

# Global | Inflation and Bottlenecks Chartbook

November 2022

# Summary

- October data points to continued moderation in both headline and core inflation in the United States, while Europe, led by Germany, sees no respite, as inflation soared to new highs, linked mainly to prices in the energy sector. **Sequentially, October headline inflation rose sharply in the Euro Area, except Spain**, where a fall in electricity and fuel prices led inflation lower
- Indicators of synchronicity and persistence of inflation show clear moderation in the case of the US but not for Europe. In particular, the housing utilities inflation component has seen a sharp pick up in many European countries
- In the US, short term consumer inflation expectations rose slightly while medium and long-term inflation expectations by analysts edged higher. In contrast, the Euro Area saw inflation expectations stabilize across the board.
- Our supply bottlenecks indicator suggests that supply chain disruptions have ended in the US but are still elevated in the Euro Area. Supplier delivery times continue to decline globally, with the exception of China, where a rebound in Covid cases has led to renewed restrictions in certain provinces.
- The backlog of US manufacturing orders eased further as production outpaced new orders while the production-demand gap persisted in Europe. The shortage of materials in the Euro Area has continued to improve but is still elevated.
- Port congestion has eased, albeit unevenly across geographies. The number of goods waiting for a container ship declined, helped by lower demand, decline in container freight and easing in port congestions.

# Summary indicators

	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22		
Inflation	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	US	IPC Headline (%YoY)
	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		IPC Core (%YoY)
	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		IPC Headline (%MoM)
	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		IPC Core (%MoM)
	3.3	3.7	3.4	3.4	3.5	4.5	4.4	4.2	4.2	3.6	3.5	3.0	2.6		Inf exp (2Y inf. Swap)
	2.6	2.5	2.5	2.5	2.4	2.6	2.7	2.7	2.6	2.4	2.6	2.6	2.4		Inf exp (5Y5Y inf. Swap)
	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	EZ	IPC Headline S.A (%YoY)
	2.1	2.4	2.7	2.4	2.8	3.2	3.9	4.4	4.5	5.0	5.4	6.0	6.4		IPC Core S.A (%YoY)
	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		IPC Headline S.A (%MoM)
	0.2	0.4	0.3	0.5	0.4	0.3	0.7	0.6	0.4	0.8	0.6	0.7	0.6		IPC Core S.A (%MoM)
Bottlenecks	60.6	61.4	61	57.9	61.7	53.8	53.5	55.1	55.1	48	51.3	47.1	49.2	US manuf.	ISM New Orders
	63.6	61.9	62.8	56.4	65.0	60.0	56.0	58.7	58.7	51.3	53.0	50.9	45.3		Backlog of Orders
	59.0	60.2	59.4	57.8	58.5	54.5	53.6	54.2	54.9	53.5	50.4	50.6	52.3		Production Index
	75.6	72.2	64.9	64.6	66.1	65.4	67.2	65.7	57.3	55.2	55.1	52.4	46.8		Supplier Deliveries
	31.7	25.1	31.7	33.0	31.8	34.1	37.1	32.7	35.2	39.5	38.9	41.6	41.6		Customer Inventories
	16.1	21.1	19.3	21.9	22.4	19.7	18.2	7.60	13.1	4.6	-3.3	-3.9	-5.2	EZ manuf.	Order books
	11.2	8.4	13.7	13.9	12.8	10.4	10.5	3.8	7.6	2.8	-0.9	0.8	0.0		Production trend
	65.7	64.4	65.0	65.6	61.7	65.6	67.4	61.7	54.8	49.3	45.6	44.2	44.3	Taiwan	Supplier Deliveries
	565	569	580	583	598	627	640	634	619	580	587	568	558	Input costs	CRB Spot Comdty. Price
	3981	3936	3745	3805	4109	4407	4580	4407	4401	4467	4449	4163	1905		Container freight

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

Source: BBVA Research and Haver Analytics

# Euro Area inflation reached new highs in October, led by Germany; in the United States there are clearer signs of moderation after the June peak

## INFLATION, YOY%

### Headline Inflation (YoY%)

	2021												2022									
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O
US	1.4	1.7	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
China	0.5	-1.1	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
Eurozone	0.9	0.9	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
Germany	0.9	1.2	1.8	2.1	2.5	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
Spain	0.4	0.0	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
Turkey	14.7	15.3	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
Argentina	38.3	40.6	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
Colombia	1.6	1.6	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
Mexico	3.6	3.8	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
Peru	2.6	2.4	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

### Core Inflation (YoY%)

US	1.4	1.3	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
China	0.2	0.1	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
Eurozone	1.2	1.0	0.9	0.8	0.9	1.0	1.1	1.9	2.0	2.1	2.4	2.7	2.4	2.8	3.2	3.9	4.4	4.5	5.0	5.4	6.0	6.4
Germany	1.4	1.4	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
Spain	0.4	-0.1	-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
Turkey	15.0	15.7	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
Argentina	41.3	43.6	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
Colombia	1.8	1.8	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
Mexico	3.8	3.9	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
Peru	1.7	1.6	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

Period considered: 2015-2019

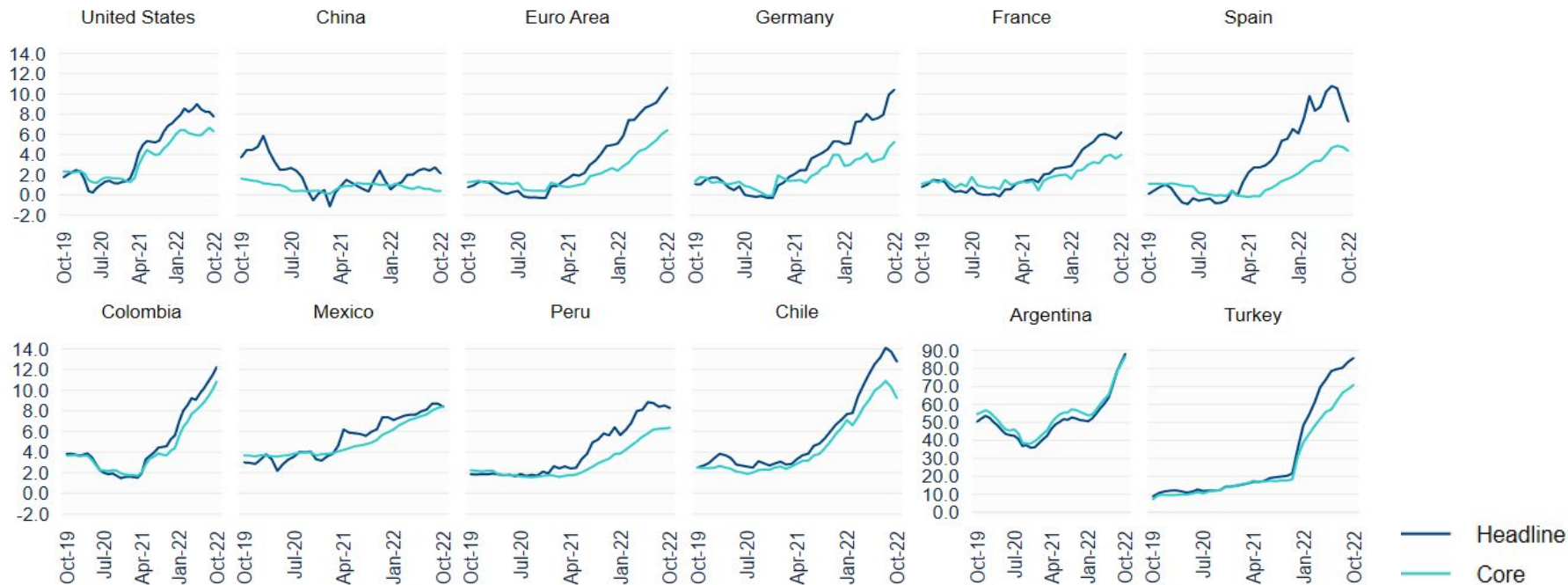
StDev below:

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

StDev above:

# Price pressures are slowing in the US, Spain, Chile and Peru, while others such as Germany, Colombia and Mexico see little or no respite

## INFLATION, YOY%





# Sequentially as well, October headline inflation rose sharply in the Euro Area, driven strongly by energy prices in Italy, except Spain

## INFLATION, MOM% (SA)

### Headline Inflation (MoM%)

	2021												2022									
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O
US	0.2	0.4	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
China	0.7	-0.4	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
Eurozone	1.2	-0.1	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
Germany	1.3	0.4	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
Spain	1.0	-0.5	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
Turkey	1.4	1.3	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
Argentina	4.0	3.8	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
Colombia	0.2	0.2	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
Mexico	0.7	0.6	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
Peru	0.8	0.0	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

### Core Inflation (MoM%)

	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O
US	0.0	0.2	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
China	0.0	0.0	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
Eurozone	0.7	0.0	0.0	0.0	0.1	0.2	0.3	0.2	0.2	0.2	0.4	0.3	0.5	0.4	0.3	0.7	0.6	0.4	0.8	0.6	0.7	0.6
Germany	0.9	0.2	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
Spain	0.5	-0.3	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
Turkey	1.4	1.1	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
Argentina	4.2	4.2	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
Colombia	0.2	0.2	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
Mexico	0.4	0.3	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
Peru	0.2	0.1	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

Period considered: 2015-2019

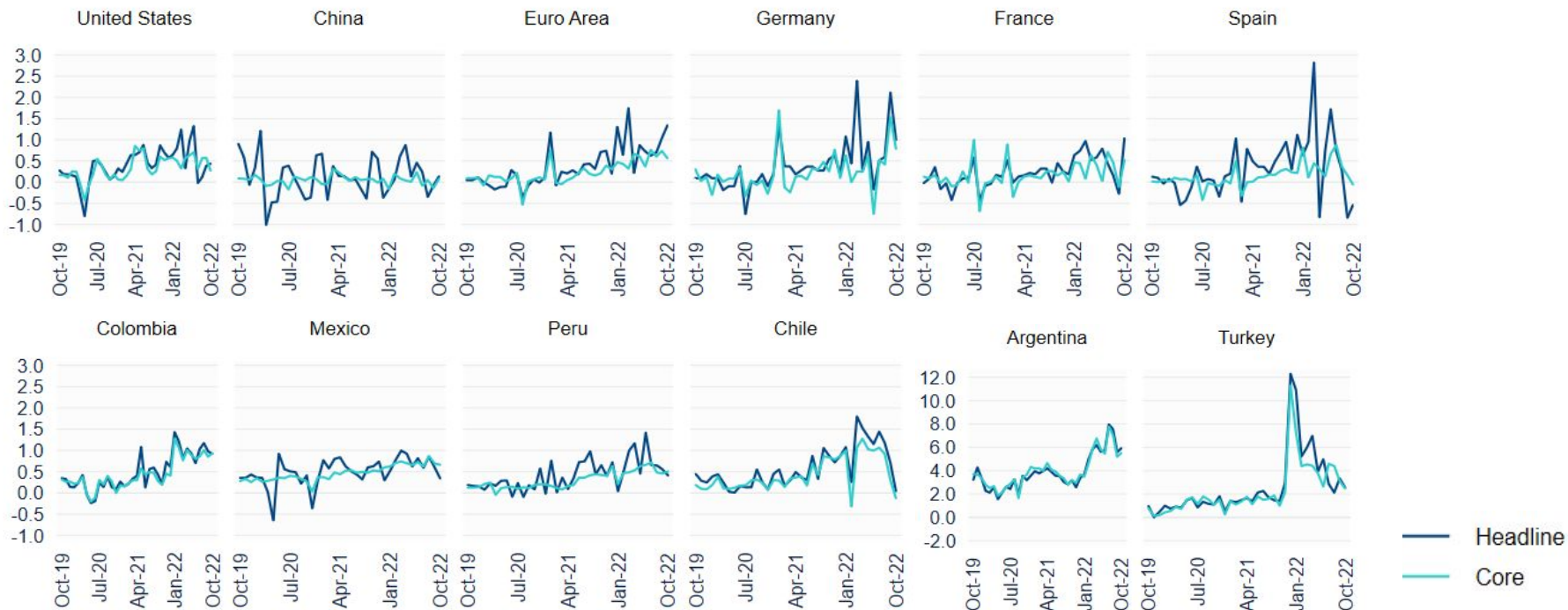
StDev below:

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StDev above:

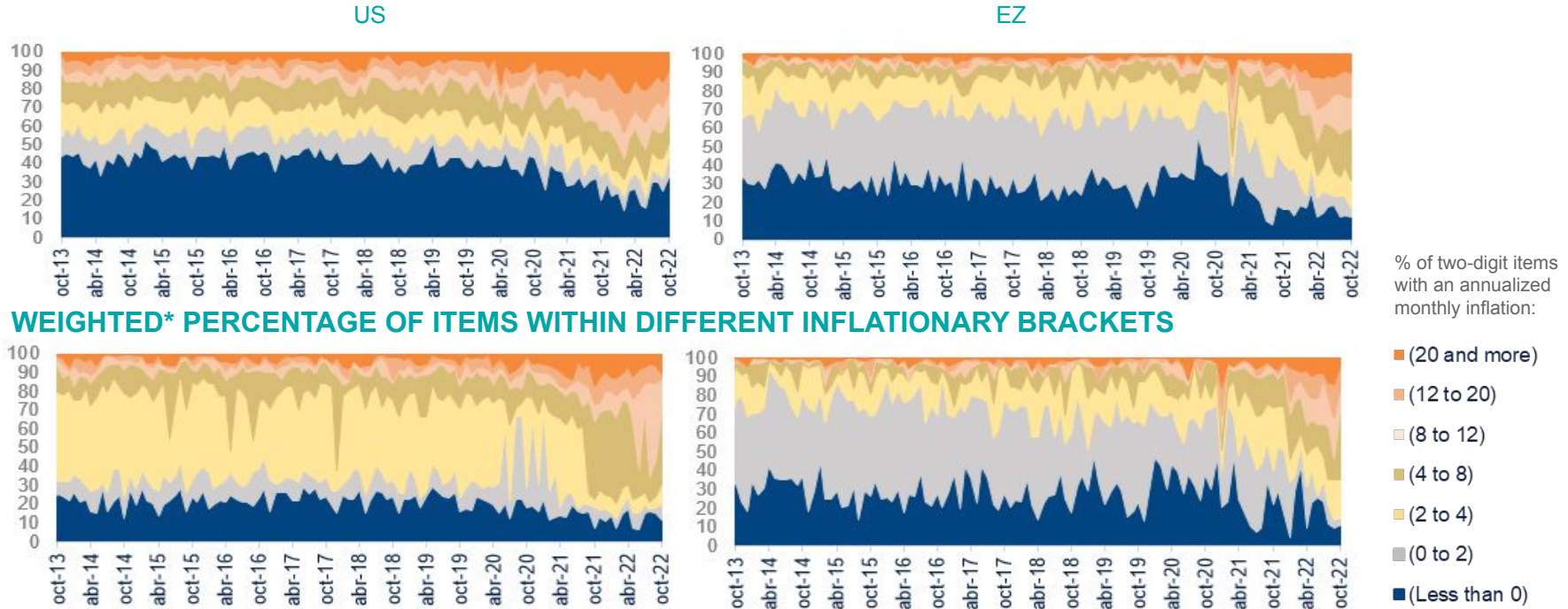
# Sequential headline inflation jumped in the Euro Area, while moderating in the US and stabilizing at elevated levels in Latam

## INFLATION, MOM% (SA)



# The dispersion in high rate inflation has peaked in the US, in contrast to Euro Area where the share of goods with inflation of 4% or more is still around 50%

## PERCENTAGE OF ITEMS WITHIN DIFFERENT INFLATIONARY BRACKETS



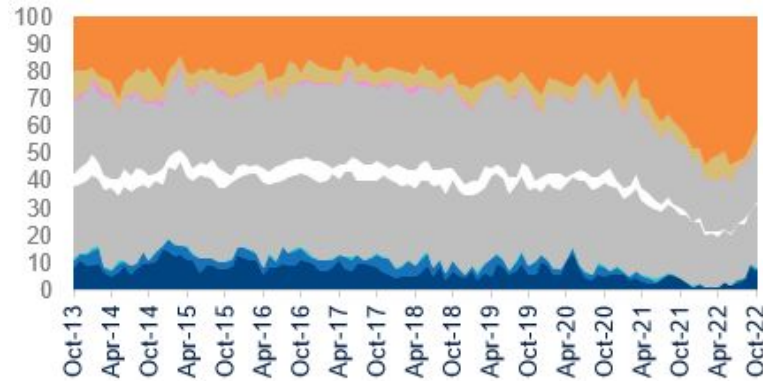
\*weighted by each item's level of expenditure within the CPI basket.

Source: BBVA Research based on Haver Analytics

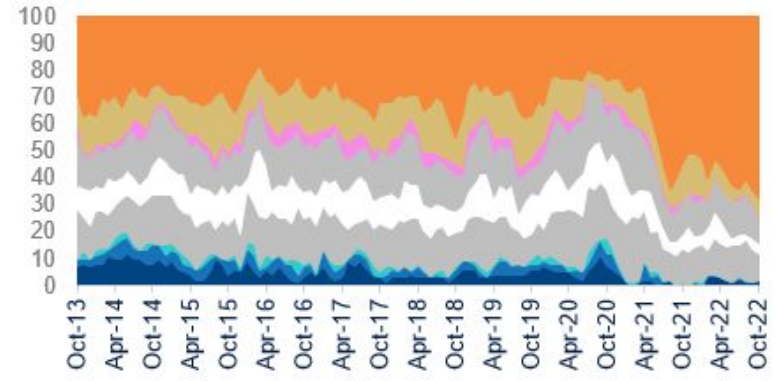


# Items subject to frequent price changes have also been fewer in the US while in the Euro Area they comprise a larger share (more than 50%) of the basket

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.

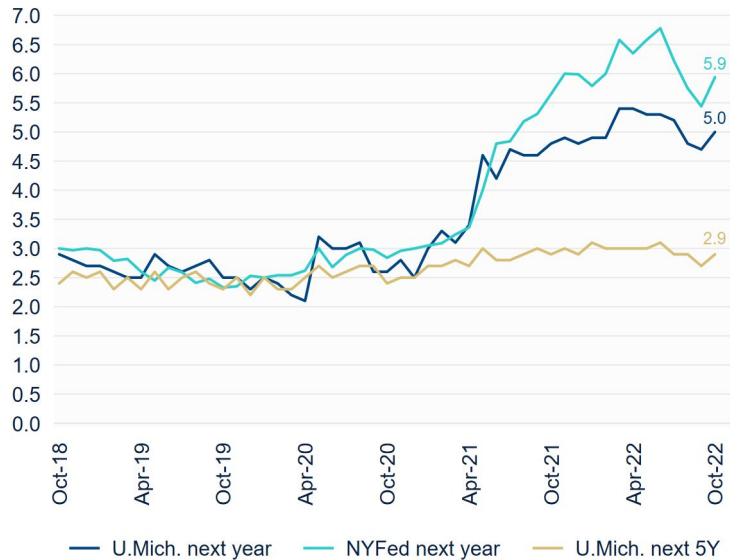
% of items\* with prices signaling; \* items within the CPI basket (2 digits) and where.

Source: BBVA Research, Haver Analytics.

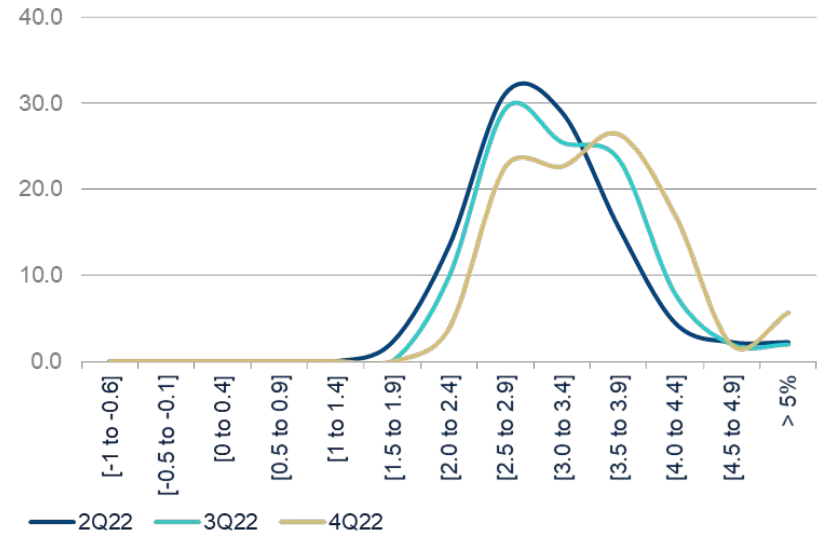
# In the US, short-term consumer inflation expectations picked up while medium and long-term inflation expectations by analysts edged higher

## EXPECTATIONS: CONSUMERS SURVEY

(NEXT YEAR, NEXT 5 YEARS)



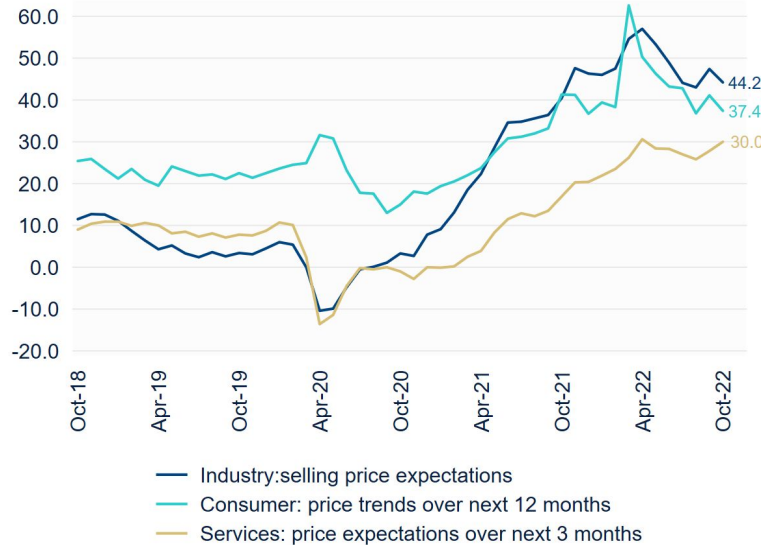
## EXPECTATIONS: SURVEY OF PROFESSIONAL FORECASTERS (LONG-TERM)



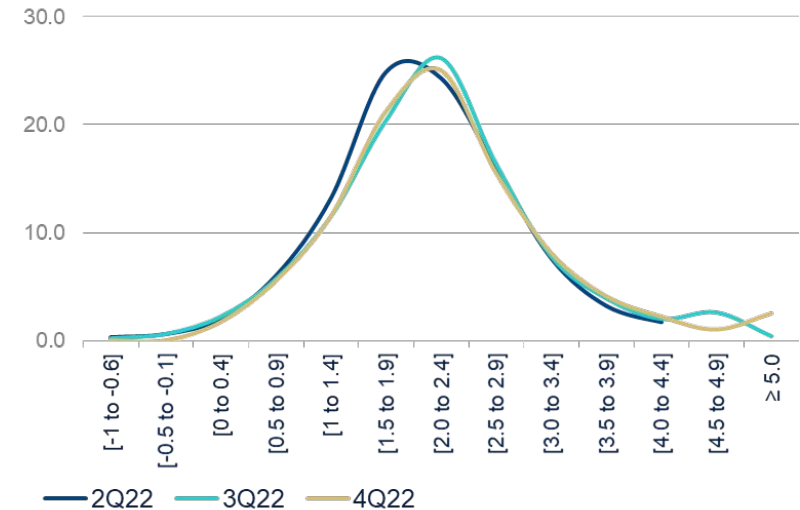
Long-Term CPI Inflation refers to avg 5 and 10 year annual average rate of headline CPI Inflation

# Euro Area short-term consumer inflation expectations have stabilized while long-term analysts' expectations remain unchanged from the previous quarter

## EXPECTATIONS: CONSUMERS AND PRODUCERS SURVEY\* (PERCENT BALANCE)



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



Long-Term CPI Inflation refers to 2027 expected headline inflation rate

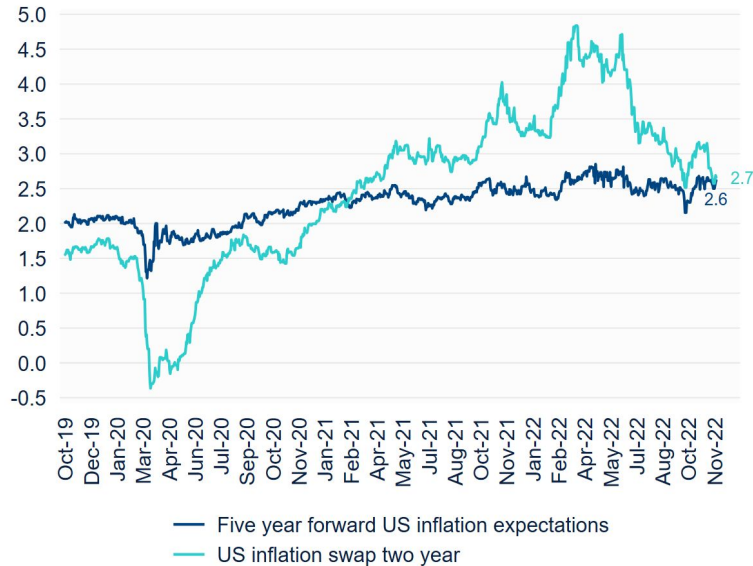
\* Percent balance equals percent of respondents reporting an increase minus the percent of respondents reporting a decrease.

Source: BBVA Research, Haver Analytics.

# Market-based medium and long-term inflation expectations have edged lower, with long-term expectations are still close to 3% and 2% in the US and EA

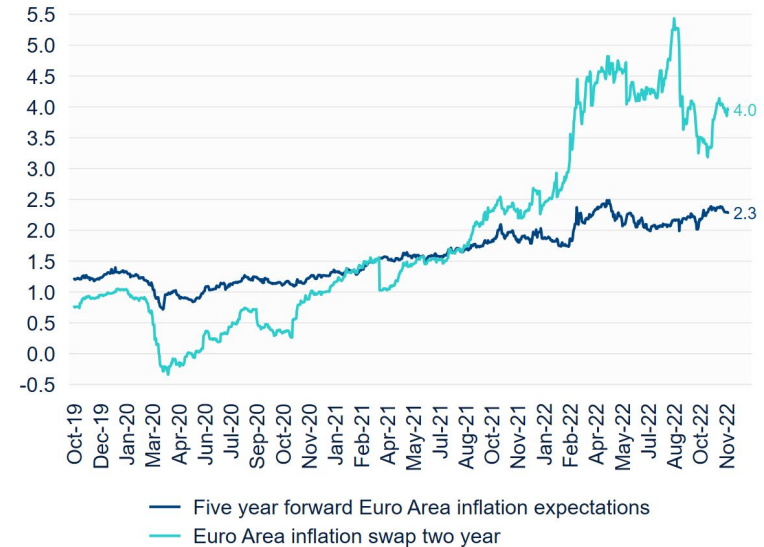
## US: MARKET EXPECTATIONS

(5Y5Y FORWARD, 5Y SWAP)



## EA: MARKET EXPECTATIONS

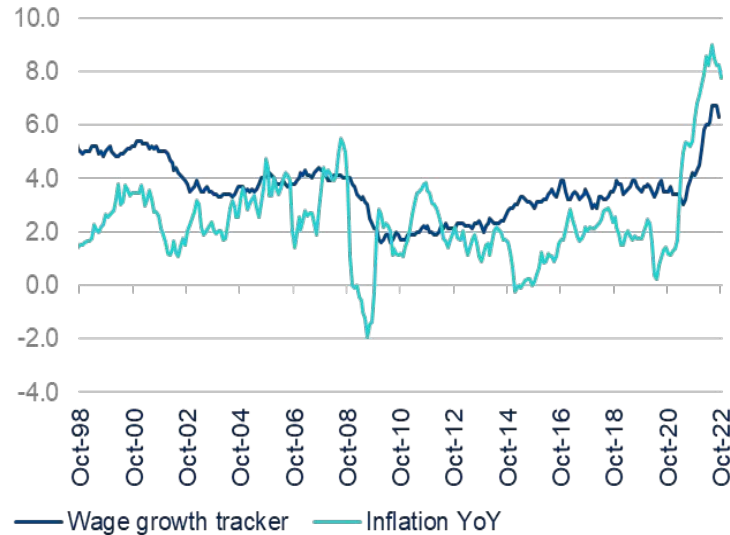
(5Y5Y FORWARD, 5Y SWAP)



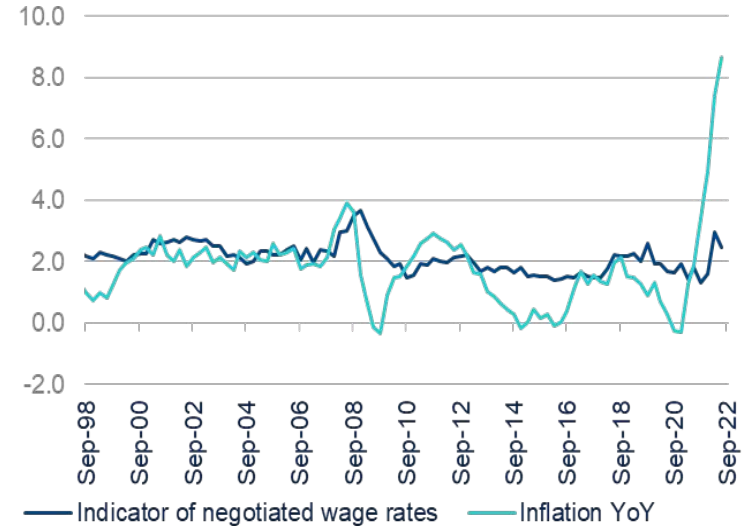


# Labor costs have moderated slightly in both the US and Euro Area

## US: CPI AND LABOUR COSTS (YOY%)



## EA: CPI AND LABOUR COSTS (YOY%)



# Our supply bottlenecks indicator suggests supply disruptions have ended in the US but are still elevated in the Euro Area

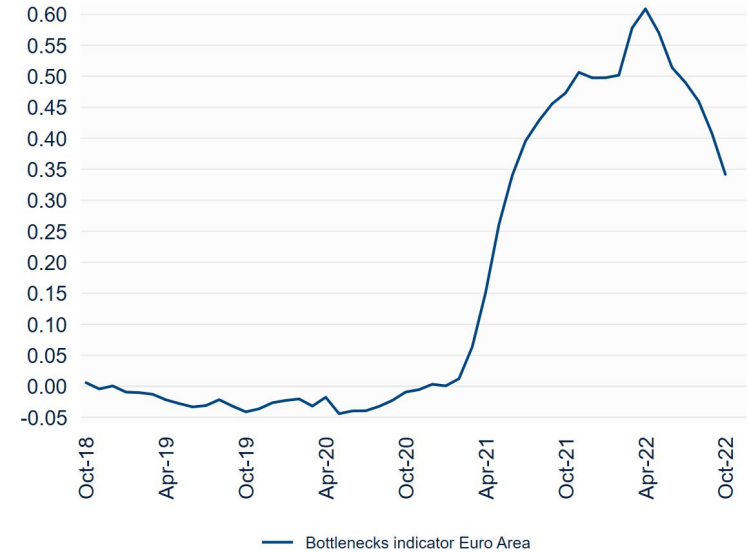
## US SUPPLY BOTTLENECKS INDICATOR

(INDEX; LAST AVAILABLE DATA: SEPT 2022)



## EA: SUPPLY BOTTLENECKS INDICATOR

(INDEX; LAST AVAILABLE DATA: SEPT 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.

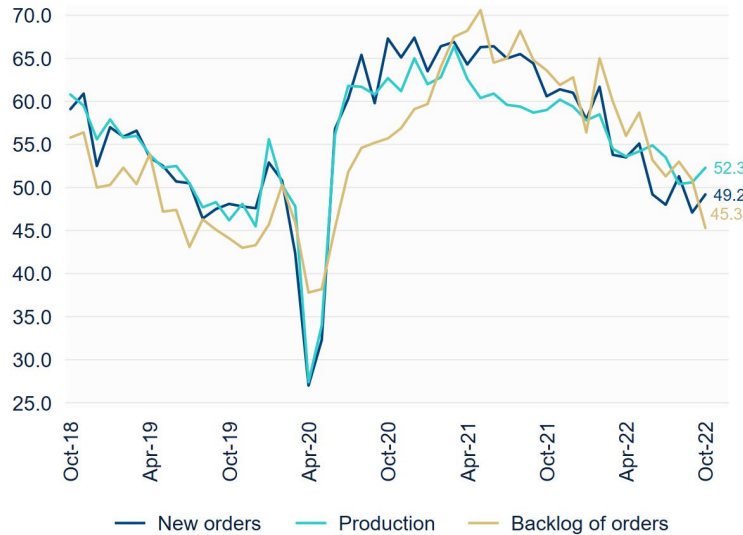
Variables included in the indicator: EA19: factors limiting production - Equipment (Percent Balance SA); EA19: Material shortage construction (Percent Balance SA); IFO: Germany: Material shortage in construction (Percent Balance SA); Ea 19: Retail Inventories (Percent Balance SA); Harpex Shipping Index;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

Source: BBVA Research, Haver Analytics.

# US manufacturing order backlog eased further as production outpaced new orders while the production-demand gap persists in the Euro Area

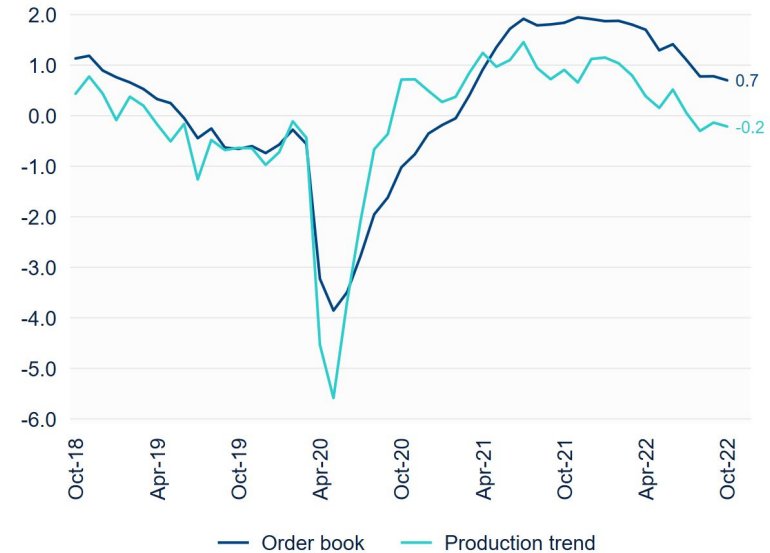
## US: ISM MANUFACTURING

(DIFFUSION INDEX. +50 EXPANSION)



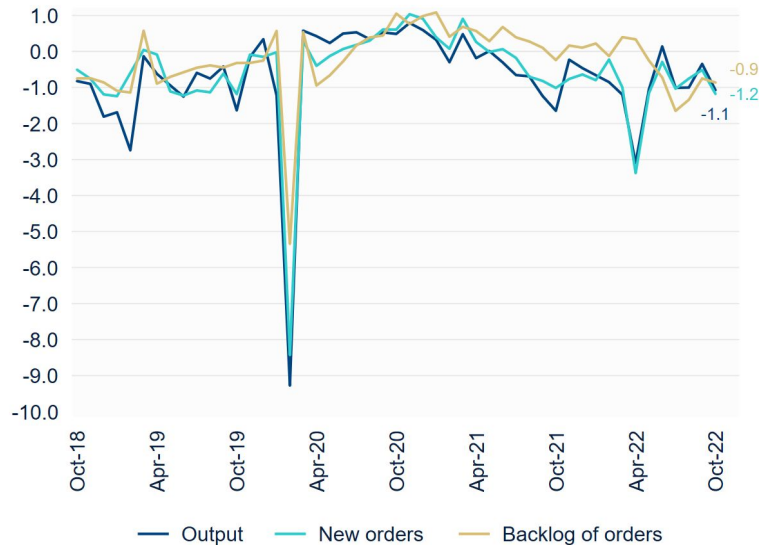
## EA: EC SURVEY MANUFACTURING

(DEVIATION FROM THE MEAN SINCE 2000)

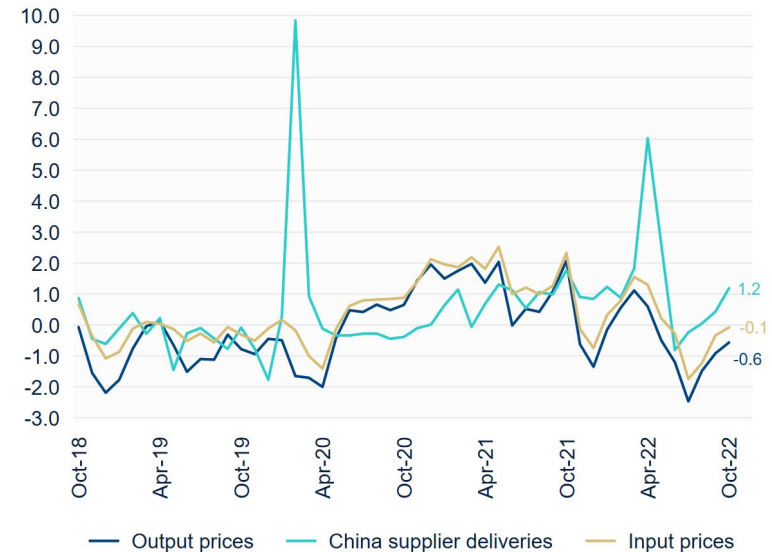


# In China, october saw manufacturing PMI worsen led by a fall in output and new orders, while supplier deliveries time rose amid a rebound of covid cases

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



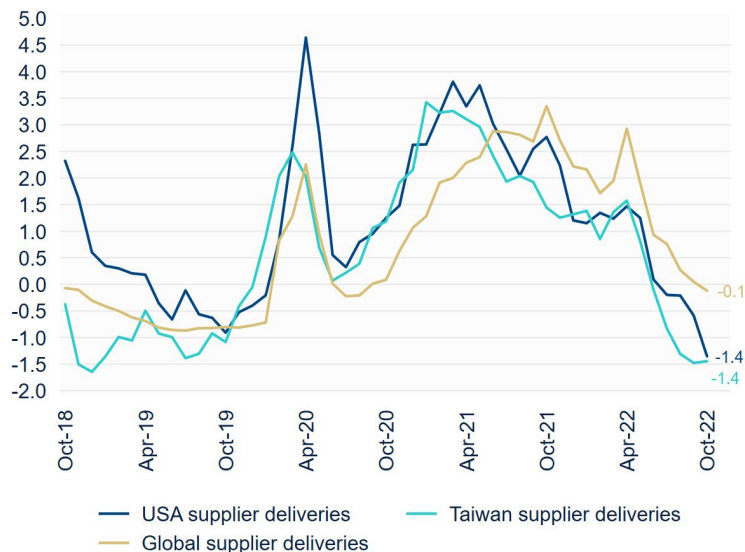
## CHINA: MANUFACTURING PMI PRICES AND SUPPLIER DELIVERY TIME (DEVIATION FROM THE MEAN SINCE 2000)



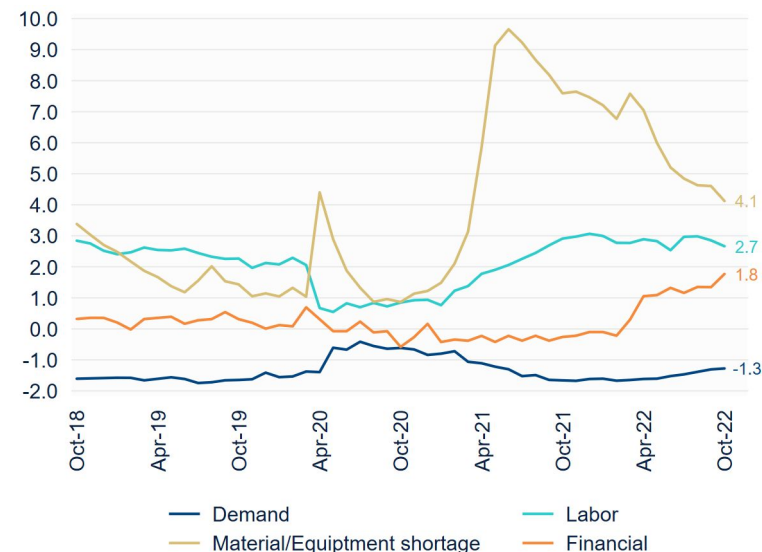


# Supplier delivery times declined further globally; in the Euro Area, the shortage of materials continued to improve

## MANUFACTURING SUPPLIERS' DELIVERIES TIMES (STANDARD DEVIATION FROM THE MEAN)



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

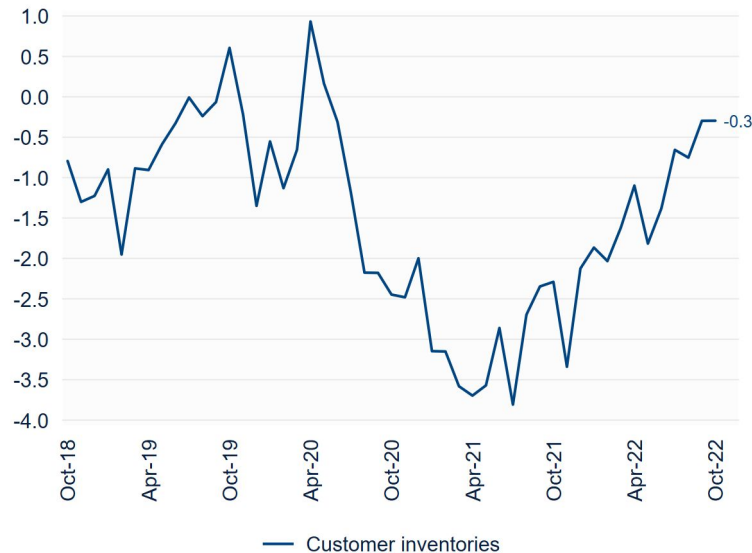


Taiwan represents 63% of semiconductor world sales.  
Source: BBVA Research, Haver Analytics.

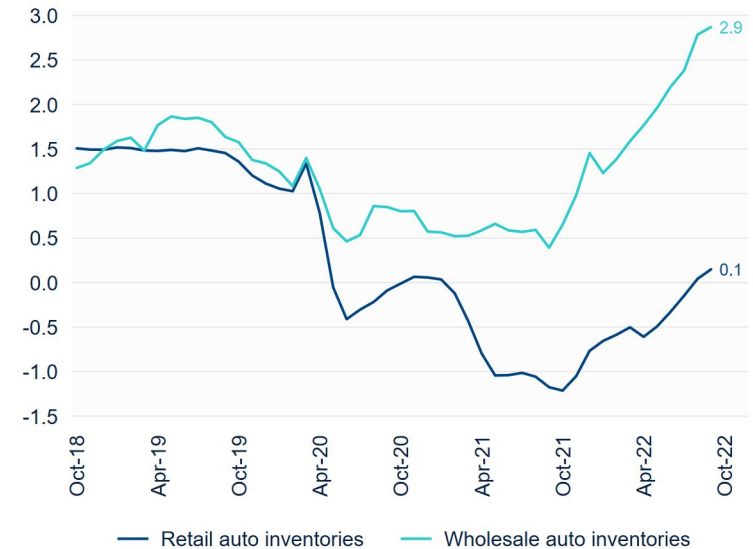
Source: BBVA Research; European Commission survey.

# Customer inventories in the US have normalized, while auto real wholesale inventories remain elevated

## US MANUFACTURING CUSTOMER INVENTORIES INDEX (STANDARD DEVIATION)



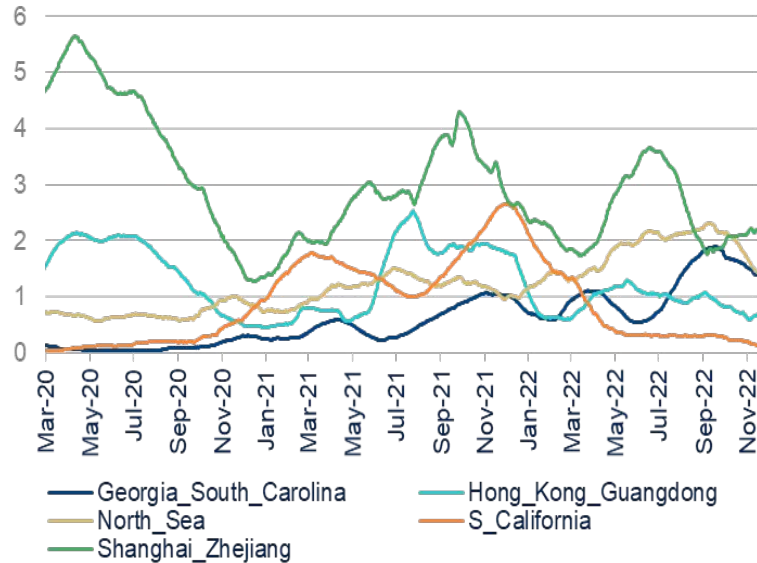
## US AUTO INVENTORIES ACROSS SUPPLY CHAIN (DEFLATED BY CPI INDEX BASE: JANUARY 2017)



# Port congestion continued to ease in the US as well as in Europe as demand moderated

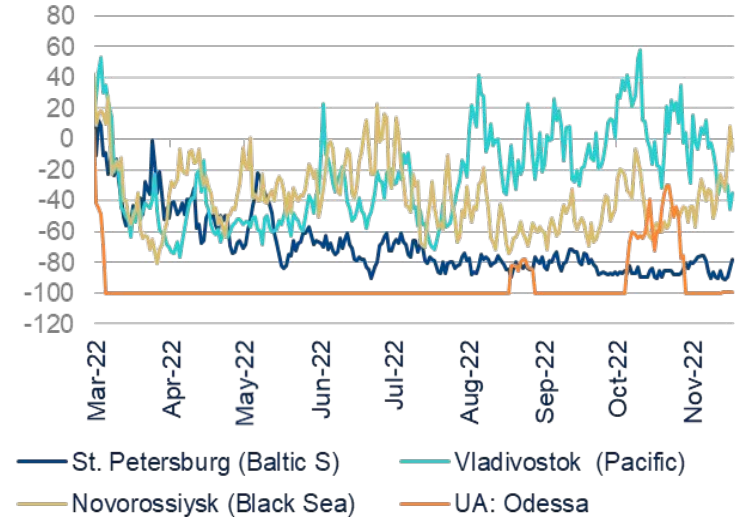
## CONTAINERSHIP TRAFFIC AT MAJOR PORTS

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



## RUSSIA UKRAINE; ARRIVING CONTAINER LOAD

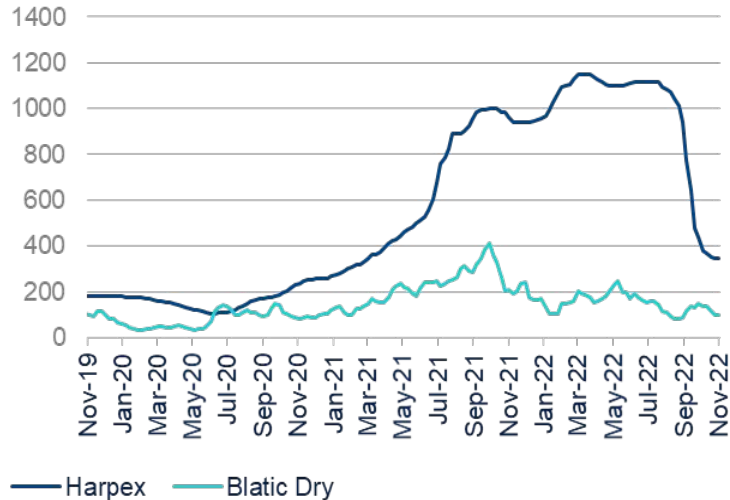
(% YOY CHG.)



# Container freights declined further but at a slower pace, likely aided by China's easing of covid restrictions; backlog of goods awaiting shipments fell

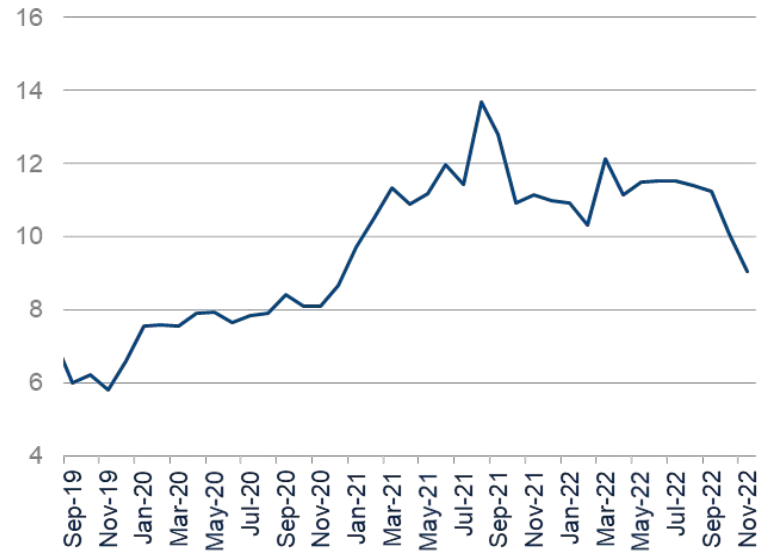
## CONTAINER FREIGHT AND BALTIC DRY

(INDEX BASED JANUARY 2012 )



## GOODS WAITING FOR CONTAINER SHIPS

% AS FRACTION OF GOODS SHIPPED IN THE SEA

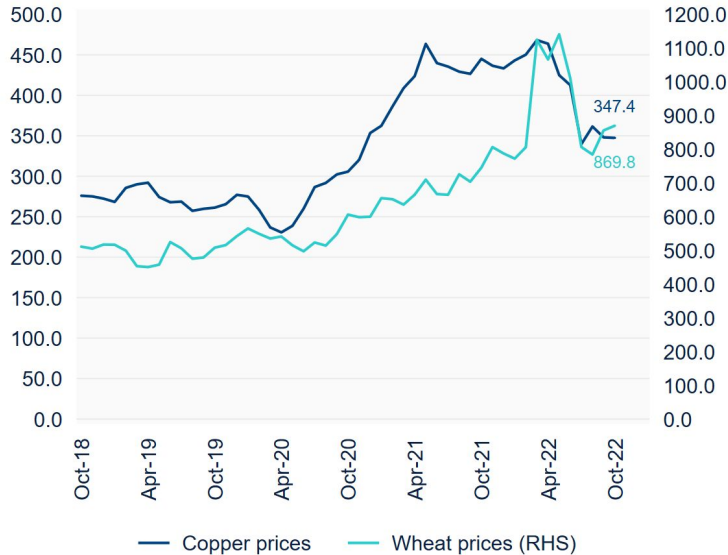




# Copper prices halted its downward trend on prospects of easing covid related restrictions in China; European gas price futures steadied until spring 2024

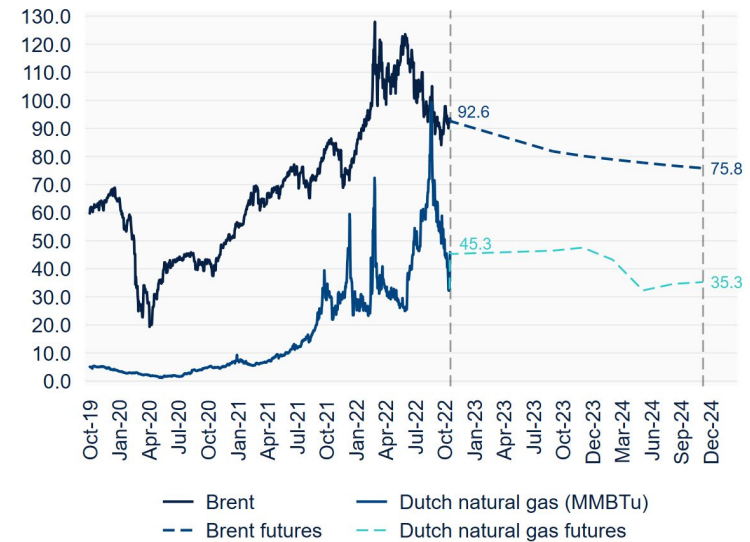
## COPPER AND WHEAT PRICES

(USD/LBS;USD/BU )



## OIL BRENT AND NATURAL GAS FUTURES

(USD/B and USD/MMBtu)



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