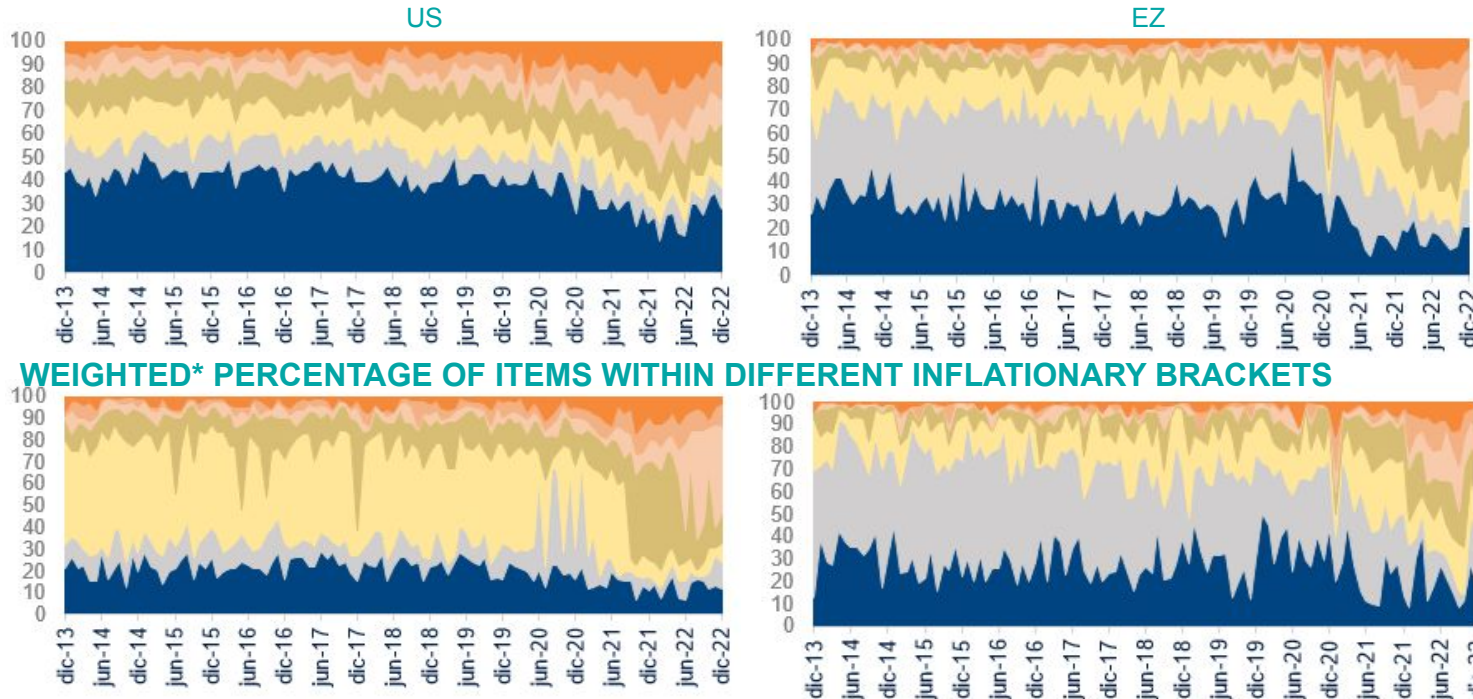
Sequential headline inflation contracted importantly in the EZ, and continued its moderation in the US; a more slow trend in consolidating in Latam

INFLATION. MOM% (SA)



The dispersion across items of high inflation has peaked in the US goods. Inflation above 4% in EZ fell from 70% of items in Oct to around 40% in Dec

PERCENTAGE OF ITEMS WITHIN DIFFERENT INFLATIONARY BRACKETS



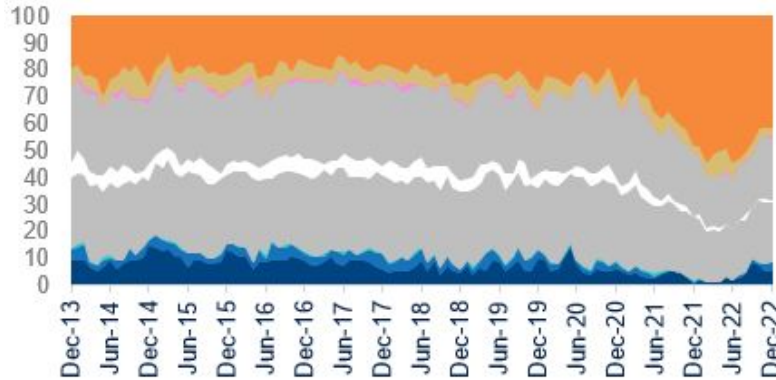
% of two-digit items with an annualized monthly inflation:

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

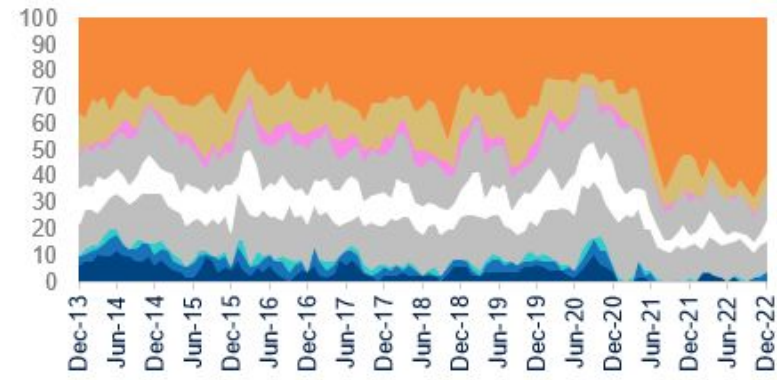
*weighted by each item's level of expenditure within the CPI basket.
Source: BBVA Research based on Haver Analytics

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

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.

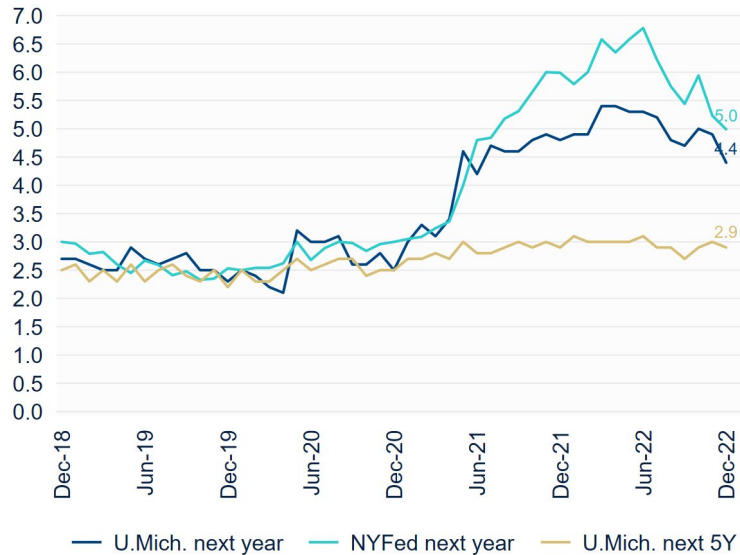
% of items* with prices signaling; * items within the CPI basket (2 digits) and where.

Source: BBVA Research, Haver Analytics.

In the US, short-term consumer inflation expectations show moderation while medium and long-term expectations by analysts edge higher

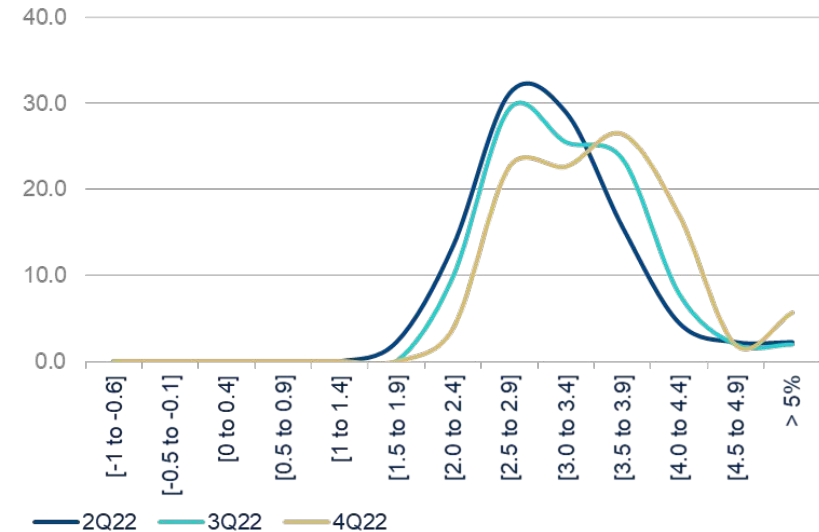
EXPECTATIONS: CONSUMERS SURVEY

(NEXT YEAR, NEXT 5 YEARS)



EXPECTATIONS: SURVEY OF PROFESSIONAL FORECASTERS

(LONG-TERM*, %)



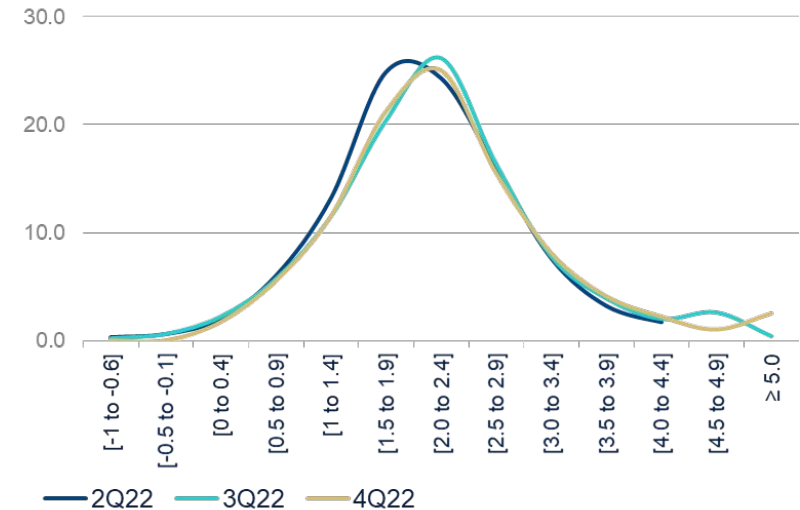
* / This refers to an average of 5 and 10-year ahead expected rate of inflation

Euro Zone short-term consumer inflation expectations moderated, while long-term analysts' expectations remain unchanged from the previous quarter

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



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

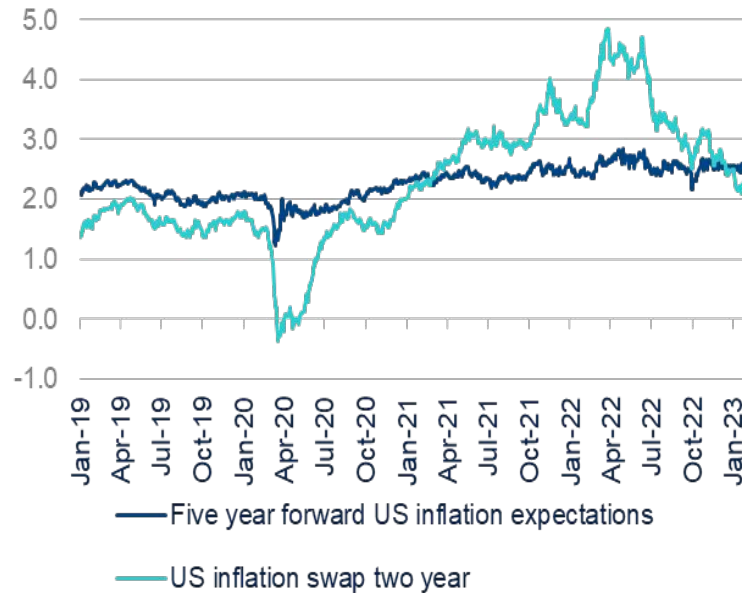


* / Long-Term CPI Inflation refers to 2027 expected headline inflation

Market-based medium term inflation expectations have edged lower, with long-term expectations still above 3% and 2% in the US and EZ

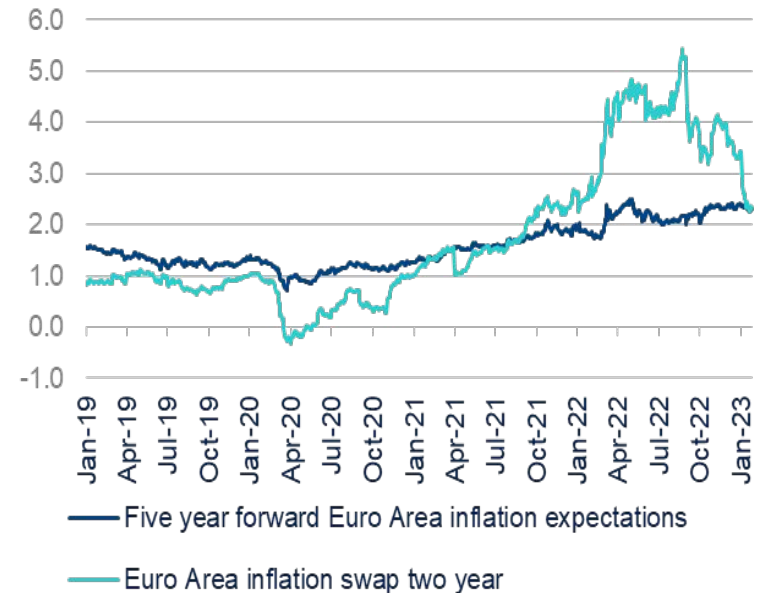
US: MARKET EXPECTATIONS

(5Y5Y FORWARD, 5Y SWAP)



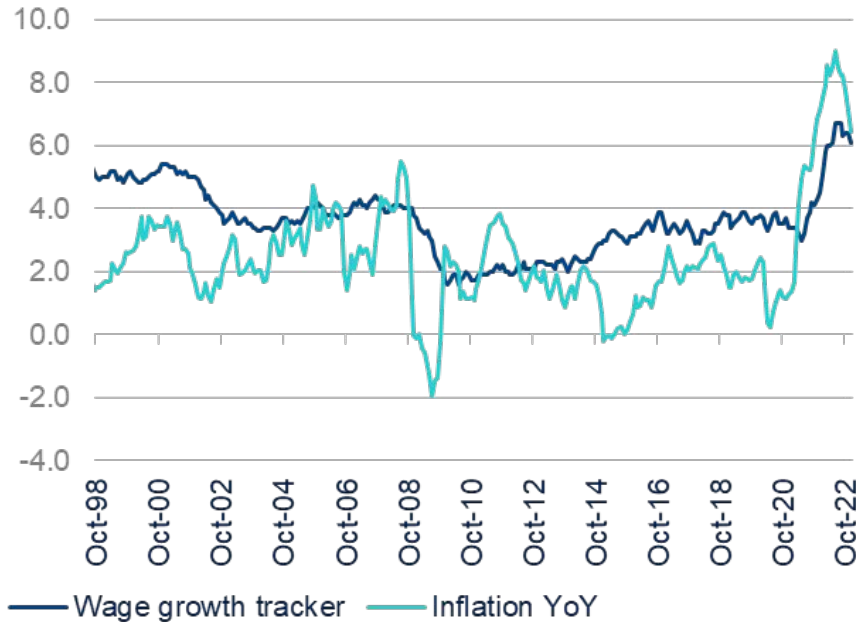
EZ: MARKET EXPECTATIONS

(5Y5Y FORWARD, 5Y SWAP)

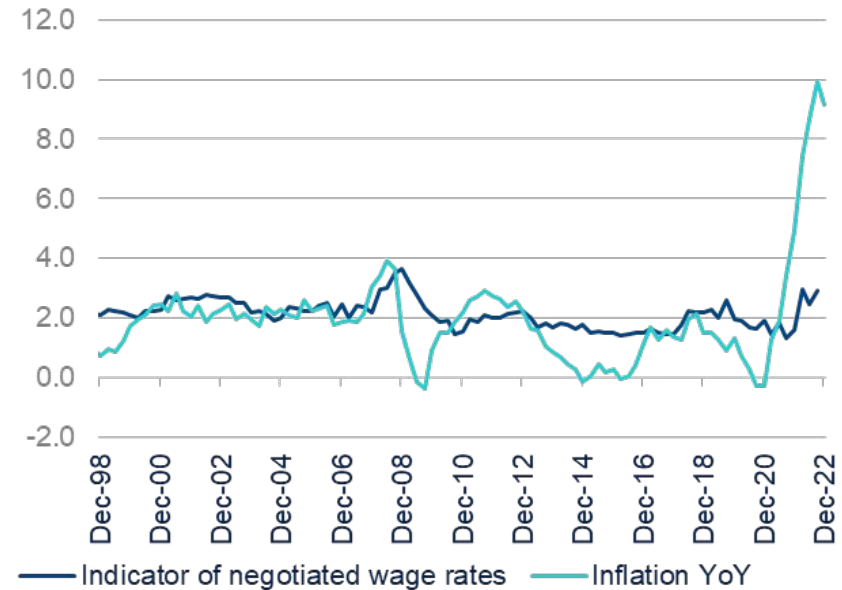


Labor costs have moderated slightly in the US; there are signs of a slight increase in the negotiated wage indicator in the EZ

US: CPI AND LABOUR COSTS (YOY%)



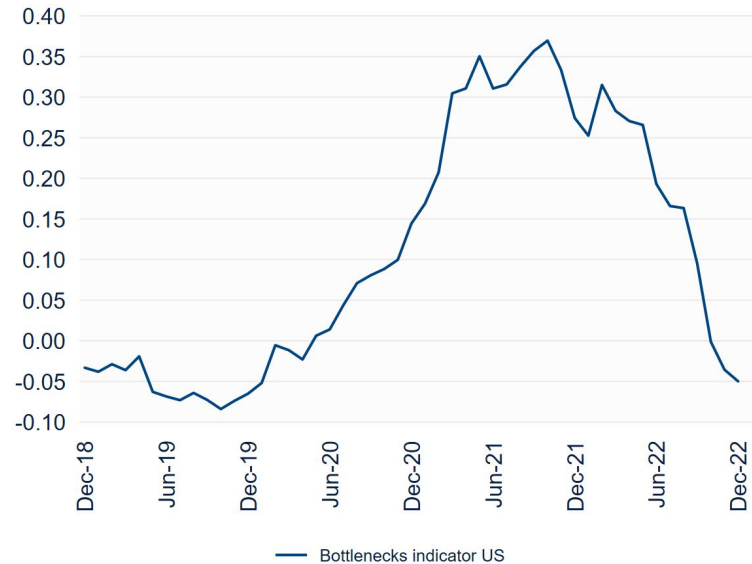
EZ: CPI AND LABOUR COSTS (YOY%)



Our supply bottlenecks indicator suggests supply chains work at normalised levels in the US but disruptions persist in the Euro Zone

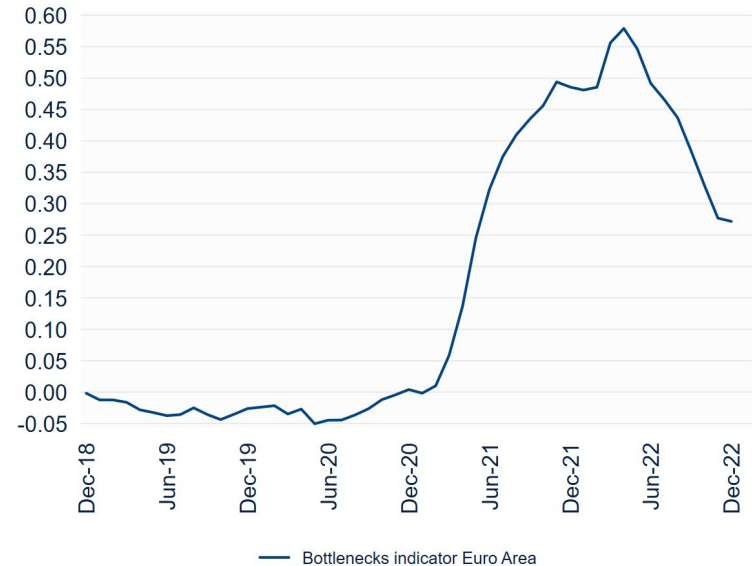
US SUPPLY BOTTLENECKS INDICATOR

(INDEX; LAST AVAILABLE DATA: DEC 2022)



EZ: SUPPLY BOTTLENECKS INDICATOR

(INDEX; LAST AVAILABLE DATA: DEC 2022)



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.

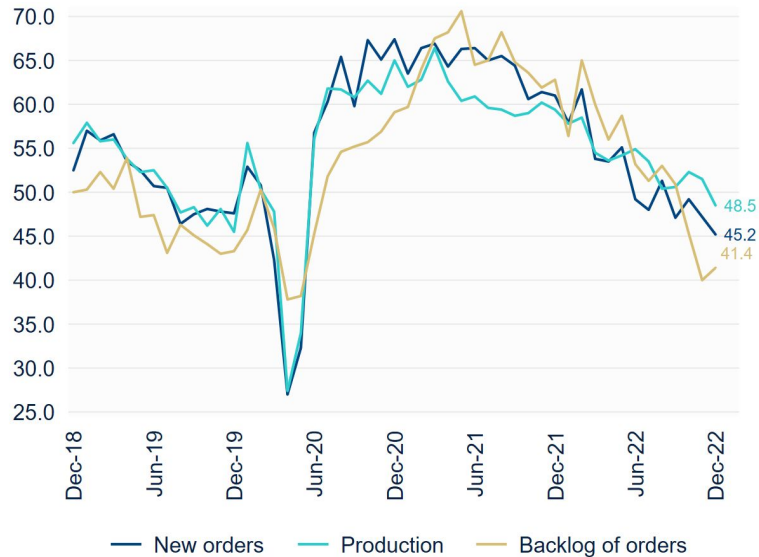
Variables included in the indicator: EA19: factors limiting production - Equipment (Percent Balance SA); EA19: Material shortage construction (Percent Balance SA); IFO: Germany: Material shortage in construction (Percent Balance SA); Ea 19: Retail Inventories (Percent Balance SA); Harpex Shipping Index;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

Source: BBVA Research, Haver Analytics.

Manufacturing production declined in December, led by weaker demand in the US. Production recovered toward its historical mean in the Euro Zone

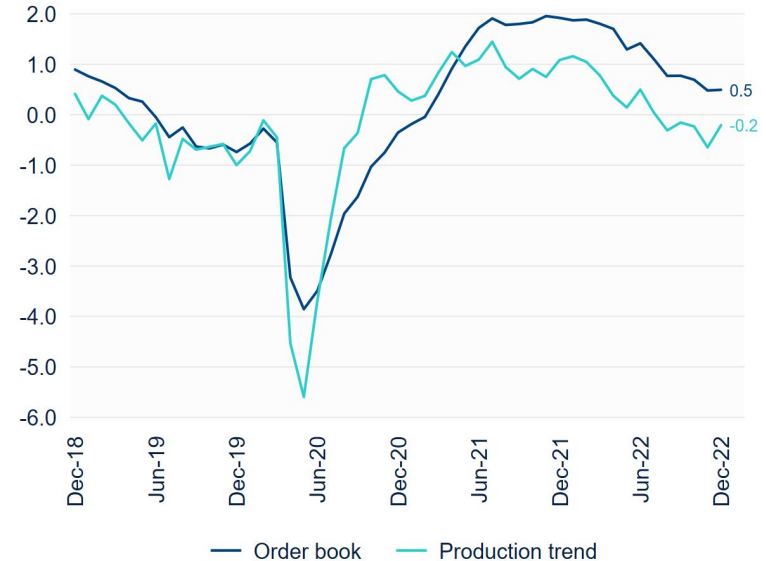
US: ISM MANUFACTURING

(DIFFUSION INDEX. +50 EXPANSION)



EZ: EC SURVEY MANUFACTURING

(DEVIATION FROM THE MEAN SINCE 2000)

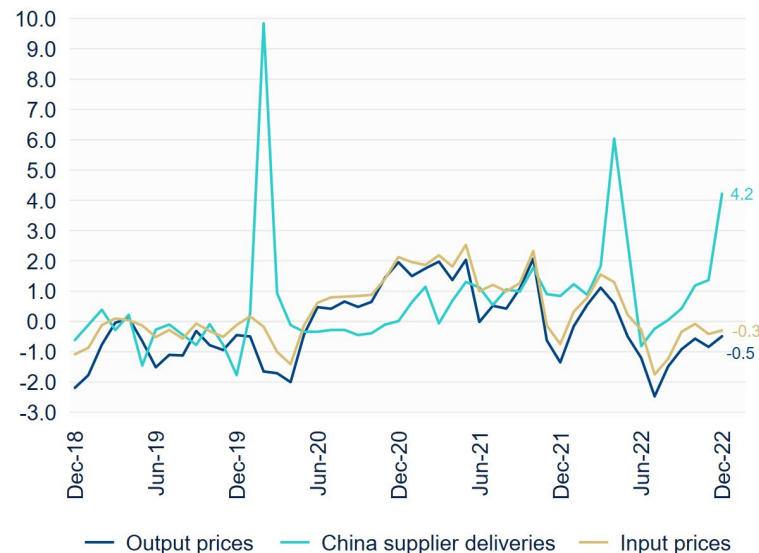


In China, disorderly ending of zero-covid policy dragged production and demand, while supplier deliveries times jumped

CHINA: PMI MANUFACTURING (DEVIATION FROM THE MEAN SINCE 2000)

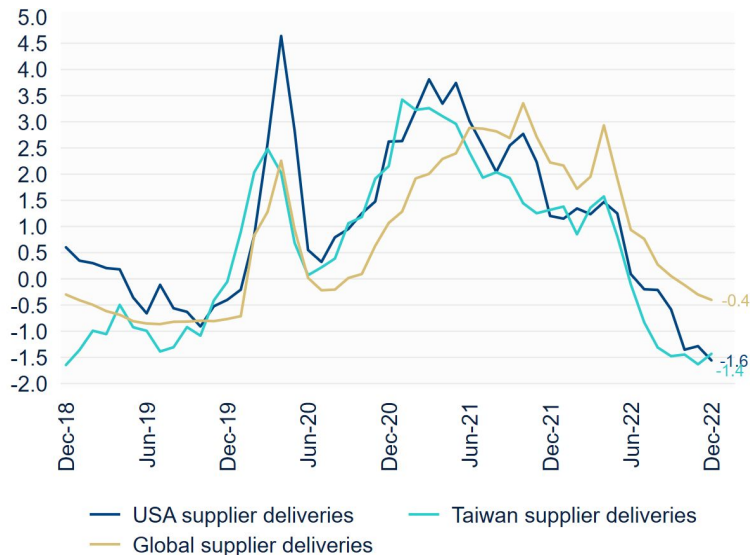


CHINA: MANUFACTURING PMI PRICES AND SUPPLIER DELIVERY TIME (DEVIATION FROM THE MEAN SINCE 2000)

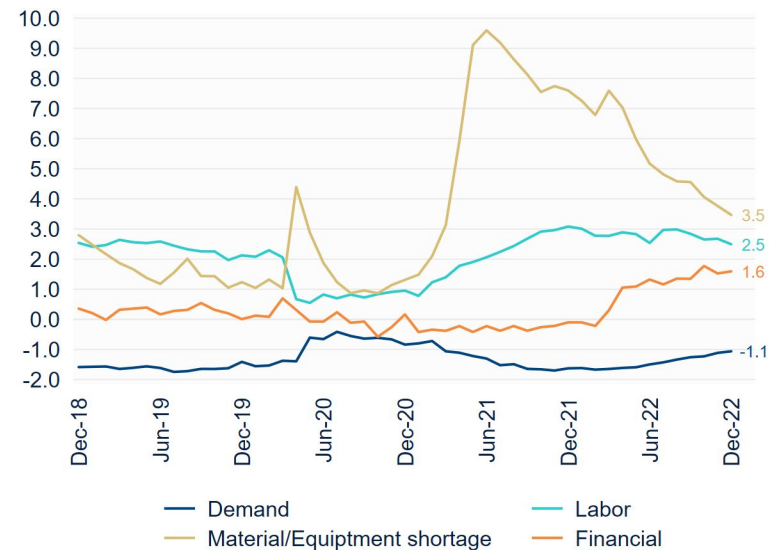


Supplier delivery times declined below normal levels or remained low in the US. In the Euro Zone the shortage of materials continued normalising

MANUFACTURING SUPPLIERS' DELIVERY TIMES (STANDARD DEVIATION FROM THE MEAN)



EZ INDUSTRY FACTORS LIMITING CONSTRUCTION (STANDARD DEVIATION FROM THE MEAN SINCE 1997)

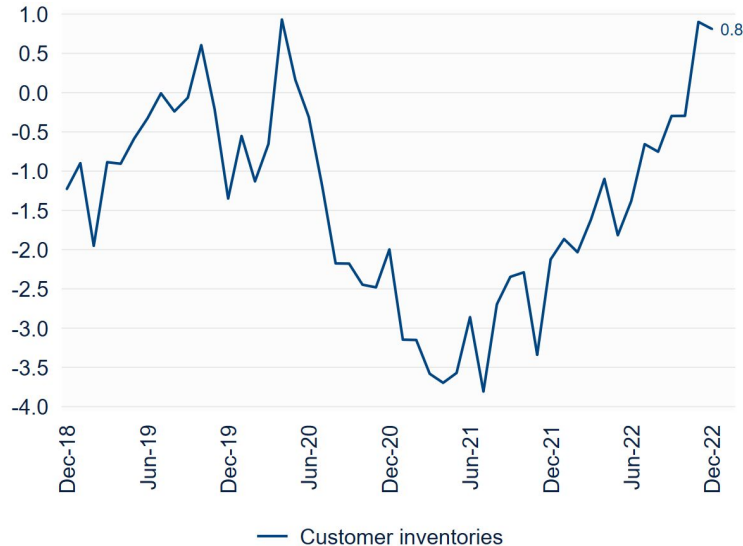


Taiwan represents 63% of semiconductor world sales.
Source: BBVA Research, Haver Analytics.

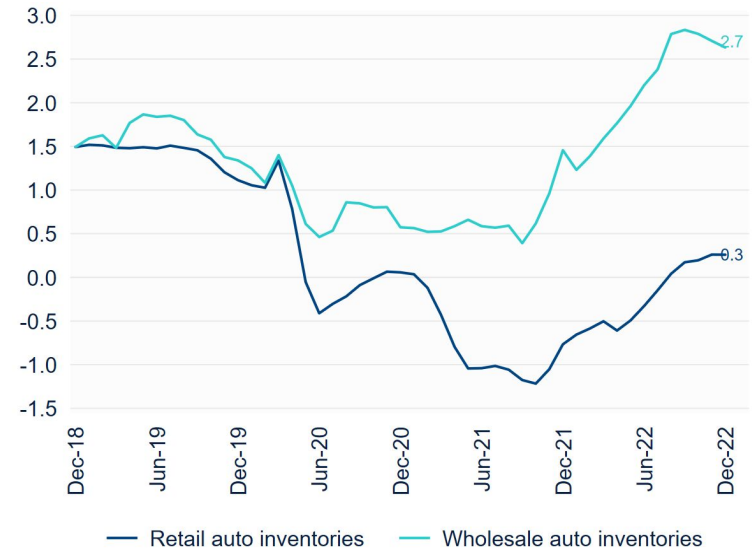
Source: BBVA Research; European Commission survey.

Customer inventories reached high levels as new orders declined. However, real retail inventories for automobile is still below pre-covid levels.

US MANUFACTURING CUSTOMER INVENTORIES INDEX (STANDARD DEVIATION)



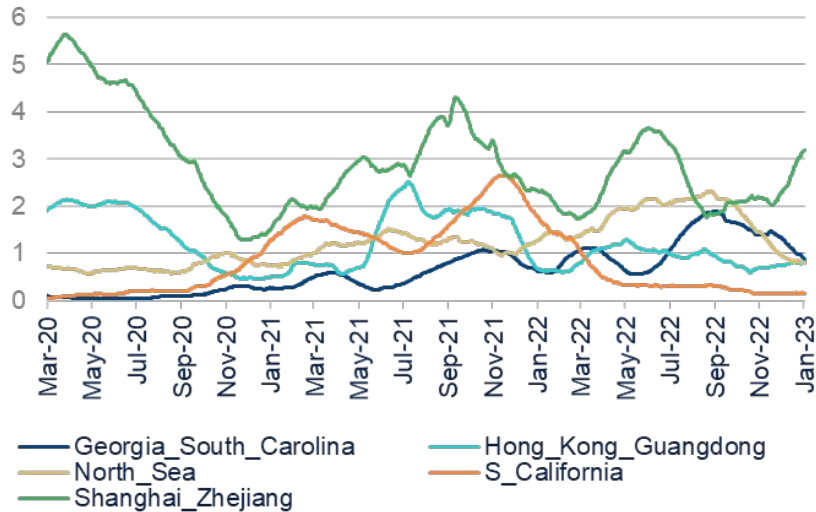
US AUTO INVENTORIES ACROSS SUPPLY CHAIN (DEFLATED BY CPI INDEX BASE: JANUARY 2017)



Port congestion continued to ease in main ports, except in China due to the end of covid restrictions

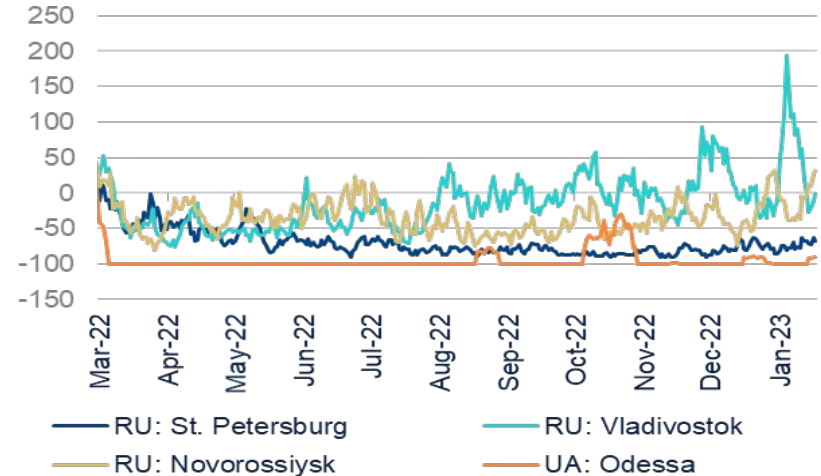
CONTAINERSHIP TRAFFIC AT MAJOR PORTS

(FRACTION OF WAITING SHIPS AS % OF GLOBAL CAPACITY.
LAST DATA JANUARY 17)



RUSSIA UKRAINE; ARRIVING CONTAINER LOAD

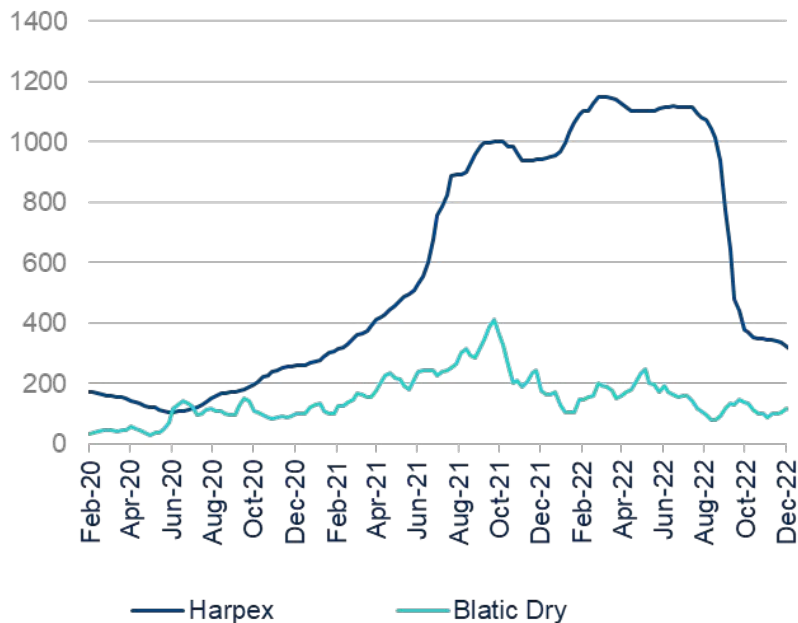
(% YOY CHG.)



Container freights prices declined marginally on lower demand and lower energy

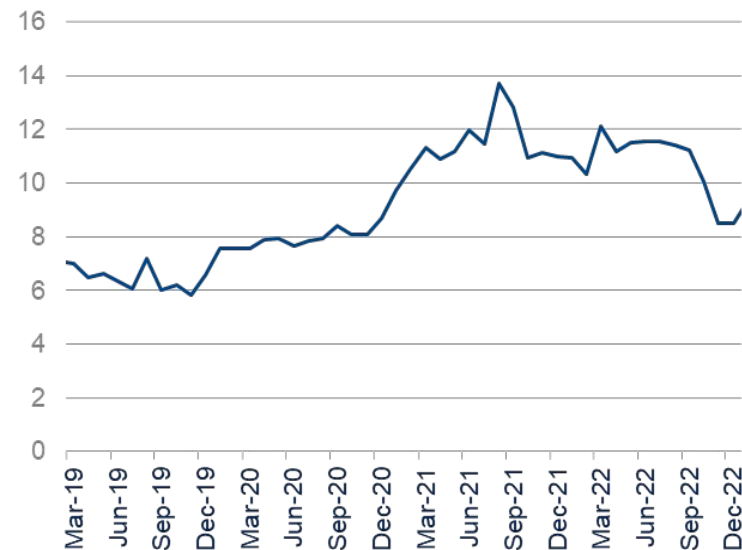
CONTAINER FREIGHT AND BALTIC DRY

(INDEX BASED JANUARY 2012)



GOODS WAITING FOR CONTAINER SHIPS

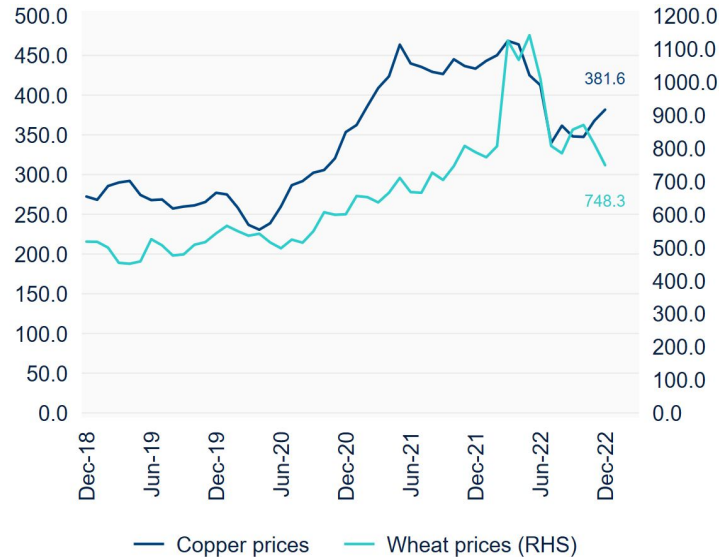
% AS FRACTION OF GOODS SHIPPED IN THE SEA



Copper rebounded as China's restrictions ended. Energy prices declined on warmer weather, high gas storage and US slowdown

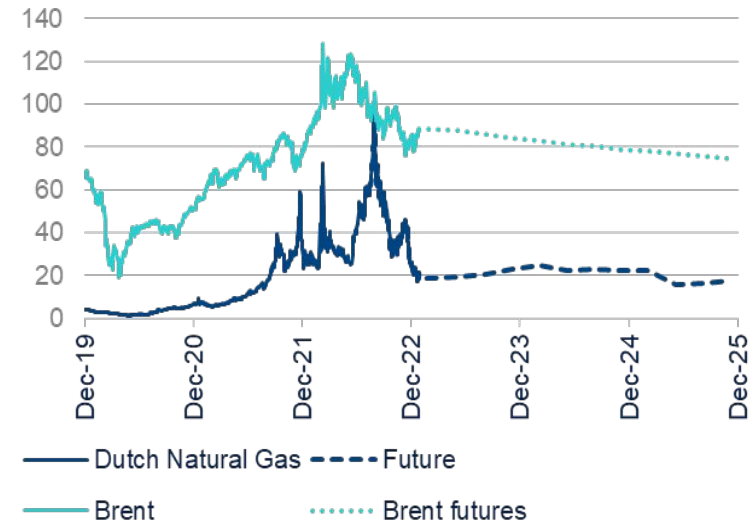
COPPER AND WHEAT PRICES

(USD/LBS;USD/BU)



OIL BRENT AND NATURAL GAS FUTURES

(USD/B and USD/MMBtu)





Annex

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