

Global | Inflation and Bottlenecks Chartbook

October 2022

Summary

- September headline as well as core inflation outturns in both the US and the Euro Area firmed up, surpassing expectations. The breakup suggests that **while goods price inflation is moderating, services inflation is accelerating**. Energy costs moderated further in the US, but are lower than in the previous two months. In emerging markets, Colombia and Mexico saw a notable rise in core inflation.
- **The spread of high inflation to a larger range of goods has stabilized, although it continues at high levels**. Around 50% of goods with inflation of 4% or more, with two or more increases in the last three months respectively.
- **Analysts' median long-term inflation expectations have moved higher** while market based medium to long-term inflation expectations for the US and the Euro Area suggest moderation to near 3% levels.
- Our **supply bottlenecks indicator eased further, led in part by lower global demand**. Supplier delivery times have returned to close to normalized levels globally, with particular improvement in the US. On the flipside, limitations to Euro Area production are improving only gradually, constraining efforts to match demand.
- **Congestion at the North Sea port in Europe persists**, while traffic at Russian ports suggests that the country turned to Asia to offset embargo. Weak activity in Ukraine's ports continues. **The number of goods waiting for a container ship still remains elevated across the board**. However, order book for new container ships is above 2008 peak, while most of the new container fleet is expected to be delivered in 2023-2024.

Summary indicators

	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22		
Inflation	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	US	IPC Headline (%YoY)
	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		IPC Core (%YoY)
	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		IPC Headline (%MoM)
	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		IPC Core (%MoM)
	2.9	3.3	3.7	3.4	3.4	3.5	4.5	4.4	4.2	4.2	3.6	3.5	3.0		Inf exp (2Y inf. Swap)
	2.4	2.6	2.5	2.5	2.5	2.4	2.6	2.7	2.7	2.6	2.4	2.6	2.6		Inf exp (5Y5Y inf. Swap)
	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	EZ	IPC Headline S.A. (%YoY)
	2.0	2.1	2.4	2.7	2.4	2.9	3.2	3.9	4.4	4.5	5.0	5.4	6.1		IPC Core S.A. (%YoY)
	0.3	0.7	0.7	0.2	1.3	0.6	1.7	0.2	0.9	0.7	0.6	0.7	1.1		IPC Headline S.A. (%MoM)
	0.2	0.3	0.4	0.3	0.5	0.4	0.3	0.7	0.6	0.4	0.8	0.6	0.8		IPC Core S.A. (%MoM)
Bottlenecks	64.4	60.6	61.4	61	57.9	61.7	53.8	53.5	55.1	55.1	48	51.3	47.1	US manuf.	ISM New Orders
	64.8	63.6	61.9	62.8	56.4	65.0	60.0	56.0	58.7	58.7	51.3	53.0	50.9		Backlog of Orders
	58.7	59.0	60.2	59.4	57.8	58.5	54.5	53.6	54.2	54.9	53.5	50.4	50.6		Production Index
	73.4	75.6	72.2	64.9	64.6	66.1	65.4	67.2	65.7	57.3	55.2	55.1	52.4		Supplier Deliveries
	31.7	31.7	25.1	31.7	33.0	31.8	34.1	37.1	32.7	35.2	39.5	38.9	41.6	Customer Inventories	
	14.4	16.1	21.1	19.3	21.9	22.4	19.7	18.2	7.60	13.1	4.4	-3.4	-4.1	EZ manuf.	Order books
	9.3	11.2	8.4	13.7	13.9	12.8	10.4	10.5	3.8	7.5	2.6	-1.1	0.7		Production trend
	69.1	65.7	64.4	65.0	65.6	61.7	65.6	67.4	61.7	54.8	49.3	45.6	44.2	Taiwan	Supplier Deliveries
	554	565	569	580	583	598	627	640	634	619	580	587	568	Input costs	CRB Spot Comdty. Price
	3599	3981	3936	3745	3805	4109	4407	4580	4407	4401	4467	4449	4163		Container freight

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

Source: BBVA Research and Haver Analytics

Headline inflation in the US appears to have peaked in June but hit a new high in the Euro Area in Sept; core continues to reach new highs across the board


INFLATION, YOY%

Headline Inflation (YoY%)

	2021												2022								
	J	F	M	A	M	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	
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
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
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
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
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
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
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
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
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
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	5.6	6.2	6.8	8.0	8.1	8.8	8.7	8.4	8.5

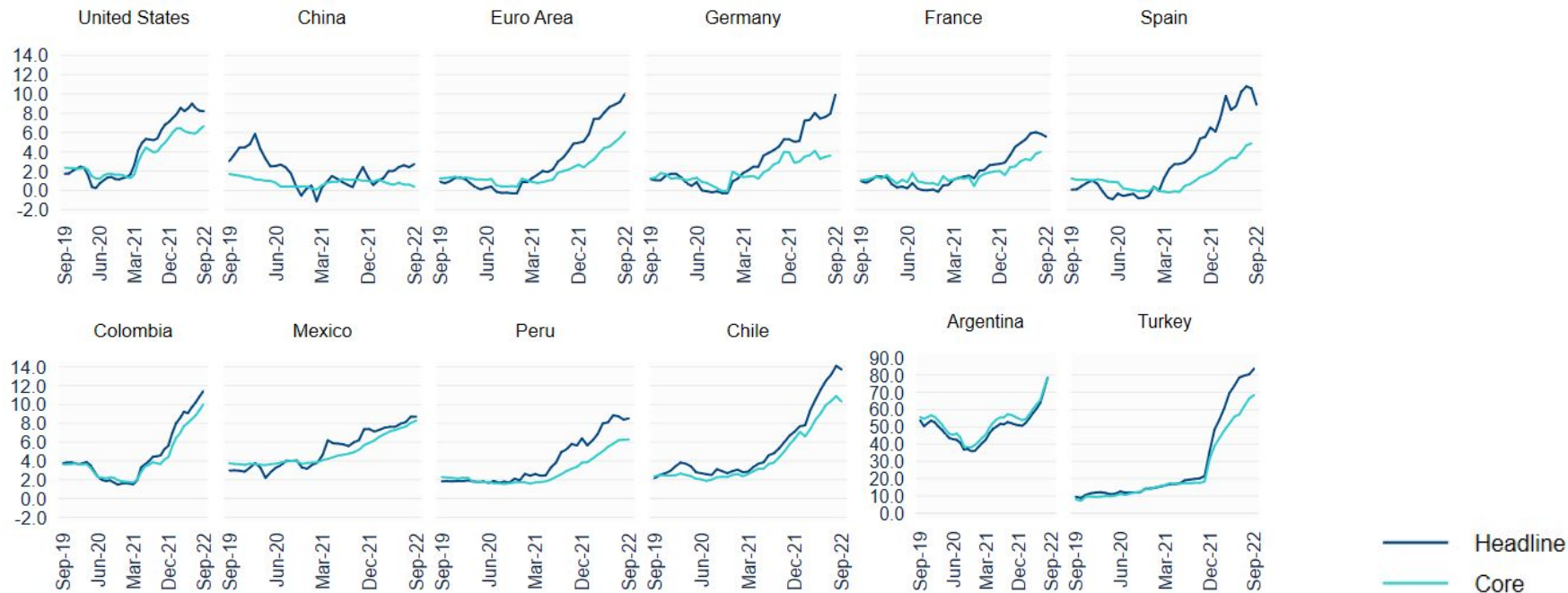
Core Inflation (YoY%)

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
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
Eurozone	1.2	1.0	0.9	0.8	0.9	1.0	1.1	1.8	2.0	2.1	2.4	2.7	2.4	2.9	3.2	3.9	4.4	4.5	5.0	5.4	6.0
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
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
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
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
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
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
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

Period considered: 2015-2019
 StDev below:  
 StDev above: 
 + than 3 2 to 3 1 to 2 -1 to +1 1 to 2 2 to 3 + than 3

Core inflation trending higher across most while headline inflation appears to have peaked, with some exceptions

INFLATION, YOY%



Sequentially, headline inflation picked up marginally in the US; both headline and core inflation firmed up visibly in the Euro Area


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
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
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
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
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
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
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
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
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
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
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

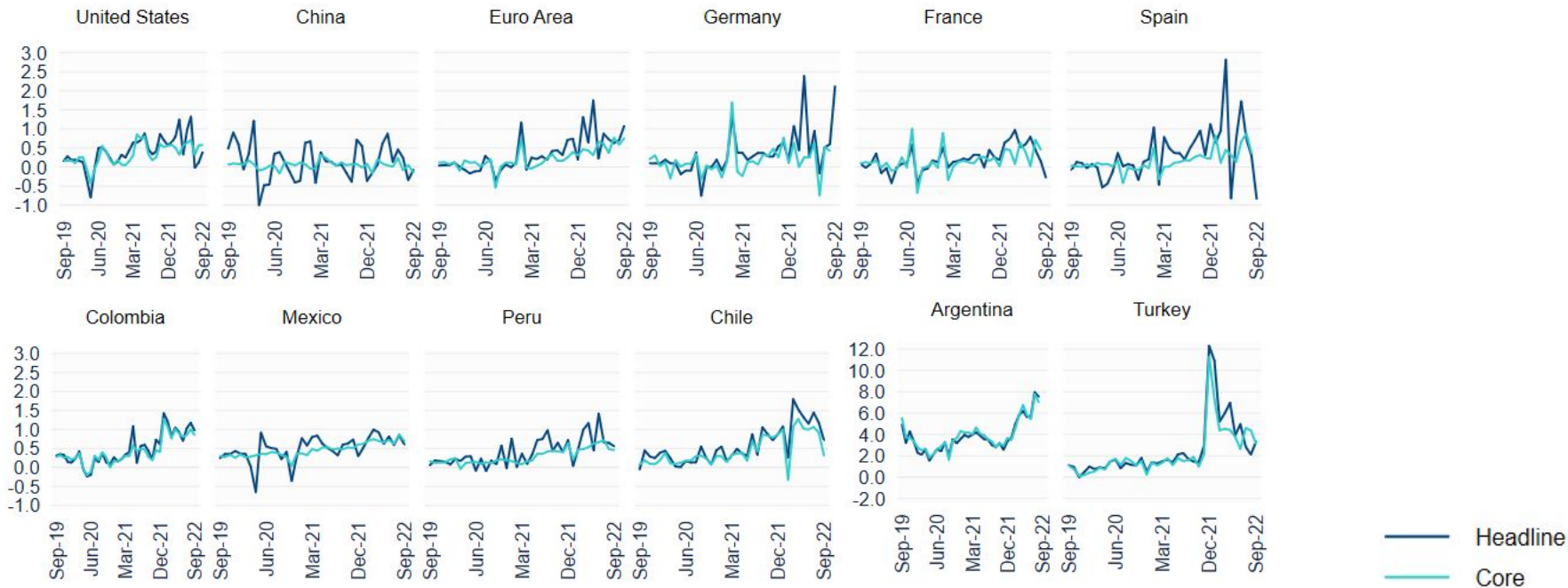
Core Inflation (MoM%)

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	
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	
Eurozone	0.7	0.0	0.0	0.0	0.1	0.2	0.3	0.2	0.2	0.3	0.4	0.3	0.5	0.4	0.3	0.7	0.6	0.4	0.8	0.6	0.7	
Germany	0.9	0.2	0.2	0.2	0.3	0.4	0.3	0.2	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
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	
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	
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	
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	
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	
Peru	0.2	0.1	0.1	0.2	0.2	0.4	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

Period considered: 2015-2019
 StDev below: 
 StDev above: 
 + than 3 2 to 3 1 to 2 -1 to +1 1 to 2 2 to 3 + than 3

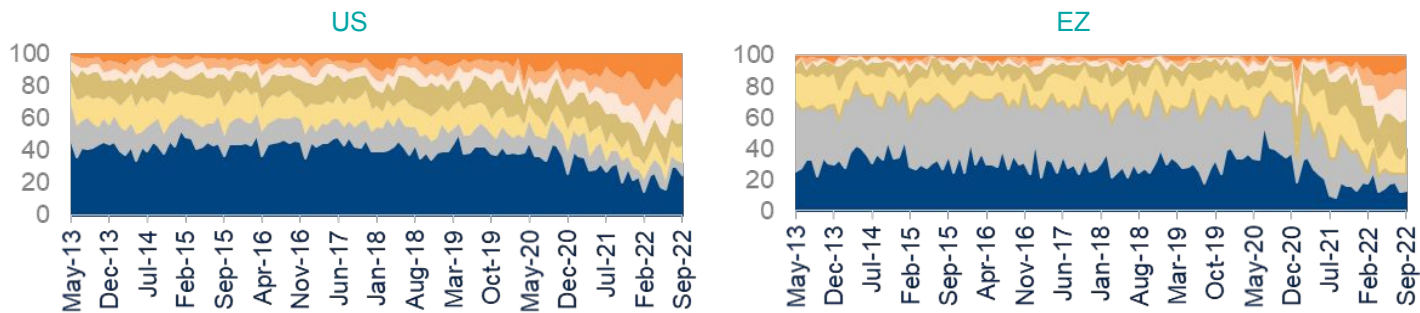
Sequential headline inflation jumped in Germany, while in EMs, it has largely stabilized

INFLATION, MOM% (SA)



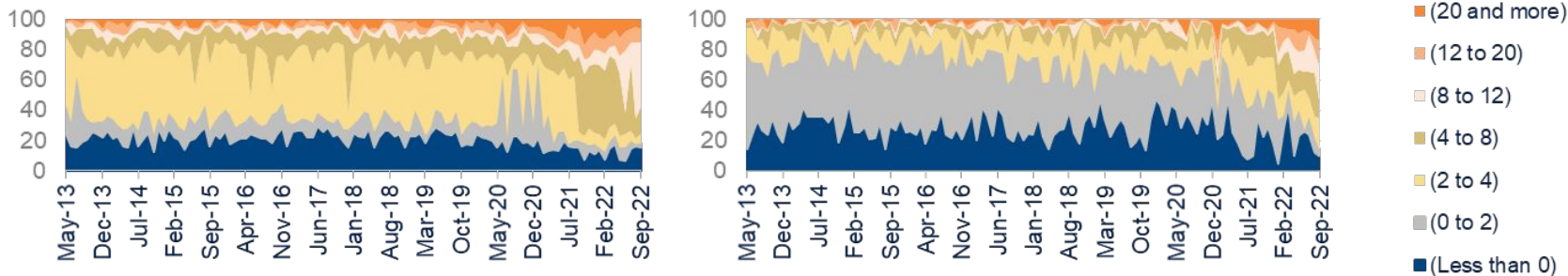
The spread of high inflation to a larger range of goods has stabilized although it still remains high in level terms in both, the US and the Euro Area

PERCENTAGE OF ITEMS WITHIN DIFFERENT INFLATIONARY BRACKETS



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

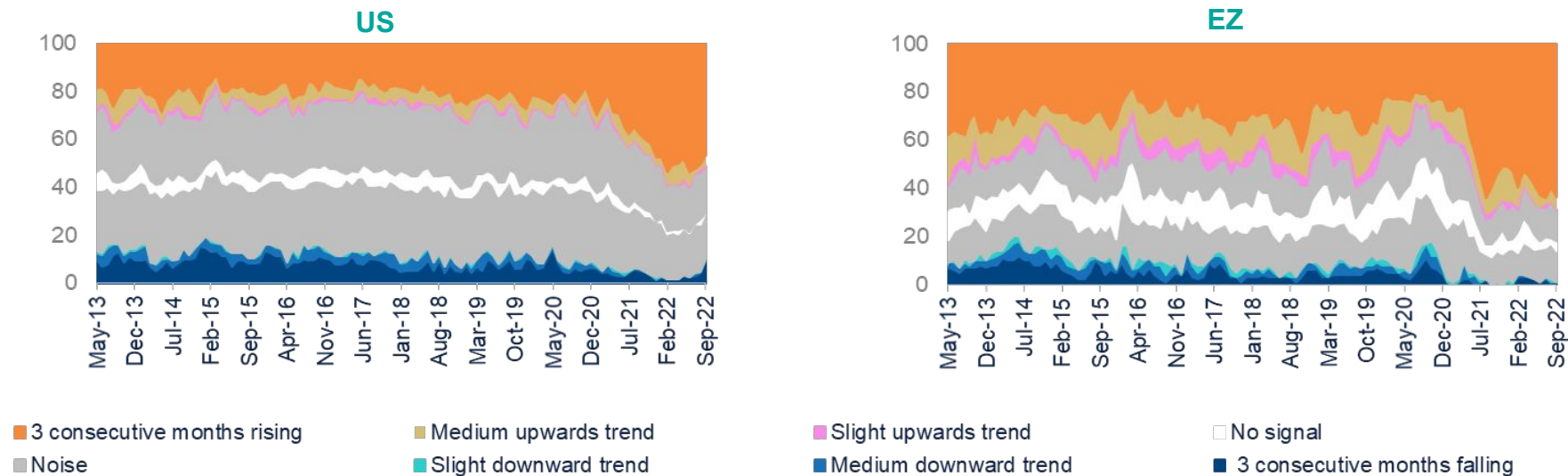
WEIGHTED* PERCENTAGE OF ITEMS WITHIN DIFFERENT INFLATIONARY BRACKETS



*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 stabilized in recent months, with about 40% of the items with frequent price increases



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.

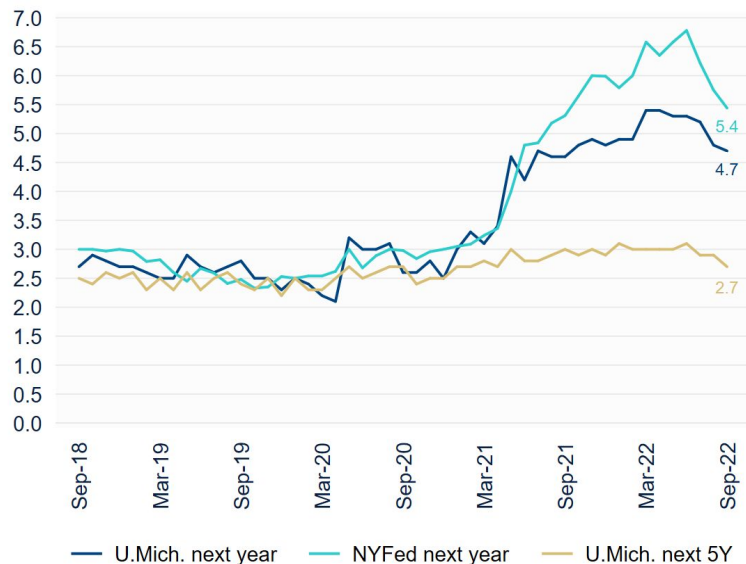
% of items* with prices signaling; * items within the CPI basket (2 digits) and where.

Source: BBVA Research, Haver Analytics.

US short-term consumer inflation expectations eased further, though still at high levels; slight right shift in distribution of long term inflation expectations

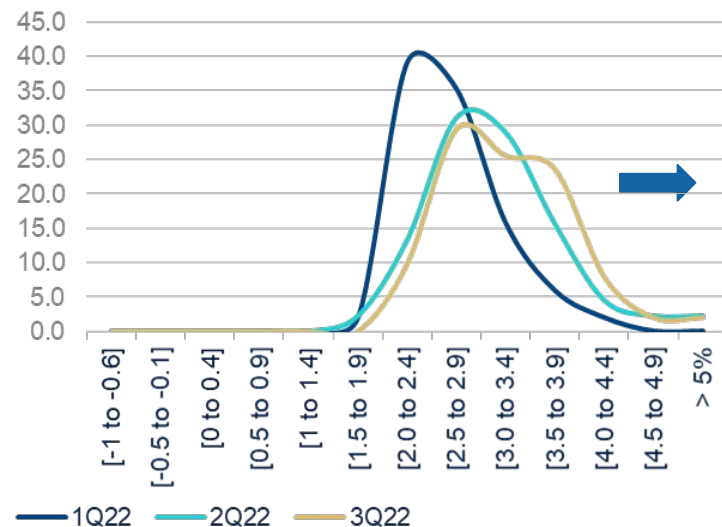
EXPECTATIONS: CONSUMERS SURVEY

(NEXT YEAR, NEXT 5 YEARS)



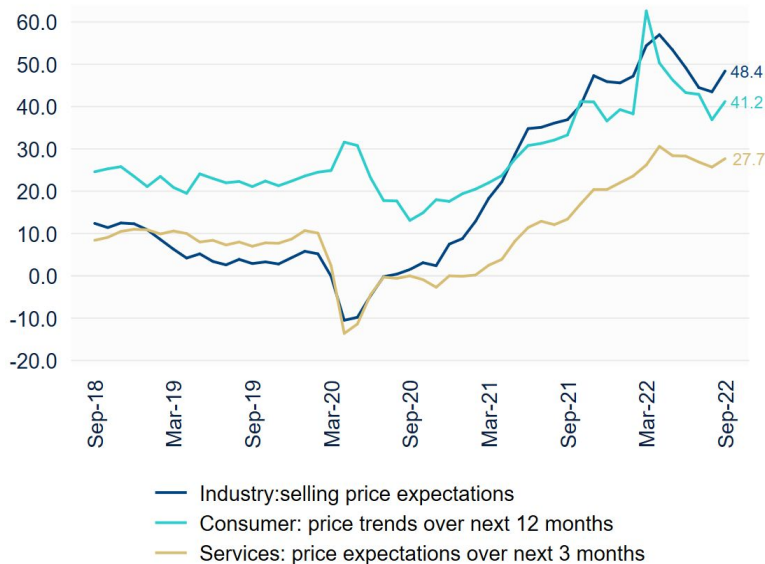
EXPECTATIONS: SURVEY OF PROFESSIONAL FORECASTERS (LONG-TERM)

(LONG-TERM)

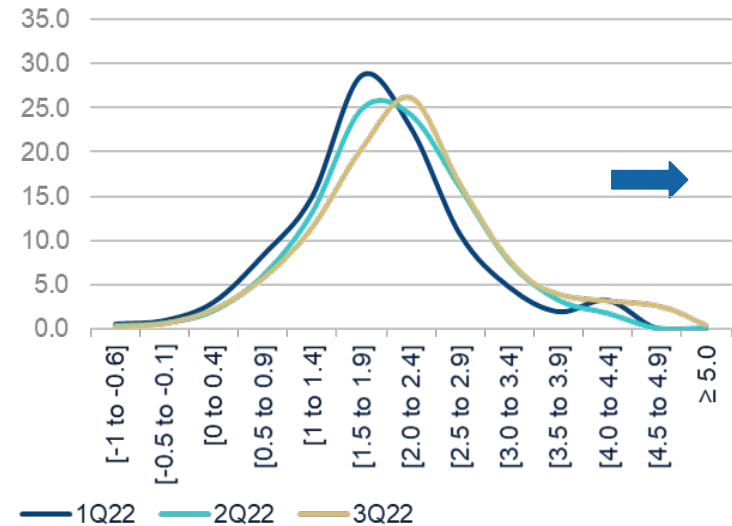


Euro Area short-term inflation expectations saw a slight pick up while the distribution of long-term inflation expectations saw a slight right shift

EXPECTATIONS: CONSUMERS AND PRODUCERS SURVEY* (PERCENT BALANCE)



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



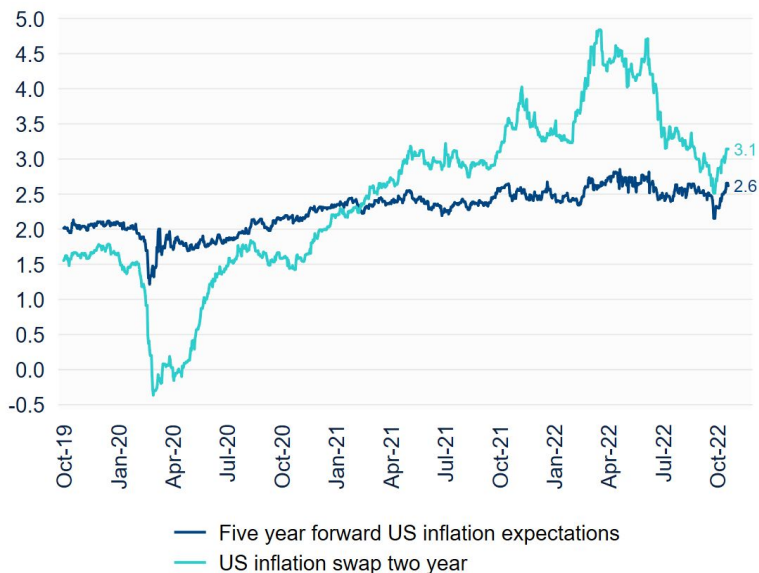
* Percent balance equals percent of respondents reporting an increase minus the percent of respondents reporting a decrease.

Source: BBVA Research, Haver Analytics.

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

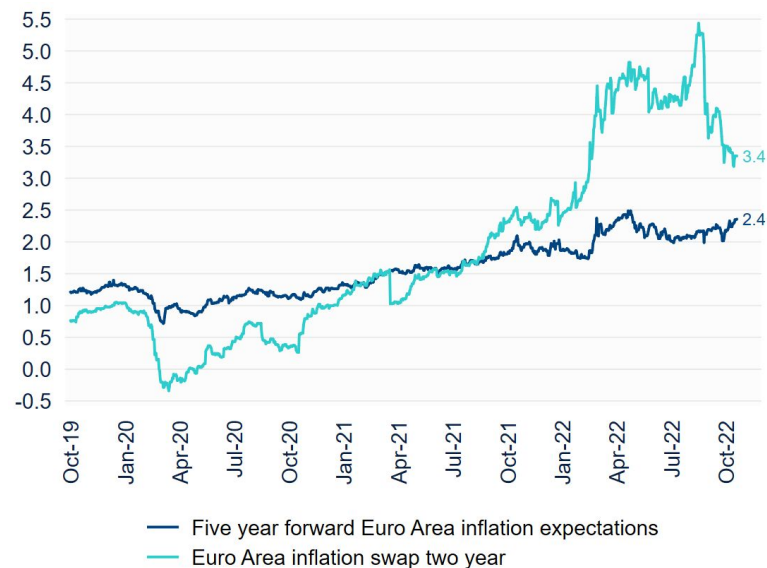
US: MARKET EXPECTATIONS

(5Y5Y FORWARD, 5Y SWAP)



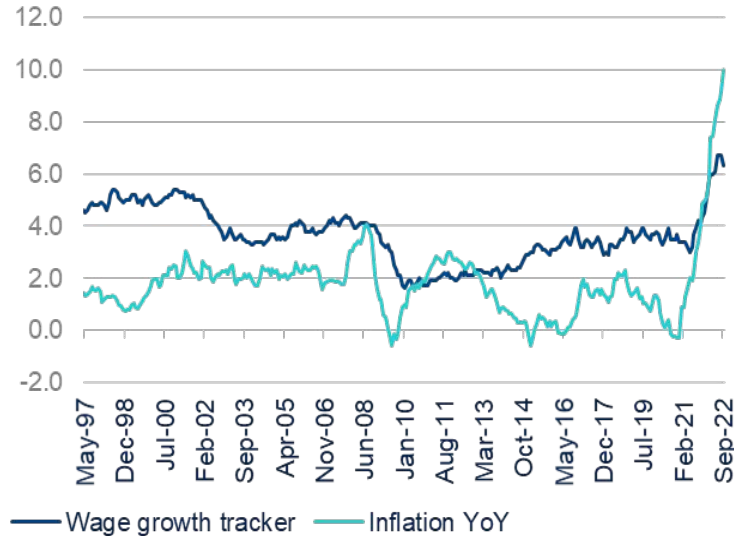
EA: MARKET EXPECTATIONS

(5Y5Y FORWARD, 5Y SWAP)

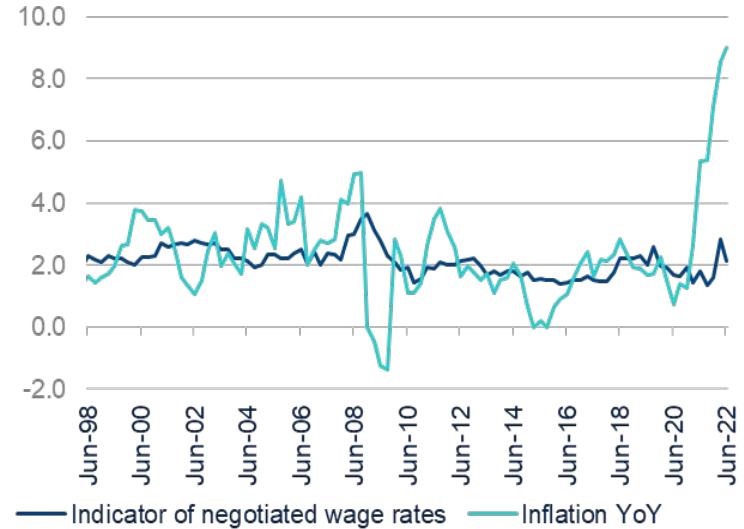


Labor costs in the U.S. continue to move higher in line with rising inflation, while nominal wages in Europe are yet to show strong evidence of acceleration

US: CPI AND LABOUR COSTS (YOY%)



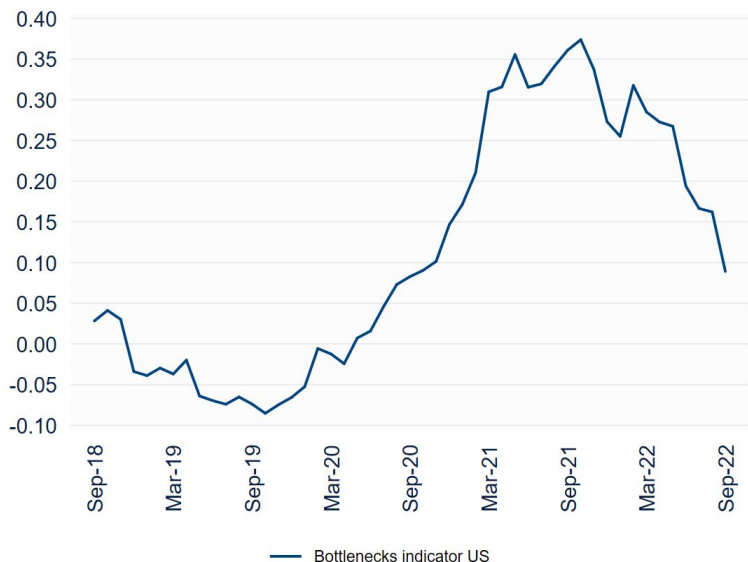
EA: CPI AND LABOUR COSTS (YOY%)



Our supply bottlenecks indicator suggest strains have continued to ease due to weaker consumption, although stress levels are still high in the Euro Area

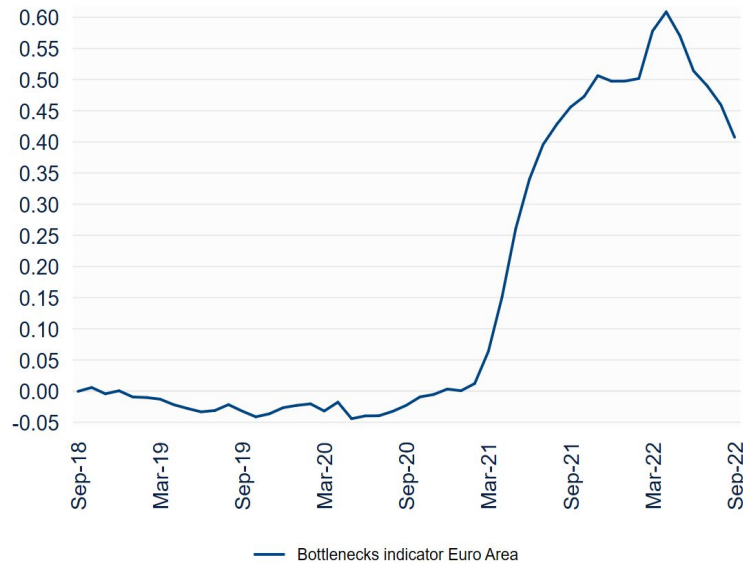
US SUPPLY BOTTLENECKS INDICATOR

(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.

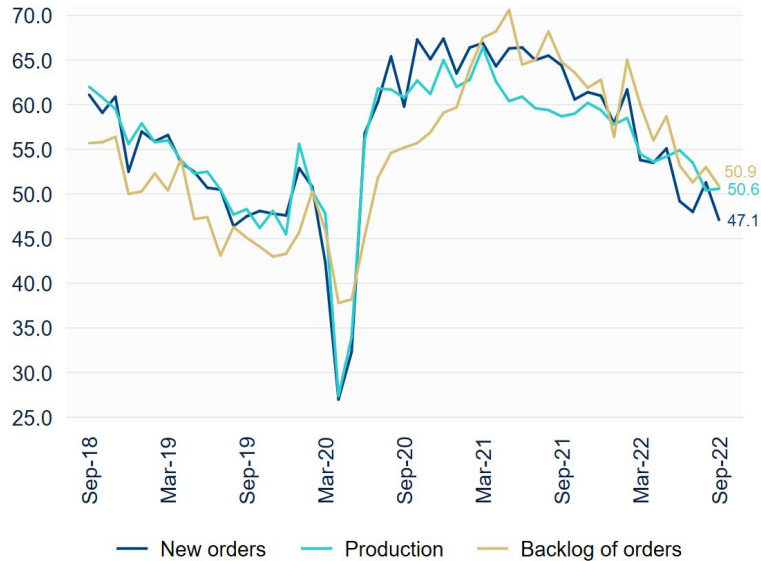
Variables included in the indicator: EA19: factors limiting production - Equipment (Percent Balance SA); EA19: Material shortage construction (Percent Balance SA); IFO: Germany: Material shortage in construction (Percent Balance SA); Ea 19: Retail Inventories (Percent Balance SA); Harpex Shipping Index;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

Source: BBVA Research, Haver Analytics.

US manufacturing backlog orders declined as new orders dropped below expansion levels; in the Euro Area, the production-demand gap persisted

US: ISM MANUFACTURING

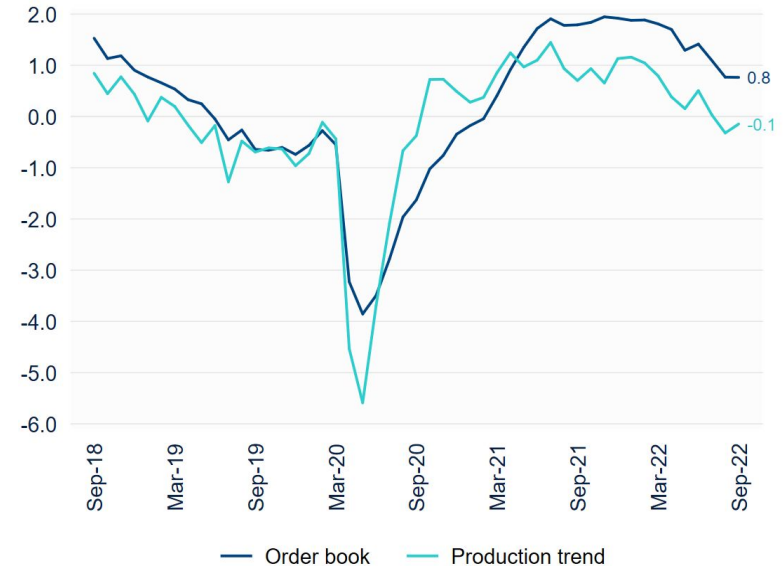
(DIFFUSION INDEX. +50 EXPANSION)



Source: BBVA Research, Haver Analytics.

EA: EC SURVEY MANUFACTURING

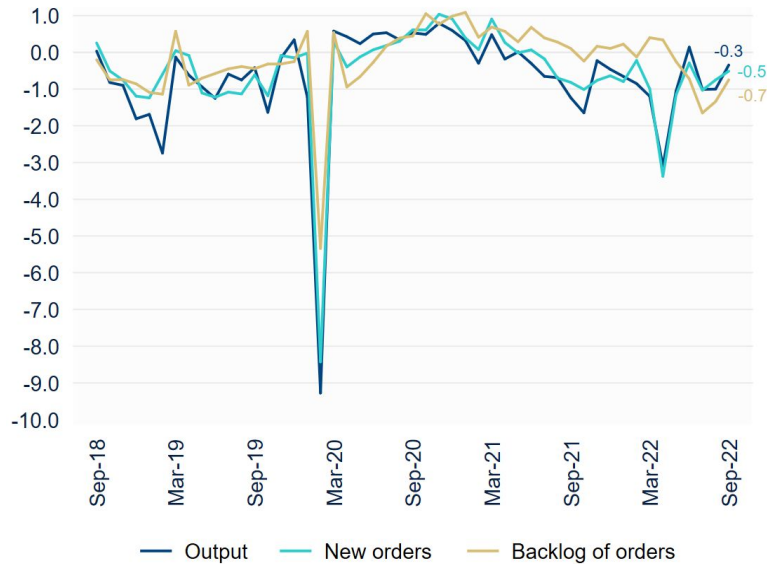
(DEVIATION FROM THE MEAN SINCE 2000)



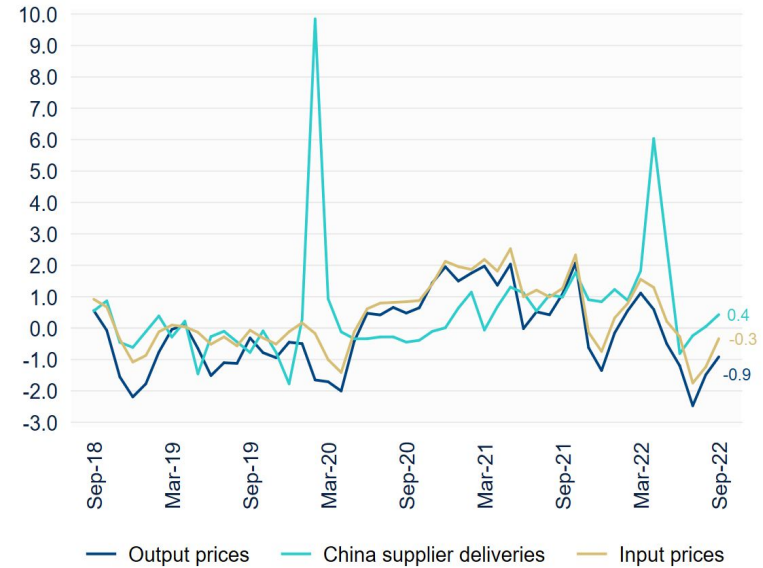
Source: BBVA Research; European Commission Survey, Haver Analytics.

China's demand, production and prices continue to suggest depressed activity despite gradual reopening of the economy from COVID lockdown

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

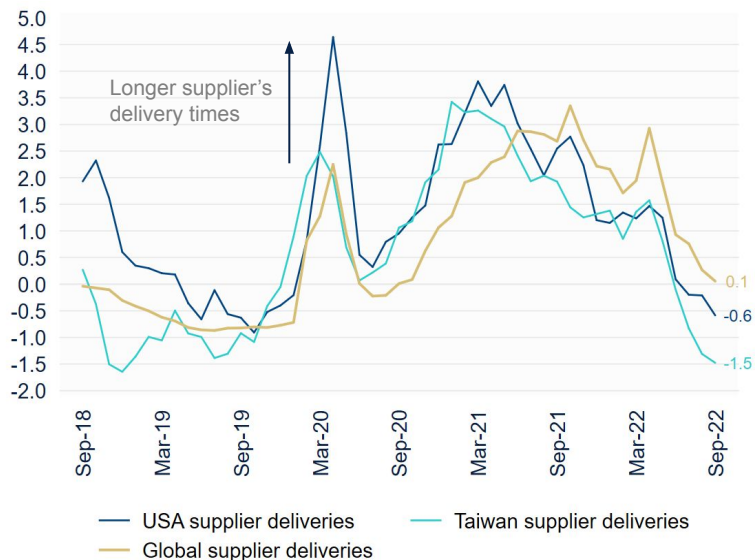


CHINA: MANUFACTURING PMI PRICES AND SUPPLIER DELIVERY TIME (DEVIATION FROM THE MEAN SINCE 2000)

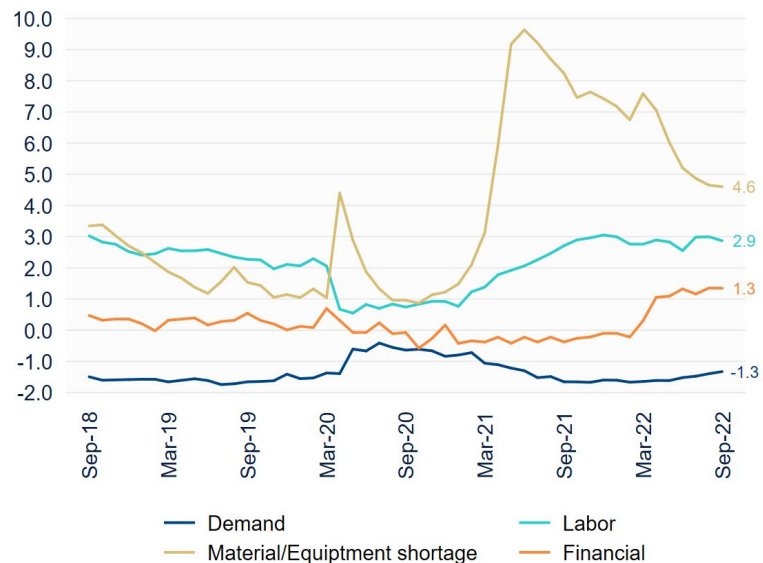


Supplier delivery times declined further globally; Taiwan reported weaker demand at home and abroad; materials shortage is improving gradually in EZ

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



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

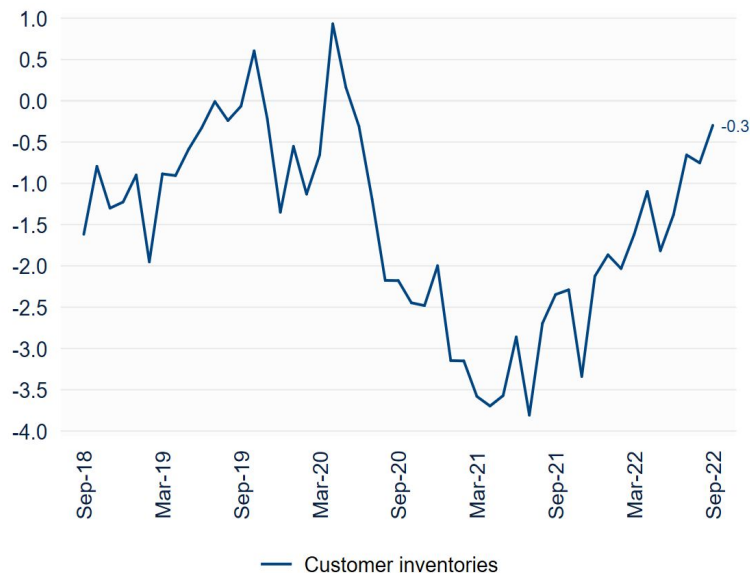


Taiwan represents 63% of semiconductor world sales.
Source: BBVA Research, Haver Analytics.

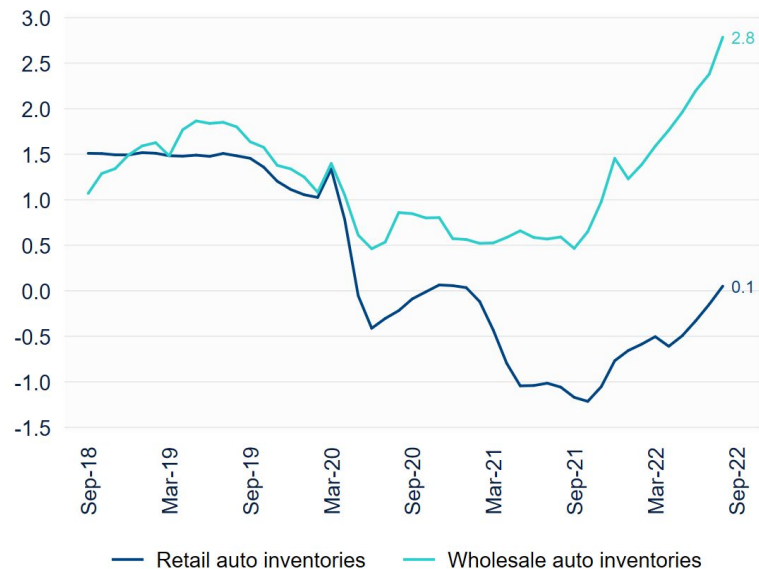
Source: BBVA Research; European Commission survey.

Customer inventories in the US continue to recover, although retail auto inventories are still well below pre-pandemic levels

US MANUFACTURING CUSTOMER INVENTORIES INDEX (STANDARD DEVIATION)



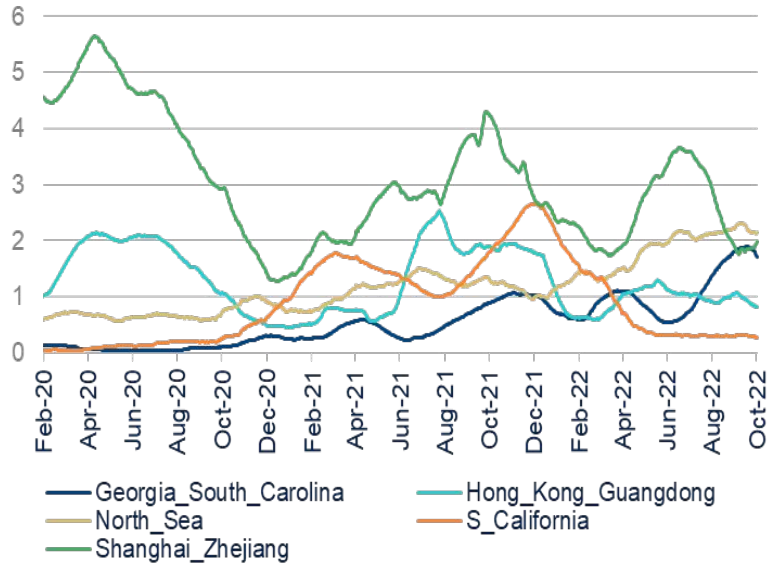
US AUTO INVENTORIES ACROSS SUPPLY CHAIN (DEFLATED BY CPI INDEX BASE: JANUARY 2017)



Weaker demand eased port congestion, but strains at North Sea ports remain high; Russia's trade activity with Asia rose; activity at Ukraine port still weak

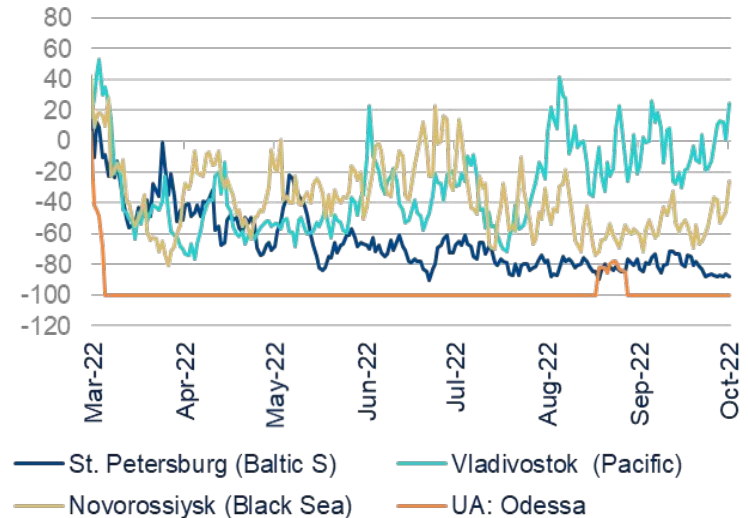
CONTAINERSHIP TRAFFIC AT MAJOR PORTS

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



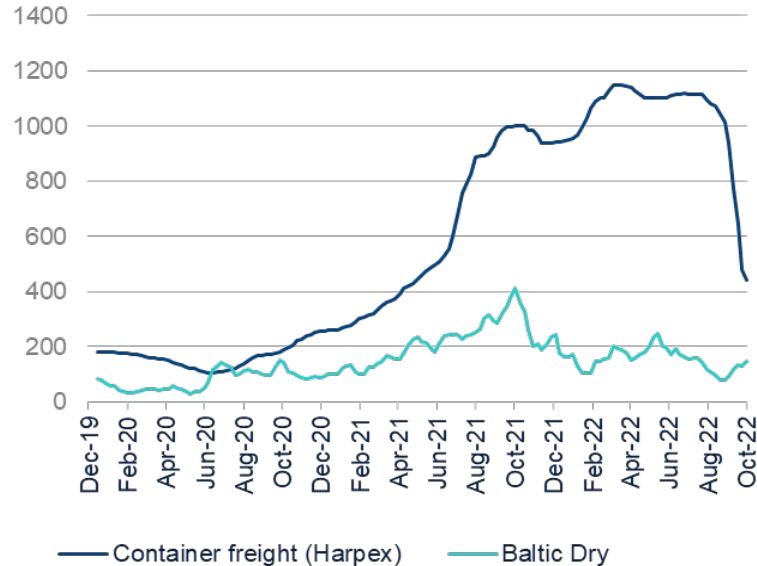
RUSSIA UKRAINE; ARRIVING CONTAINER LOAD

(% YOY CHG.)

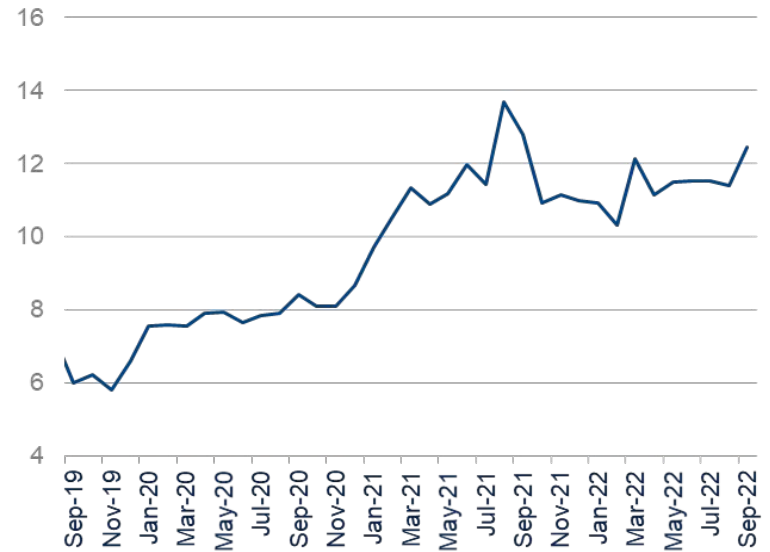


Lower demand from China dragged on container freight while backlog of goods awaiting loading rose; containers fleet is expected to grow in 2023-25

CONTAINER AND AIR FREIGHT AND BALTIC DRY (INDEX BASED JANUARY 2012)



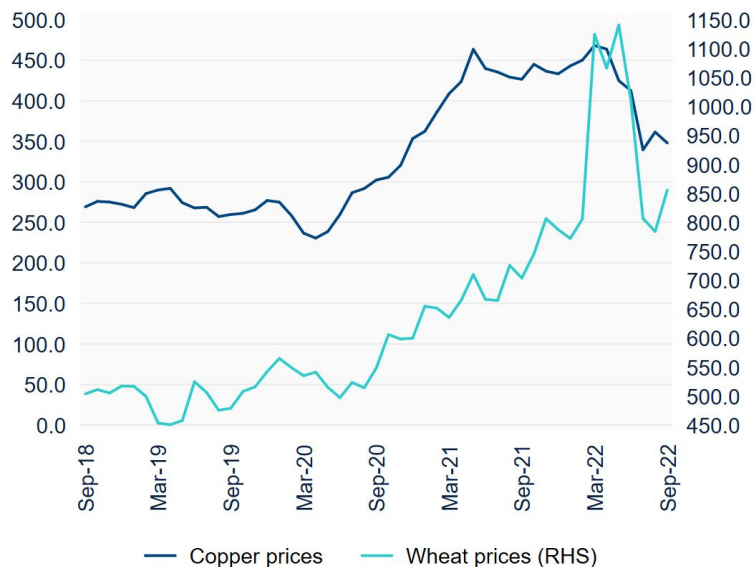
GOODS WAITING FOR CONTAINER SHIPS % AS FRACTION OF GOODS SHIPPED IN THE SEA)



Commodity prices declined despite the ongoing supply disruption in natural gas, on the back of growth concerns and actions to limit gas prices

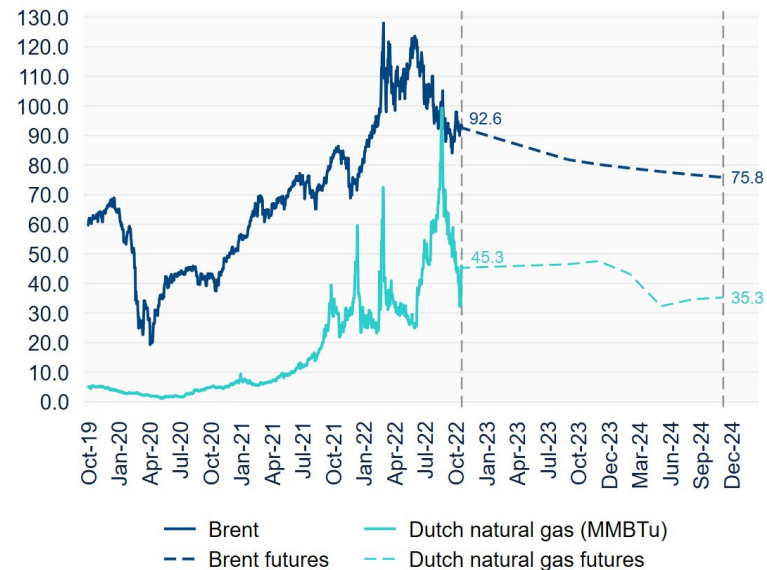
COOPER AND WHEAT PRICES

(USD/LBS;USD/BU)



OIL BRENT AND NATURAL GAS FUTURES

(USD/B and USD/MMBTu)



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