

CEPREMAP / DBNOMICS

# Macroeconomic Outlook - December 2022

## DBnomics

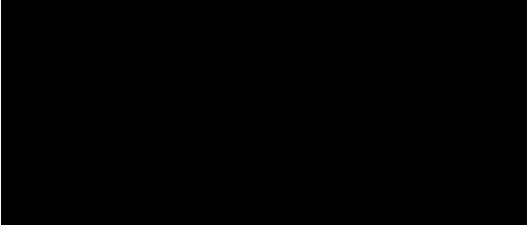
- All data presented in the forthcoming slides are extracted from DBnomics (<https://db.nomics.world/>), an open-sourced databank created at CEPREMAP, and will be automatically updated every Friday at 2:00pm
- The project has been financed by generous grants from Banque de France, AFD, DG Trésor, France Stratégie and OECD
- The executive director of the DBnomics project is Christophe Benz
- The comments on the slides have been written by Daniel Cohen and Armand Dubois at CEPREMAP
- Links to the DBnomics data are available in the Appendix
- All materials presented here can be freely used with proper acknowledgment

## Executive summary

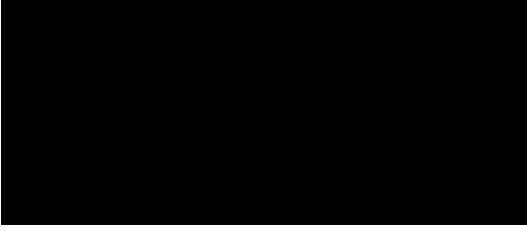
- 2022 is the year when inflation reached record high levels since 1981.
- In response, monetary policy has been tightened up to levels unheard of for the last 20 years.
- Squeezing liquidity may result in severe financial strains, reversing the previous decade of easy money.
- From a textbook point of view, in the case of a supply shock, only a rise of unemployment can calm down wage inflation.
- 2023 is announced as a year of low and potentially negative growth both in the US and in the EZ.
- The sheer threat of a recession has reduced the price of energy, potentially cooling down inflationary pressures worldwide, subject to further OPEC decisions.
- The discrepancy between the tightening pace in the US and in the Euro Area has led to an appreciation of the USD against the EUR. The expectation that US inflation may peak before the EZ could reverse this trend next year.

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## I Growth and inflation in selected G20 countries



## A    The growth slowdown

## Growth in advanced economies

Most of the major Advanced Economies have started a significant growth slowdown, although 2022 European growth has proved to be more resilient than expected

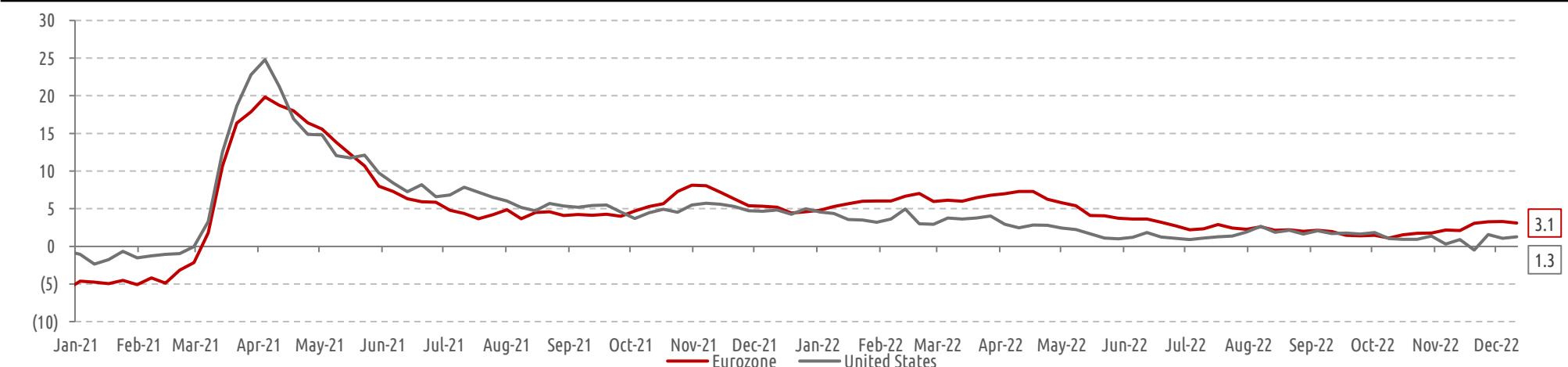
Yearly GDP growth rate (YoY % change)

Country	Yearly GDP growth rate %				
	2020	2021	2022(P)	2023(P)	2024(P)
Euro Area	(6.1) <sup>1</sup>	5.2	3.3	0.5	1.4
Germany	(3.7)	2.6	1.8	(0.3)	1.5
France	(7.9)	6.8	2.6	0.6	1.2
Italy	(9.0)	6.6	3.7	0.2	1.0
UK	(9.3)	7.4	4.4	(0.4)	0.2
USA	(3.4)	5.7	1.8	0.5	1.0
Canada	(5.2)	4.5	3.2	1.0	1.3
Japan	(4.6)	1.7	1.6	1.8	0.9

Quarterly GDP growth rate (% change over the previous period)

Country	Quarterly GDP growth rate %								YoY <sup>2</sup> 18/09	YoY <sup>2</sup> 11/12	
	20Q3	20Q4	21Q1	21Q2	21Q3	21Q4	22Q1	22Q2			
Euro Area	12.4	(0.3)	(0.1)	2.0	2.3	0.5	0.6	0.8	0.3	1.5	3.1
France	18.3	(0.9)	0.1	1.1	3.3	0.6	(0.2)	0.5	0.2	1.3	2.1
Germany	9.0	0.6	(1.5)	1.9	0.8	(0.0)	0.8	0.1	0.4	0.2	2.9
Italy	14.5	(0.8)	0.3	2.5	2.8	0.8	0.2	1.1	0.5	1.9	3.3
UK	16.6	1.2	(1.2)	6.5	1.8	1.6	0.7	0.2	(0.2)	0.5	(0.8)
USA	7.9	1.0	1.5	1.7	0.7	1.7	(0.4)	(0.1)	0.7	1.8	1.3
Canada	9.0	2.1	1.3	(0.6)	1.4	1.7	0.7	0.8	0.7	3.9	3.6
Japan	5.6	1.9	(0.1)	0.3	(0.5)	1.2	(0.5)	1.1	(0.2)	3.3	0.4

Weekly growth tracker in Advanced Economies (YoY % change) – Since Jan. 2021



## Growth in emerging countries

Repetitive lockdowns are causing a major slowdown in China. Many emerging countries should experience substantial slowdown in 2023

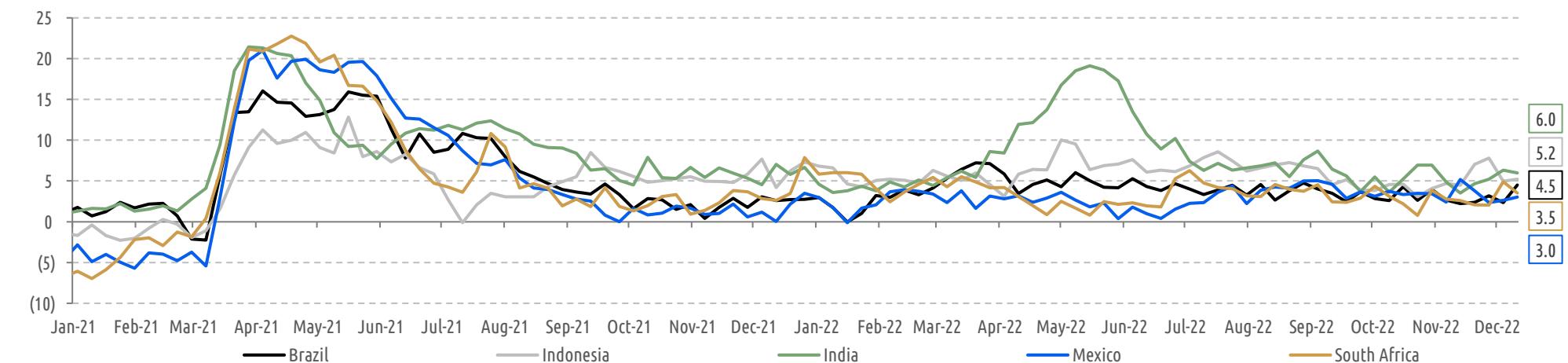
Yearly GDP growth rate (YoY % change)

Country	Yearly GDP growth rate %				
	2020	2021	2022(P)	2023(P)	2024(P)
China	2.2	8.1	3.3	4.6	4.1
S. Africa	(6.3)	4.9	1.7	1.1	1.6
Brazil	(3.9)	4.6	2.8	1.2	1.4
India	(6.6)	8.7	6.6	5.7	6.9
Mexico	(8.1)	4.8	2.5	1.6	2.1
Indonesia	(2.1)	3.7	5.3	4.7	5.1

Quarterly GDP growth rate (% change over the previous period)

Country	Quarterly GDP growth rate %								YoY <sup>1</sup>	YoY <sup>1</sup>	
	20Q3	20Q4	21Q1	21Q2	21Q3	21Q4	22Q1	22Q2	22Q3	11/00	04/12
China	3.2	2.4	0.8	1.4	0.4	1.3	1.6	(2.7)	3.9		
S. Africa	13.8	2.7	0.8	1.4	(1.8)	1.4	1.7	(0.7)	1.6	2.4	3.5
Brazil	8.1	3.2	1.1	(0.3)	0.4	0.9	1.3	1.0	0.4	2.4	4.5
India	21.4	7.8	0.8	(8.6)	8.7	5.0	(0.1)	(0.0)	0.8	5.6	6.0
Mexico	13.2	4.2	0.5	0.7	(1.1)	1.0	1.2	1.1	0.9	2.9	3.0
Indonesia	3.4	2.5	0.9	0.1	0.2	3.8	0.8	0.7	0.6	5.1	5.2

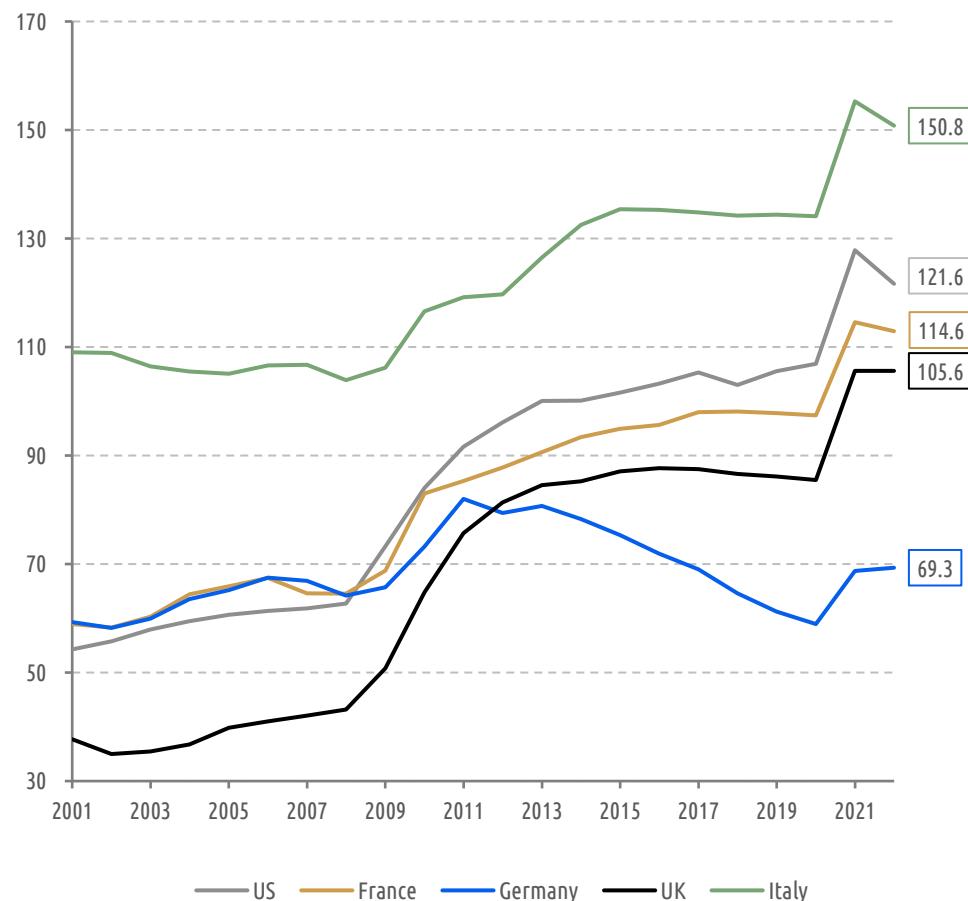
Weekly growth tracker in Emerging Economies (YoY % change) – Since Jan. 2021



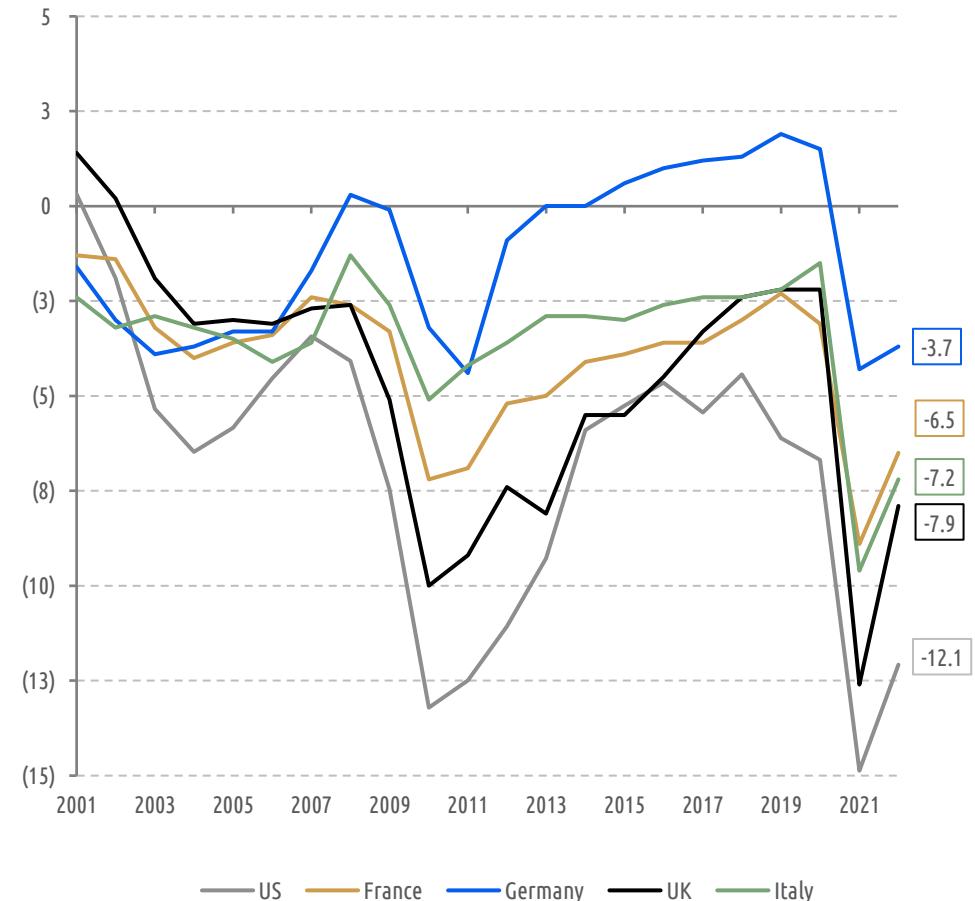
## Government debts and deficits have reached a new plateau in the G5 countries<sup>1</sup>

Fiscal accounts were deteriorated by Covid-19 policy responses with inflation a moderating factor on the evolution of debt

General Government debt (% of GDP) – Since 2001



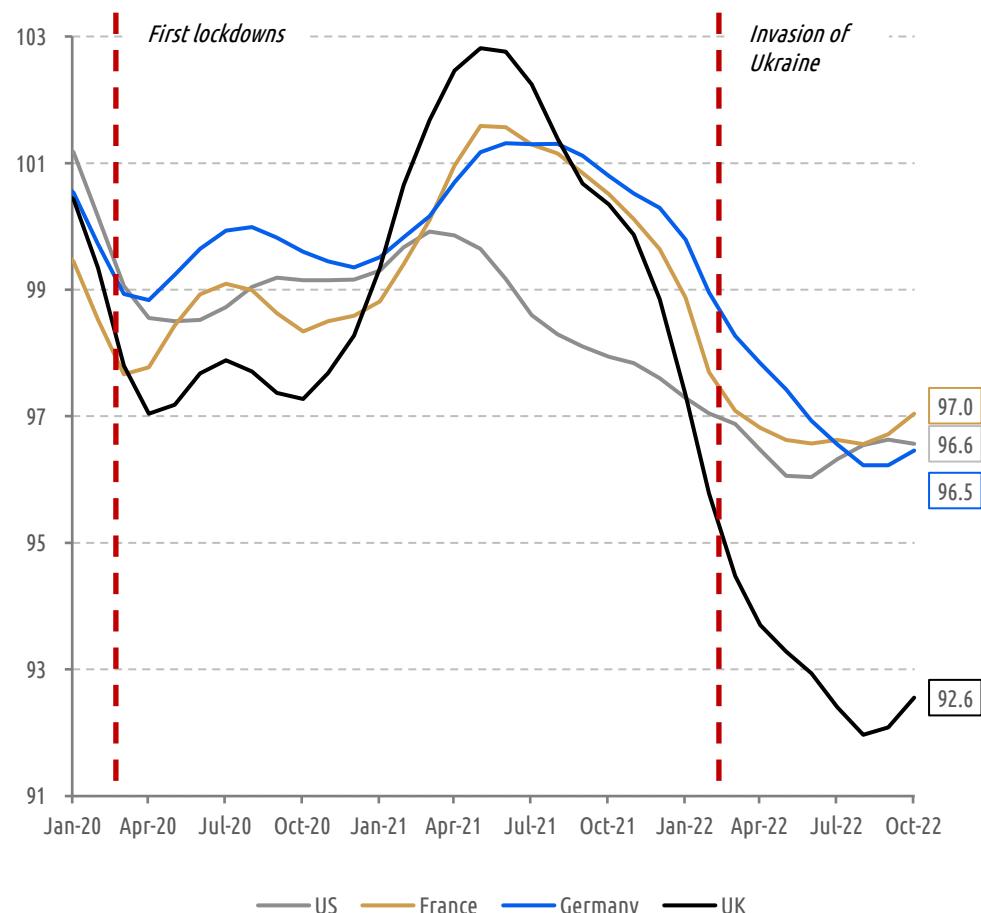
General Government deficit (% of GDP) – Since 2001



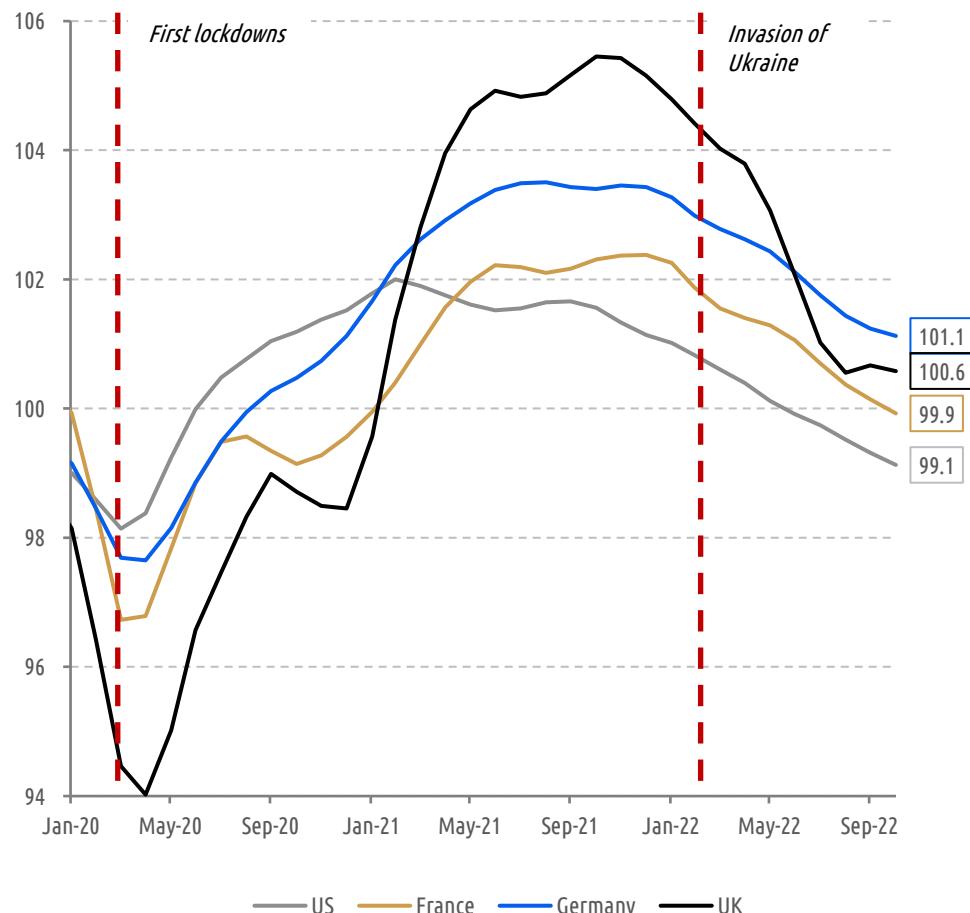
## Consumer confidence indicators are falling in the G4 countries<sup>1</sup>

Business confidence, however, while below post-Covid peaks, remains at pre-crisis level

**Consumer confidence indicator – Since Jan. 2020**

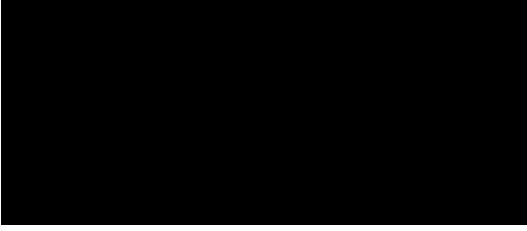


**Business confidence indicator – Since Jan. 2020**



Source: OECD as of November 2022

Note: (1) G4 includes France, Germany, US and UK



## B    The seeds of inflation

## Energy prices have sharply increased over the last 2 years... - (1/2)

Post Covid recovery has raised commodity prices, even prior to the Ukrainian invasion

**Oil prices in historical perspective (USD per barrel)**



**Natural Gas (Dutch TTF) prices in historical perspective (€/MWh) – Jan. 23**



**Copper prices in historical perspective (USD/tonne)**



**CBOT Wheat (USD/Bushel)**

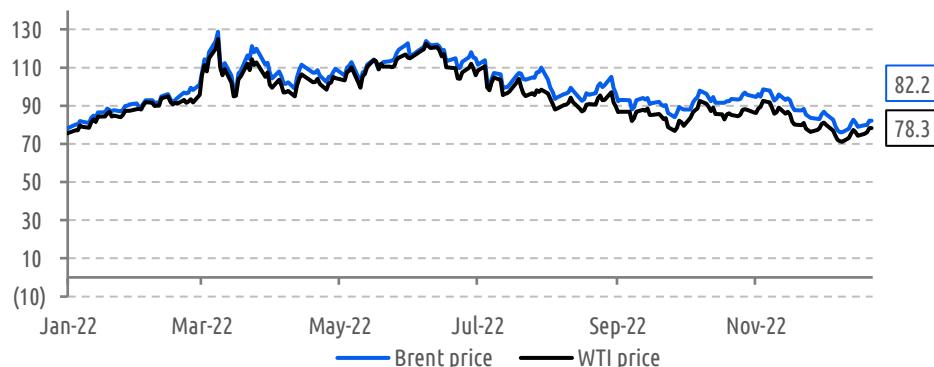


Sources: Nasdaq, ICE, NYSE as of 22/12/2022

## ...but may have already peaked - (2/2)

Ukrainian invasion lifted up prices, but fear of recession are cooling off pressure. European gas prices well below peaks.

**Oil prices in historical perspective (USD per barrel)**



**Natural Gas (Dutch TTF) prices in historical perspective (€/MWh) – Jan. 23**



**Copper prices in historical perspective (USD/tonne)**



**CBOT Wheat (USD/Bushel)**

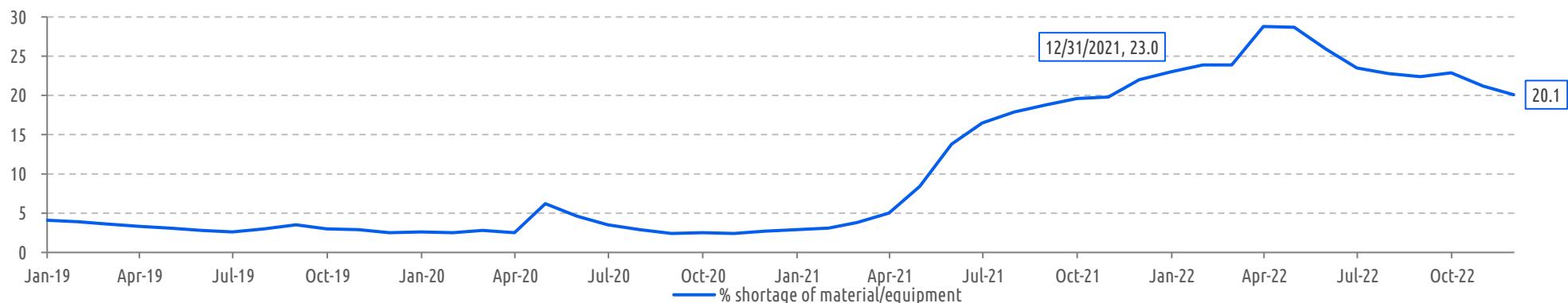


Sources: Nasdaq, ICE, NYSE as of 22/12/2022

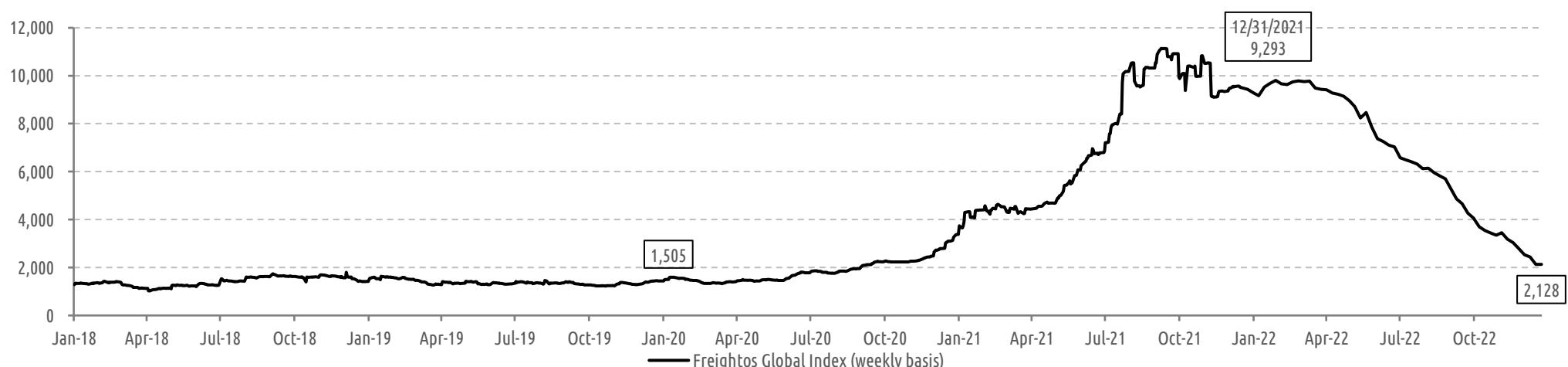
## Supply chain disruptions are easing up significantly

Transportation costs, while still high in historical perspective, are rapidly returning to normal

% of EU business reporting shortages of materials and equipment in the construction industry as a limiting production factor



Shipping Container Index (based on spot rate for 40 feet containers)

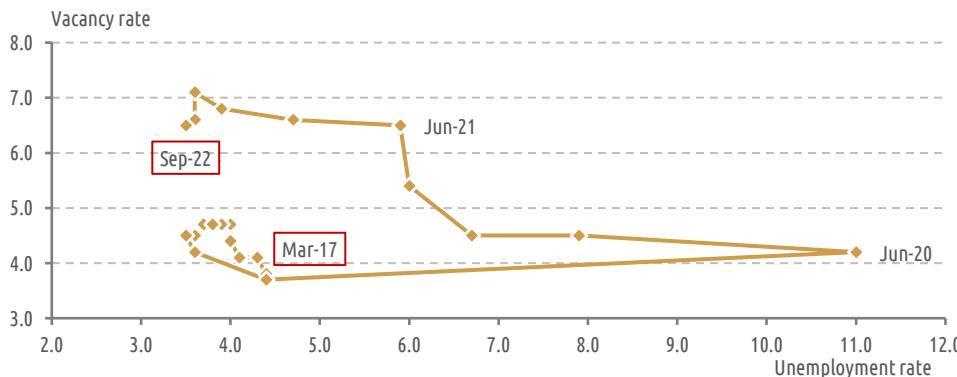


Sources: Eurostat, Freightos Data, Sea intelligence as of 23/12/2022

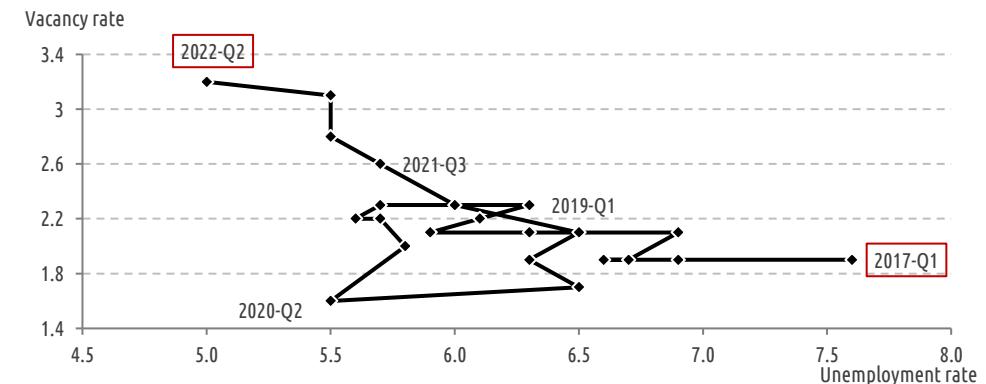
## Labor markets remain tight...

The vacancy/unemployment ratio still at record high levels

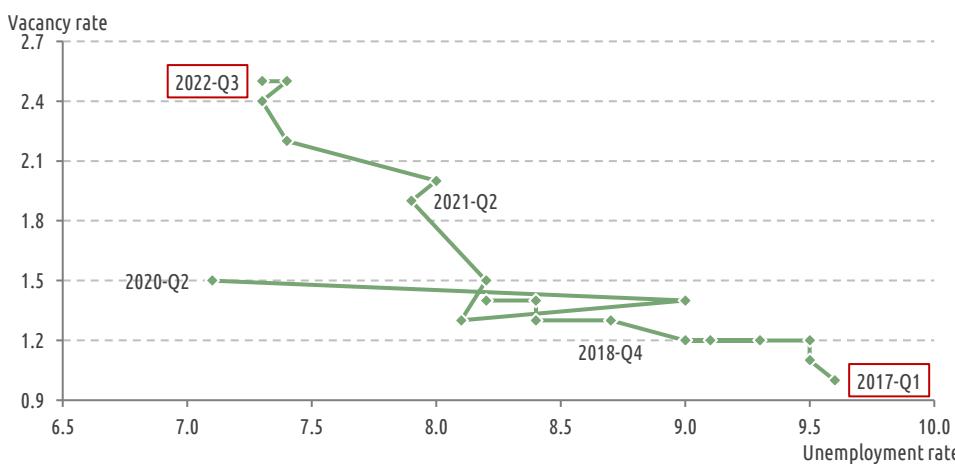
Beveridge curve - USA (Q1-17 – Q2-22), Quarterly



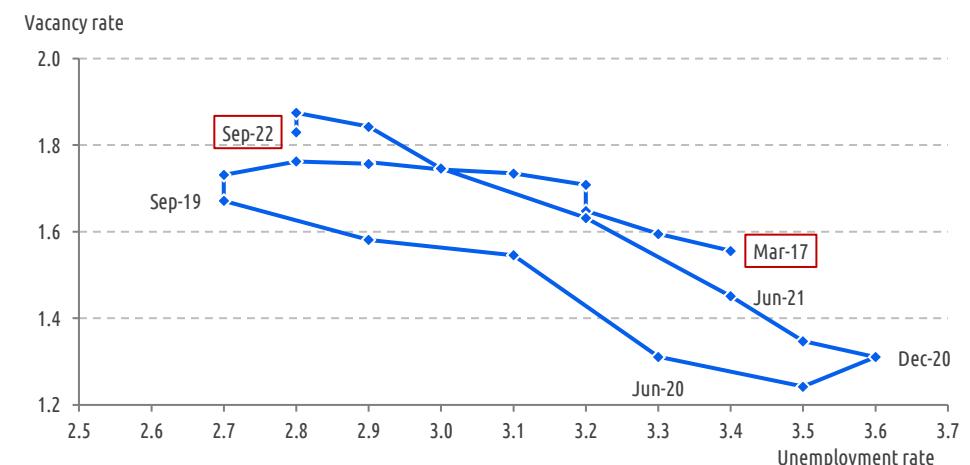
Beveridge curve – Euro Area (Q1-17 – Q2-22), Quarterly



Beveridge curve - France (Q1-17 – Q2-22), Quarterly



Beveridge curve - Germany (Q1-17 – Q2-22), Quarterly



Sources: Bureau of Labor Statistics, Destatis, Insee, Eurostat  
Note: Vacancy rate is the ratio of job openings to total jobs

## ... resulting in rising labor costs, especially in the US

The verdict on EZ wage inflation still open

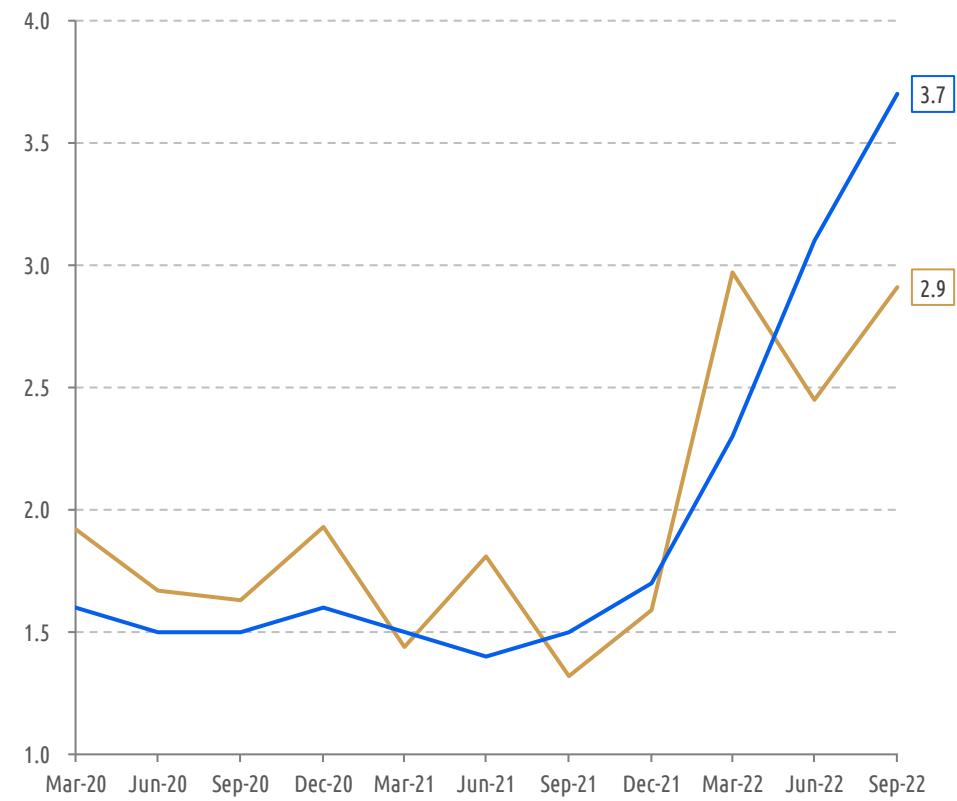
**Wage growth tracker (nominal wage growth of individuals) – US (Monthly)**



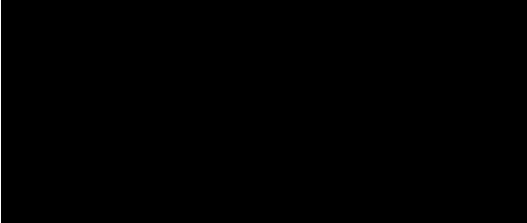
— 3-months moving average - Weighted overall

Sources: Federal reserve of Atlanta, ECB, Dares  
Note : (1) Do not include bonuses

**Indicator of negotiated wages<sup>1</sup> in the Euro Area (Quarterly)**



— Euro Area - Indicator of negotiated wages — France - Salaire mensuel de base (SMB)



## C Inflation unbound

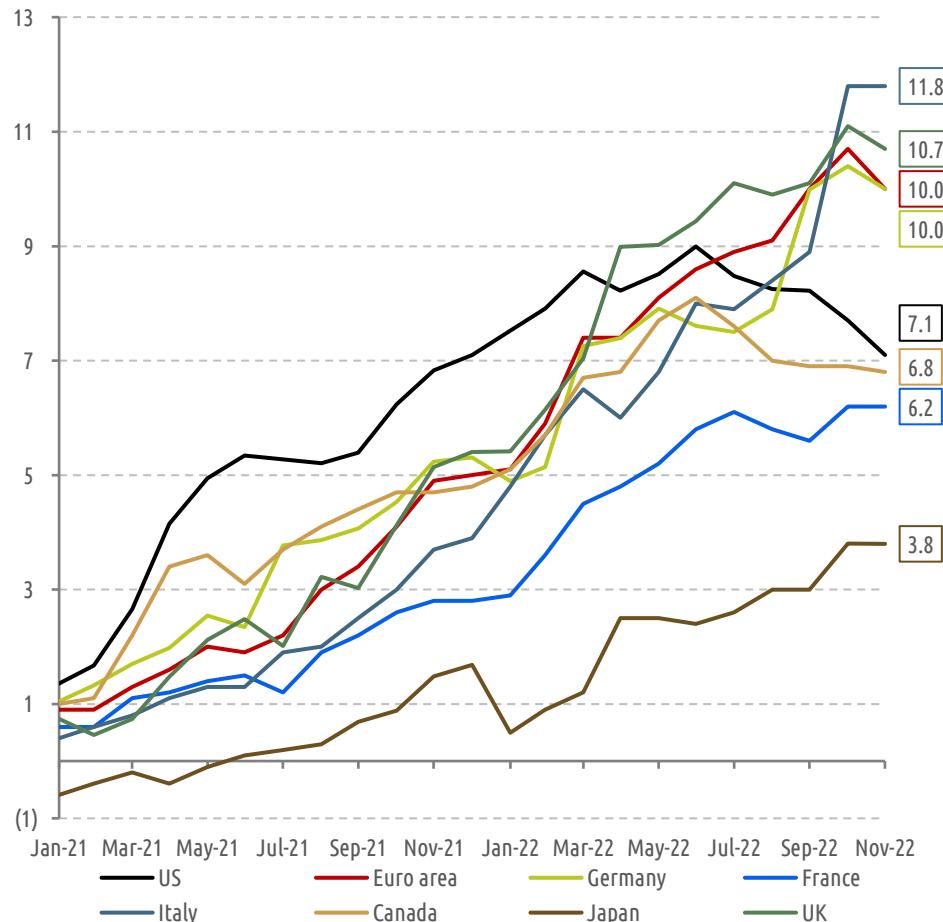
## In 2022, inflation have reached record high levels

Latest data in the US and in Europe shows that inflation has peaked in both regions, although at a higher level in the Eurozone. Core inflation, however, is still higher in the US and the UK than in EZ

CPI and core inflation in advanced economies (YoY % change)

Country	Monthly Year-on-Year inflation rates (%) - 2022											
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	
<b>US</b>	7.5	7.9	8.6	8.2	8.5	9.0	8.5	8.2	8.2	7.7	7.1	
<i>Core</i>	6.0	6.4	6.4	6.1	6.0	5.9	5.9	6.3	6.6	6.3	6.0	
<b>Euro Area</b>	5.1	5.9	7.4	7.4	8.1	8.6	8.9	9.1	10.0	10.7	10.0	
<i>Core</i>	2.3	2.7	3.0	3.5	3.8	3.7	4.0	4.3	4.8	5.0	5.0	
<b>France</b>	2.9	3.6	4.5	4.8	5.2	5.8	6.1	5.8	5.6	6.2	6.2	
<i>Core</i>	1.6	2.5	2.5	3.2	3.7	3.7	4.3	4.7	4.5	5.0	5.3	
<b>Germany</b>	4.9	5.1	7.3	7.4	7.9	7.6	7.5	7.9	10.0	10.4	10.0	
<i>Core</i>	2.9	3.0	3.4	3.8	3.8	3.2	3.2	3.5	4.6	5.0	5.0	
<b>Italy</b>	4.8	5.7	6.5	6.0	6.8	8.0	7.9	8.4	8.9	11.8	11.8	
<i>Core</i>	1.5	1.7	1.9	2.4	3.2	3.8	4.1	4.4	5.0	5.3	5.7	
<b>UK</b>	5.4	6.1	7.0	9.0	9.0	9.4	10.1	9.9	10.1	11.1	10.7	
<i>Core</i>	4.4	5.2	5.7	6.2	5.9	5.8	6.2	6.3	6.5	6.5	6.3	
<b>Canada</b>	5.1	5.7	6.7	6.8	7.7	8.1	7.6	7.0	6.9	6.9	6.8	
<i>Core</i>	3.5	3.9	4.7	4.6	5.2	5.3	5.5	5.3	5.4	5.3	5.4	
<b>Japan</b>	0.5	0.9	1.2	2.5	2.5	2.4	2.6	3.0	3.0	3.8	3.8	
<i>Core</i>	(1.2)	(0.9)	(0.7)	0.8	0.8	0.9	1.2	1.6	1.8	2.5	2.8	

CPI Inflation (YoY % change) – since January 2021



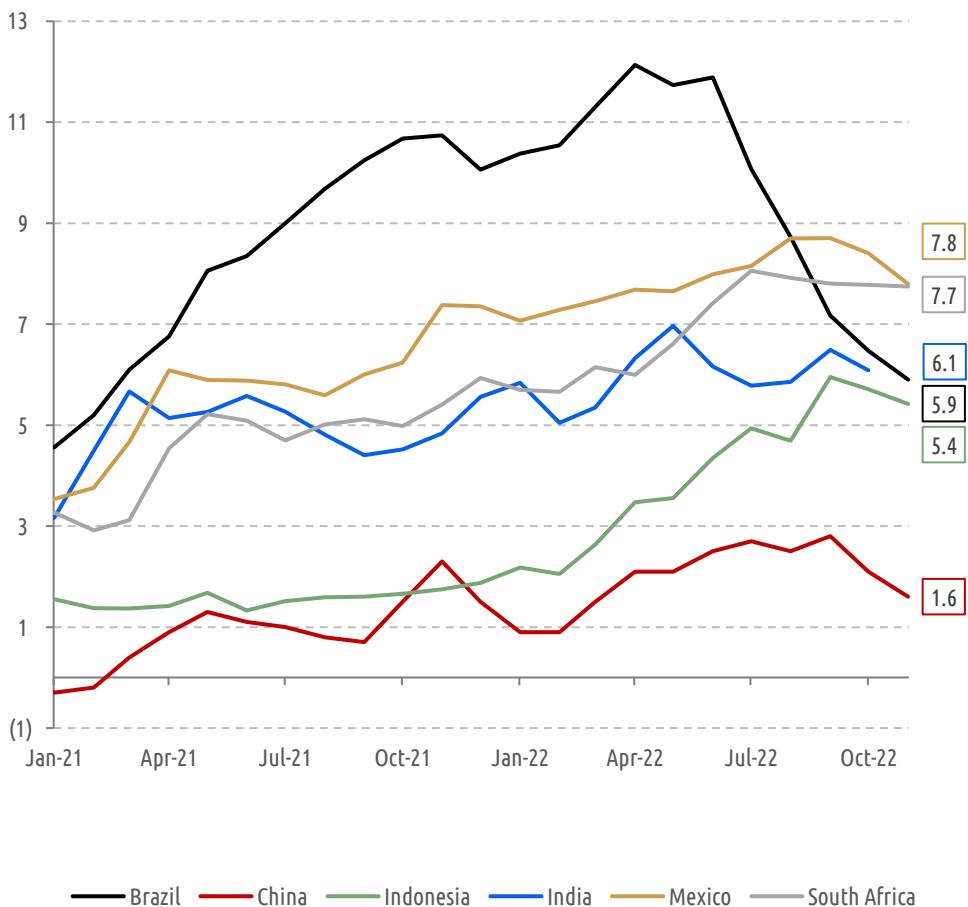
# Inflation in emerging economies

In most emerging countries, inflation also a critical problem. China an exception

CPI inflation in advanced economies (YoY % change)

Country	Monthly Year-on-Year inflation rates (%) – 2022										
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.
China	0.9	0.9	1.5	2.1	2.1	2.5	2.7	2.5	2.8	2.1	1.6
India	5.8	5.0	5.4	6.6	7.0	6.2	5.8	5.9	6.5	6.1	-
South Africa	5.7	5.7	6.1	6.0	6.6	7.4	8.1	7.9	7.8	7.8	7.7
Brazil	10.4	10.5	11.3	12.1	11.7	11.9	10.1	8.7	7.2	6.5	5.9
Mexico	7.1	7.3	7.5	7.7	7.7	8.0	8.2	8.7	8.7	8.4	7.8
Indonesia	2.2	2.1	2.6	3.5	3.6	4.3	4.9	4.7	6.0	5.7	5.4

CPI Inflation (YoY % change) – since January 2021



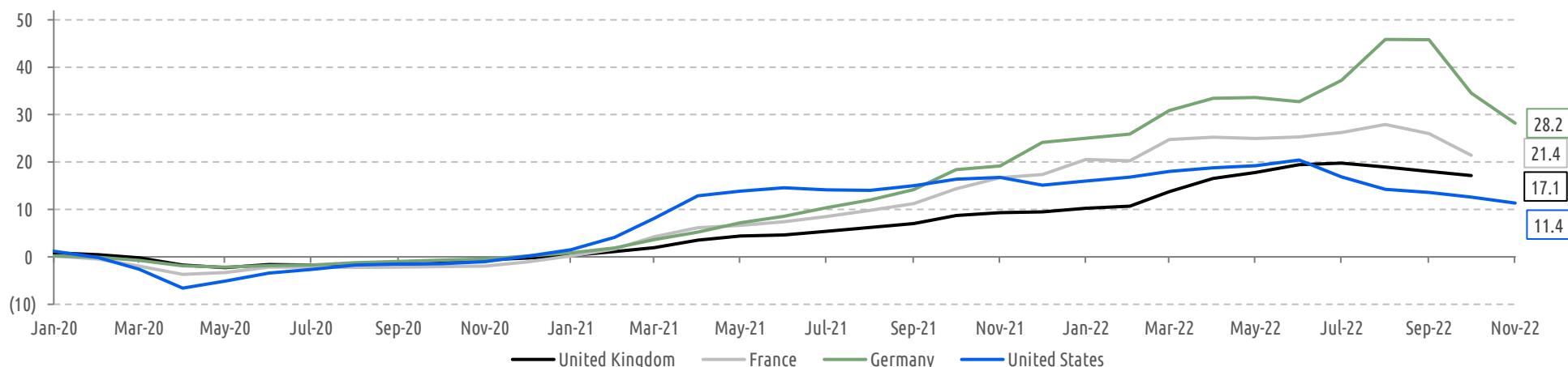
## Producer price index for the G4 countries<sup>1</sup>

Producer price inflation are still way above consumer inflation

Producer price index for industrial products in France, Germany, the UK and the US (YoY % change) – Since Jan. 2022

Producer price index for industrial products in France, Germany, the UK and the US (YoY % change) – Since Jan. 2020											
Country	01-22	02-22	03-22	04-22	05-22	06-22	07-22	08-22	09-22	10-22	11-22
US	16.0	16.8	18.0	18.8	19.2	20.4	16.9	14.3	13.6	12.6	11.4
Germany	25.0	25.9	30.9	33.5	33.6	32.7	37.2	45.8	45.8	34.5	28.2
France	20.5	20.2	24.8	25.2	25.0	25.3	26.2	27.9	26.0	21.4	-
UK	10.0	10.3	12.0	14.7	15.7	16.5	17.3	16.8	16.3	14.7	-

Producer price index for industrial products in France, Germany, the UK and the US (YoY % change) – Since Jan. 2020



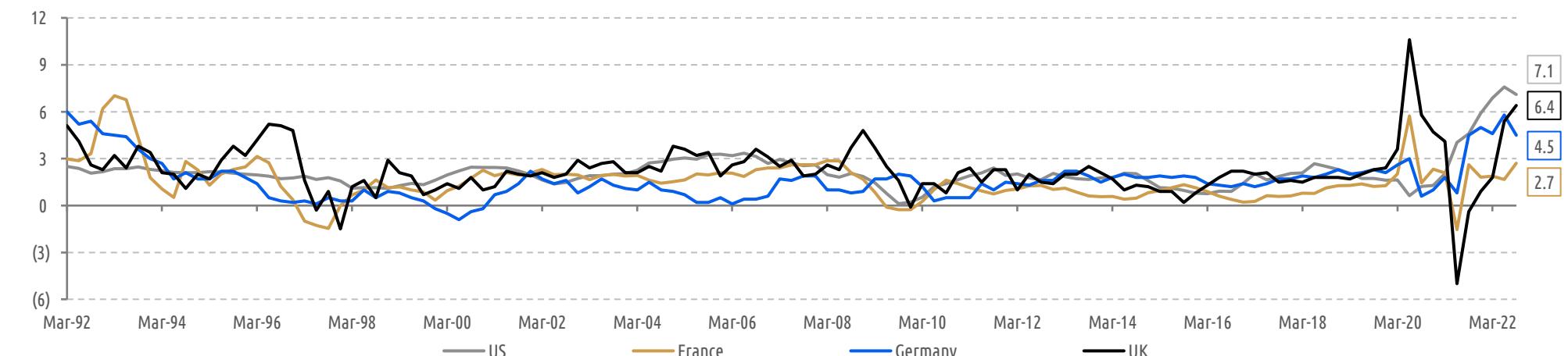
## Implied GDP deflator in G4 countries<sup>1</sup>

Implied GDP deflators have also sharply increased although to a lesser extent than headline inflation

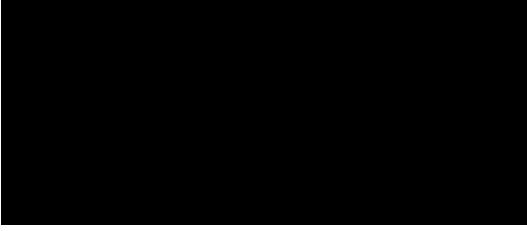
Quarterly implied GDP deflator – Since Q1-2021

Country	Implied GDP deflator (YoY % change) – Since Q1-2019							
	Q1-21	Q2-21	Q3-21	Q4-21	Q1-22	Q2-22	Q3-22	
US	2.0	4.0	4.6	5.9	6.9	7.6	7.1	
Germany	1.8	0.8	4.5	5.0	4.6	5.8	4.5	
France	2.1	(1.5)	2.6	1.8	1.9	1.7	2.7	
UK	4.1	(5.0)	(0.4)	0.9	1.8	5.4	6.4	

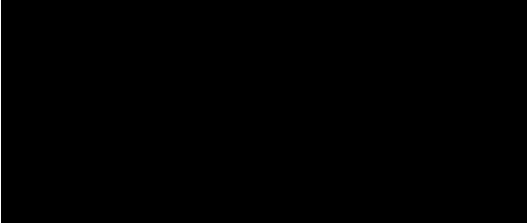
Quarterly implied GDP deflator – Since Q1-1992



Sources: Eurostat, Bureau of Economic Analysis, Office of National Statistics, Insee  
Note: G4 includes France, Germany, US and UK



## II    Monetary policy

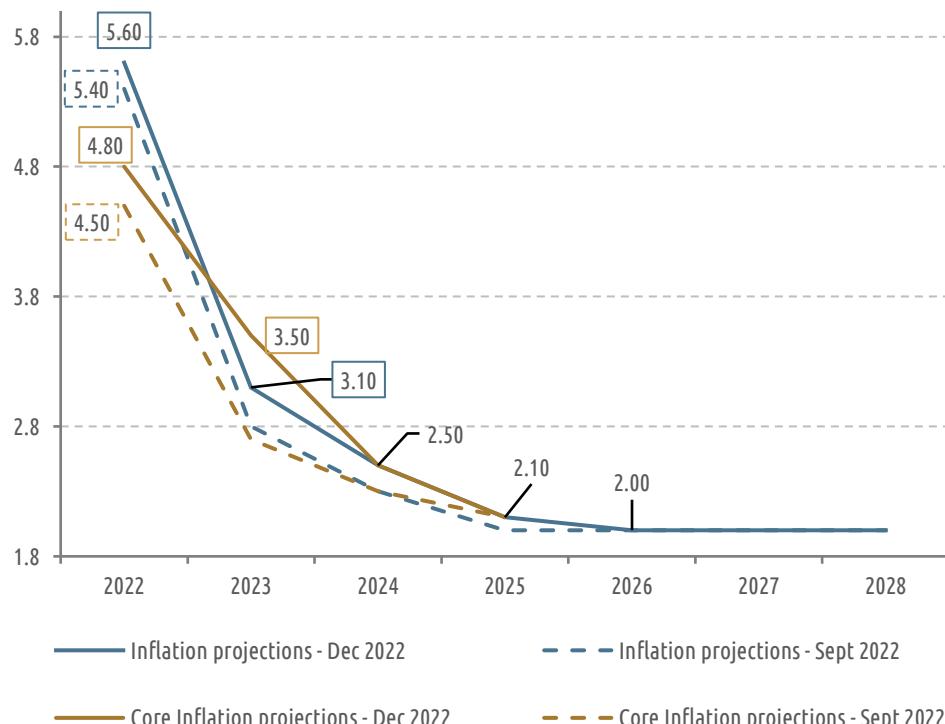


## A In the US

## Monetary Policy Decisions from the Fed (1/2)

Fed has raised rates by 50 bps and signaled its intention to keep squeezing the US economy, after a massive tightening of its monetary policy during the past 4 months

PCE Inflation Projections as of December 2022 (%)



Key considerations

- The target range of the federal fund rates was lifted from 3.75%-4.00% to 4.25%-4.50% on December 14<sup>th</sup>
- "The Committee anticipates that ongoing increases in the target range will be appropriate in order to attain a stance of monetary policy that is sufficiently restrictive to return inflation to 2 percent over time"
- This increase follows a step down in the pace of tightening that marked a 4-month in a row 75 bps increase
- The next meeting will be on the January 31<sup>st</sup> and February 1<sup>st</sup>



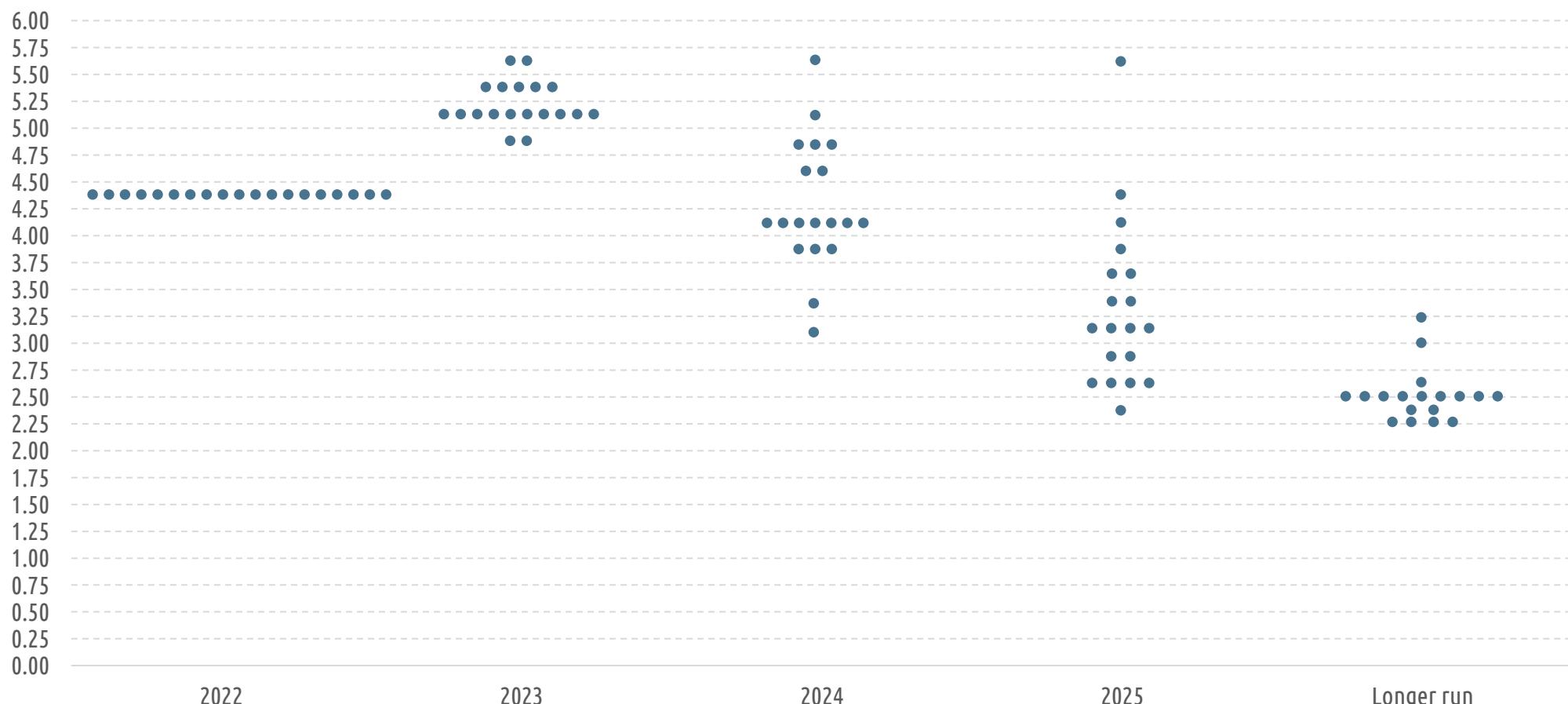
"It will take substantially more evidence to give confidence that inflation is on a sustained downward path"

JEROME POWELL, PRESS CONFERENCE, 14 DECEMBER 2022

## Monetary Policy Decisions from the Fed (2/2)

The Federal Reserve's so-called dot plot shows the median year-end projection for the federal fund rates. The estimate for the end of 2023 is 5.3% implying an additional 100 bps increase

FOMC participants' assessments of appropriate monetary policy: Midpoint of target range or target level for the federal funds rate as of 14 December



Source: Fed as of 14/12/2022

Note: Each shaded circle indicates the value (rounded to the nearest 1/8 percentage point) of an individual participant's judgment of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate at the end of the specified calendar year or over the longer run. One participant did not submit longer-run projections for the federal funds rate.

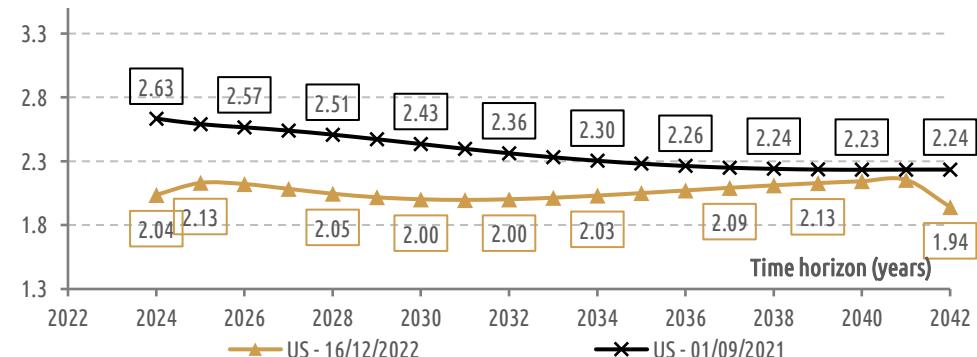
## In the US, positive inflation news has brought down nominal rates well below the 4.0% peak

Latest Fed comments, however, brought rates up again. Expected real rates have turned positive in the longer run as forward rates were lifted-up dramatically

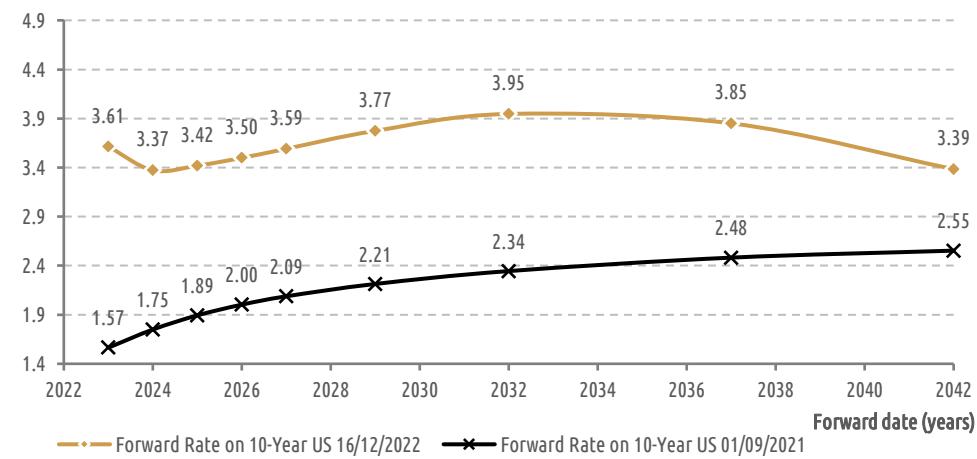
**10-Y Nominal yield – US**



**Inflation Expectations – US (%)**



**Forward Rates on 10-Year U.S. Treasuries (%)**



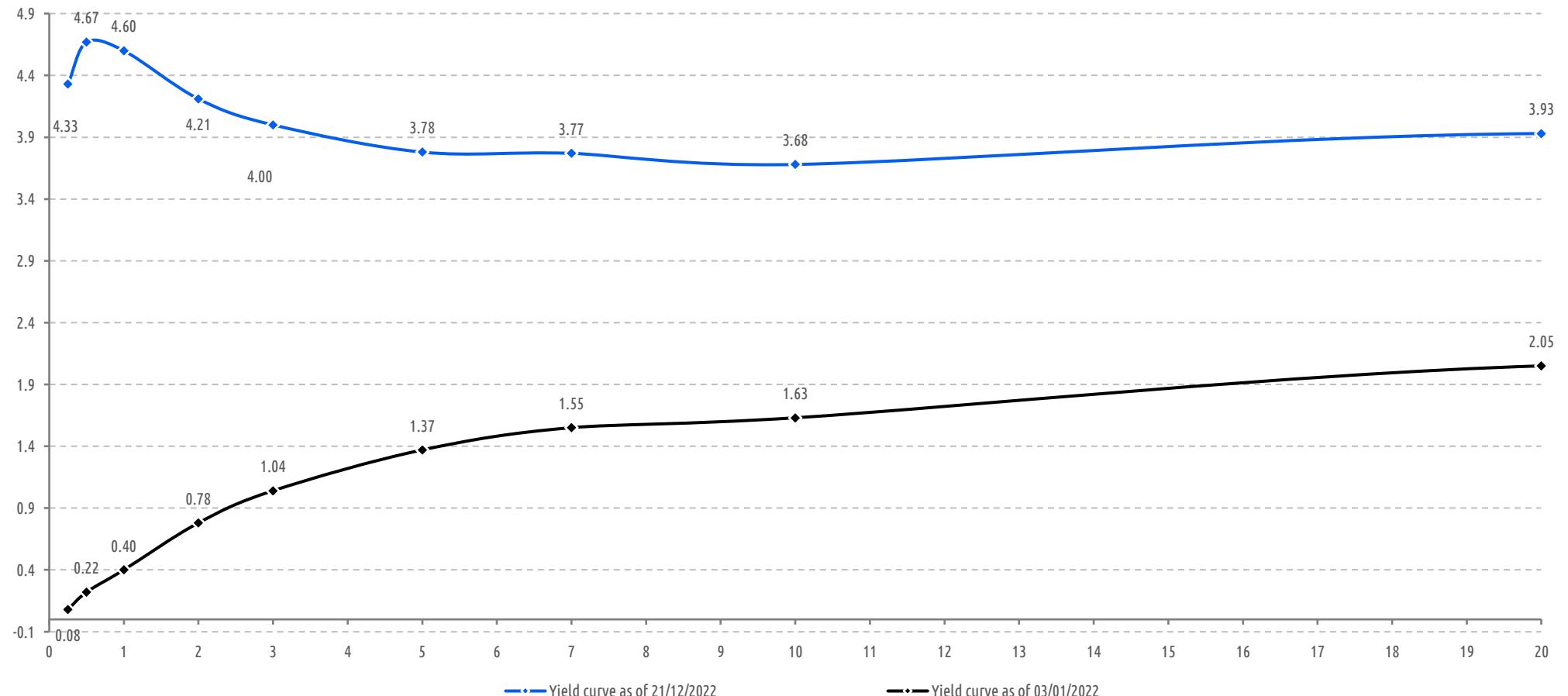
Source: Fed as of 21/12/2022, Internal calculations

Note: Inflation expectations are derived from US indexed bonds (TIPS) and US nominal bonds

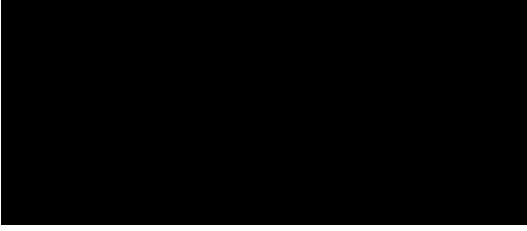
## The US yield curve is inverted, harbinger of a recession

Prior similar episodes include 2008, 2002, 1992, 1983 and 1981

**Yield curve - US**



Source: Fed as of 21/12/2022

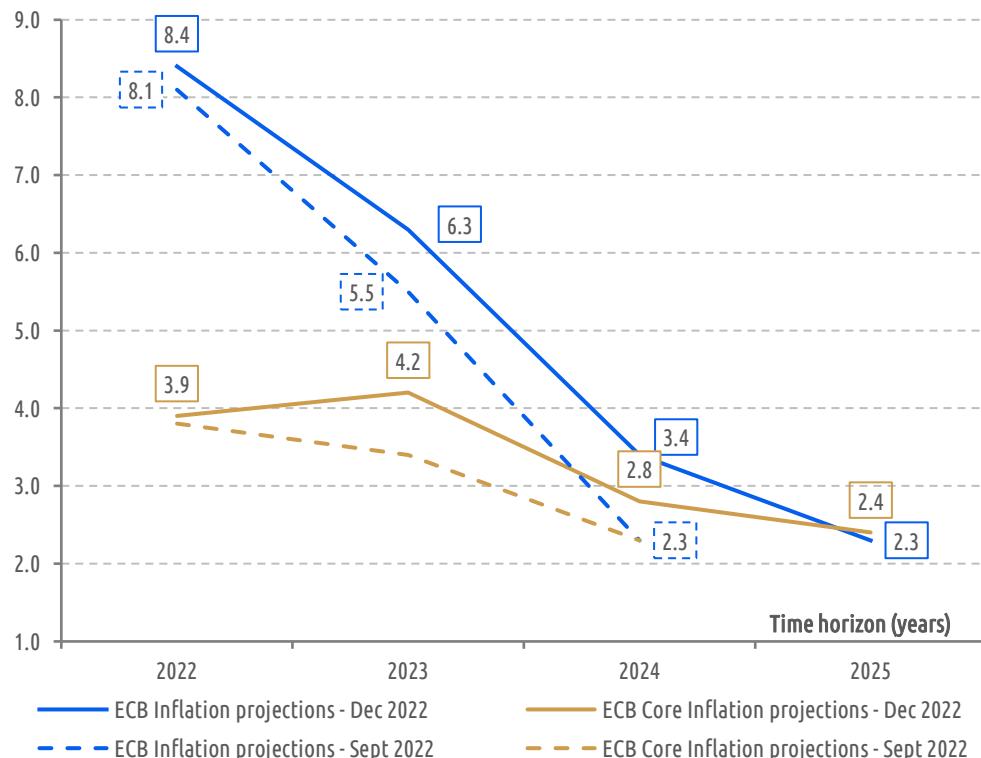


## B In the Euro Area

# The ECB has raised its interest rates by 50 bps in December after two increases of 75-bps in October and September

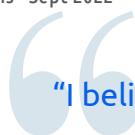
Christine Lagarde has admitted eurozone price pressures may rise again in early 2023, reflecting Europe's stickier inflation problem

CPI and core inflation expectations & projections as of July 2022 (%)



Key considerations

- The Governing Council decided to raise the three key ECB interest rates by 50 basis points, following a 75-bps hike in October for the second time in a row
- Looking ahead, ECB staff have significantly revised in December their inflation projections up and inflation is now expected to average 8.4% in 2022, 6.3% in 2023, 3.4% in 2024 and 2.4% in 2025
- The interest rate on the main refinancing operations has been lifted-up to 2.50%
- The next meeting of the ECB is set on February 2<sup>nd</sup>



**"I believe that in the euro area the neutral rate can be estimated as below or close to 2% in nominal terms, and we could be there by the end of the year"**

FRANÇOIS VILLEROY DE GALHAU, IMF, WASHINGTON, 14 SEPTEMBER

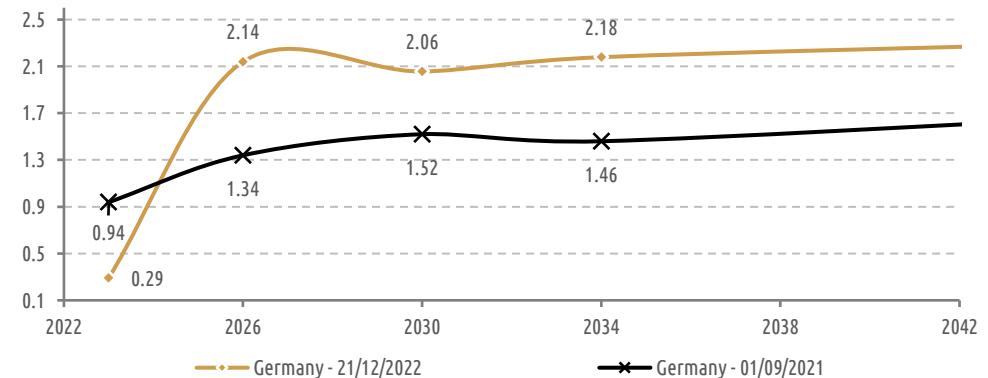
# In the Eurozone, the German bund has peaked up again after Christine Lagarde's hawkish message on next year monetary tightening

Expected real rates near zero in the longer run

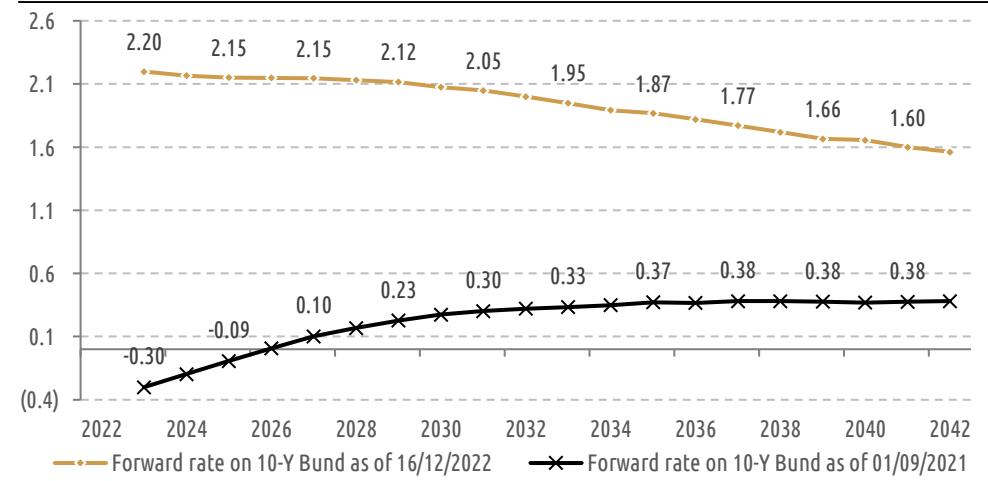
10-Y Nominal yield – German Bund



Inflation Expectations<sup>1</sup> - Germany (%)



Forward Rates on 10-Year German Bund (%)

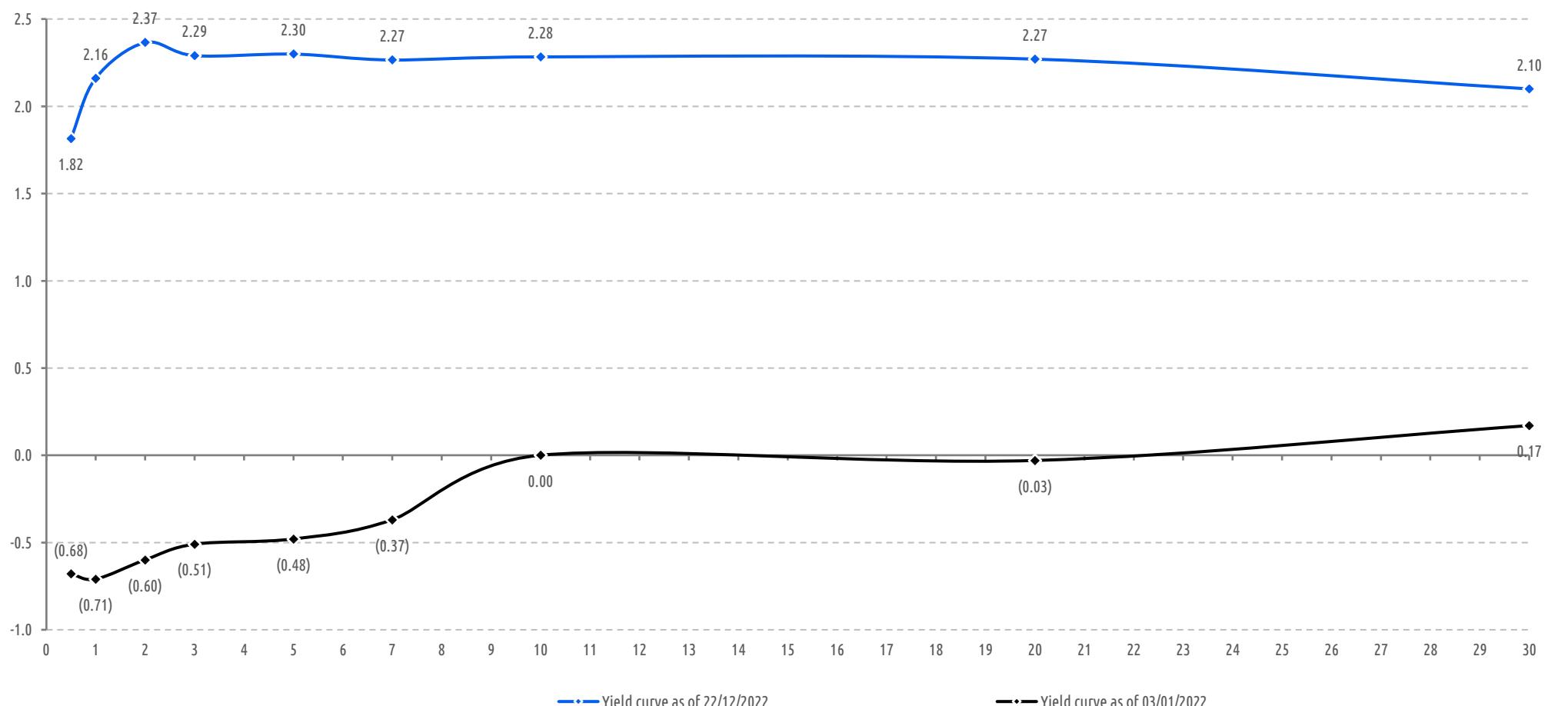


Source: Bundesbank as of 22/12/2022, Internal calculations

Note: Inflation expectations are derived from German indexed bonds and German nominal bonds

## The German yield curve is getting (moderately) inverted for the first time since 2008, reflecting fear of recession/sluggish growth in 2023

**Yield curve – Germany**



Source: Bundesbank as of 22/12/2022

## The Euro has weakened for most of the year 2022, staging a recovery in the final months

Latest US and Europe data lifted-up the euro as the prospect of monetary tightening in the US is easing off, while the ECB remains circumspect on inflation data

Nominal Foreign exchange rate in historical perspective – Since Jan. 2020

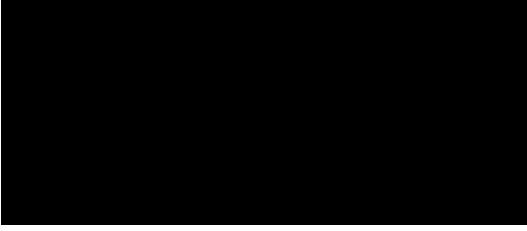


Nominal Foreign exchange rate in historical perspective – Since Jan. 2022



"The level of the euro matters significantly for imported inflation, [...]. A euro that is too weak would go against our price stability objective"

BANQUE DE FRANCE VILLEROY DE GALHAU, 06 MAY

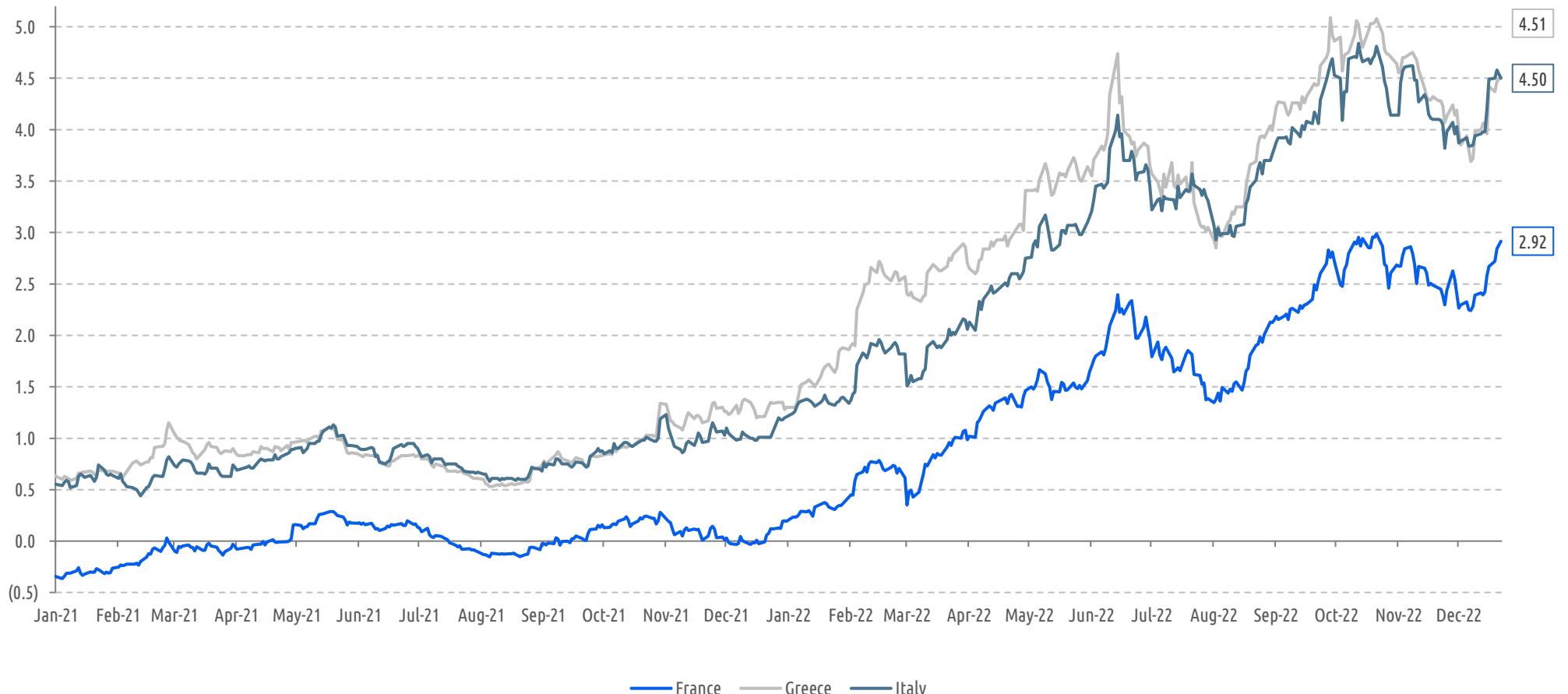


### III Impact on yields and spreads

## In Europe, sovereign yields are mounting ...

In response to the ECB hawkish message

**Italian, Greek and French 10-Y yields – Since Jan. 2021**

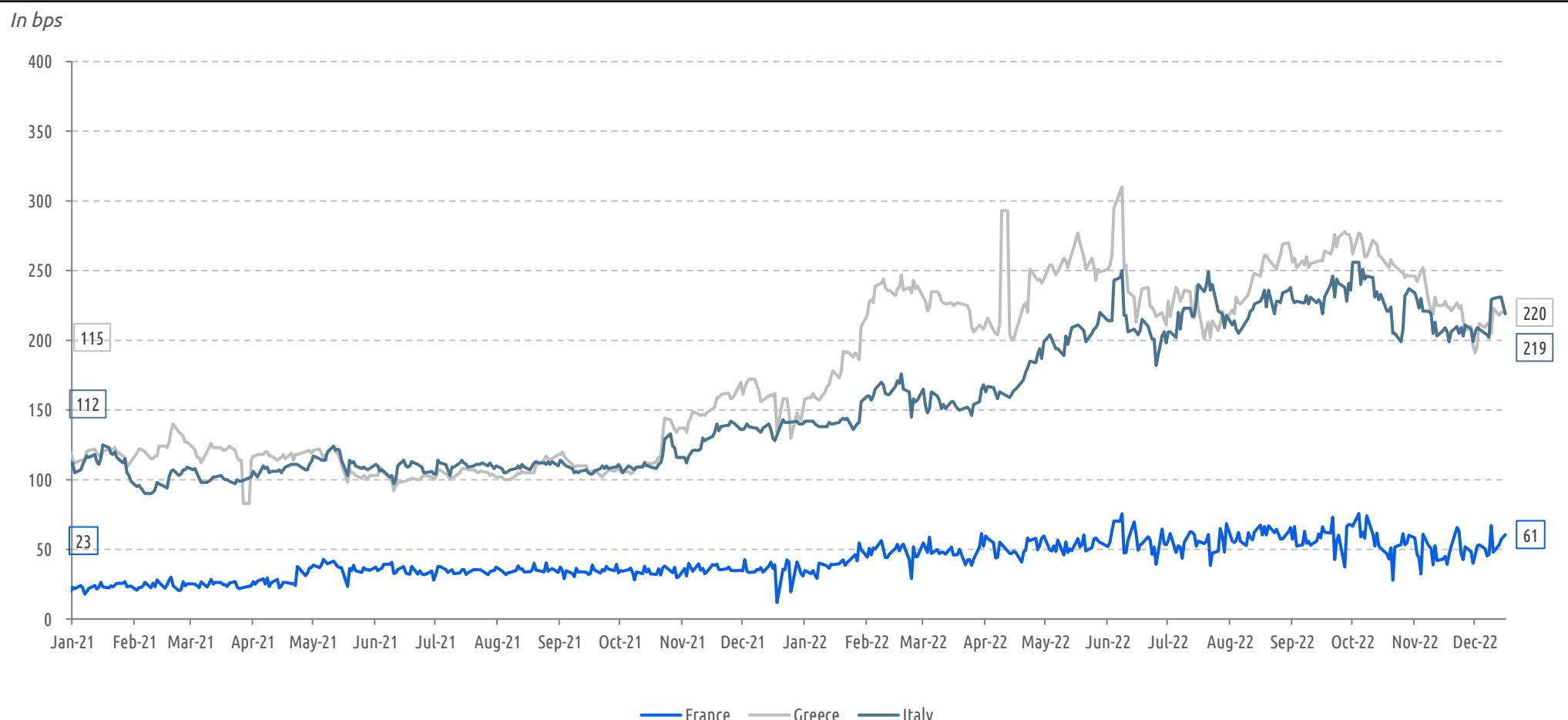


Sources: Banque de France as of 22/12/2022, Eurostat as of 22/12/2022

## ... generating higher spreads in European countries

Greek and Italian spreads reach a higher plateau

**Italian, Greek and French spreads over 10Y German bund – Since Jan. 2021**



Sources: Banque de France as of 22/12/2022, Bundesbank as of 22/12/2022, Eurostat as of 22/12/2022, Internal calculations

## High yield corporate bond spreads have also risen

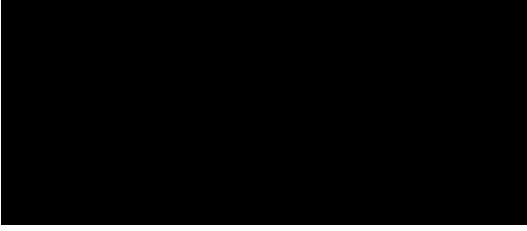
Spreads for corporate bonds<sup>1</sup> in the US and in Europe have increased since the beginning of 2022 and are now c. 100-200 bps above their pre Covid-19 crisis level

**High yield corporate bond spreads – Since 2000**



**High yield corporate bond spreads – Since 2022**



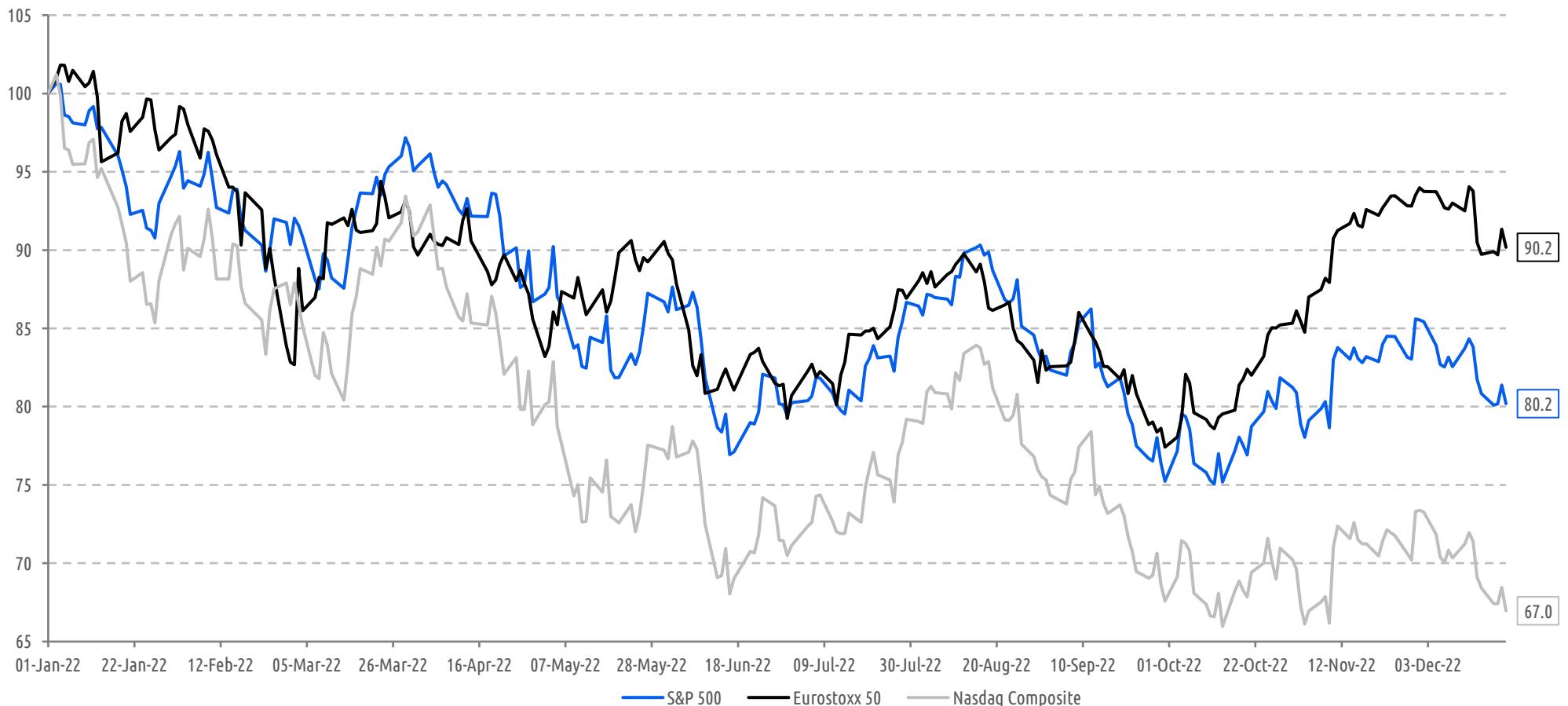


## IV Impact on stock markets

## Stock market prices have been falling since the beginning of 2022

After a sharp rebound, especially in Europe, global stocks tumbled after central banks raised interest rates, rebounded when inflation peaked and fell again following hawkish comments of central banks

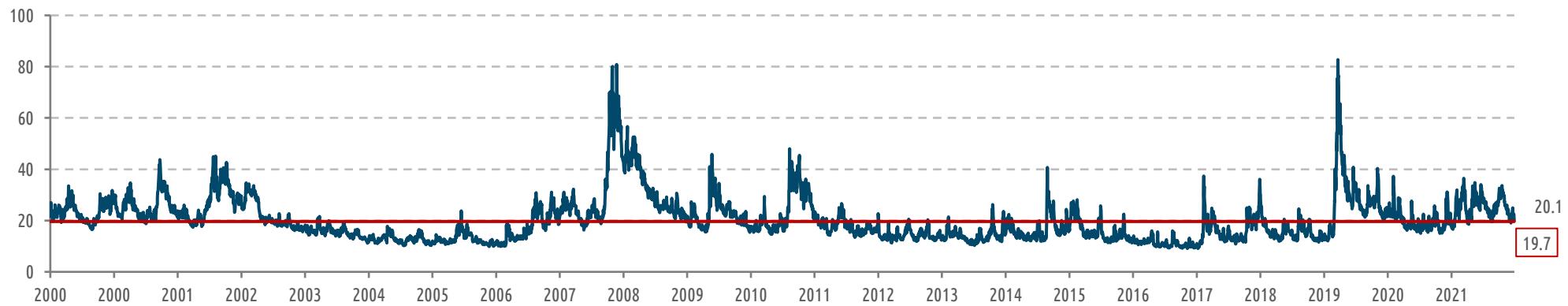
Nasdaq Composite, S&P 500 and Eurostoxx 50 indices – Jan. 2022 = 100



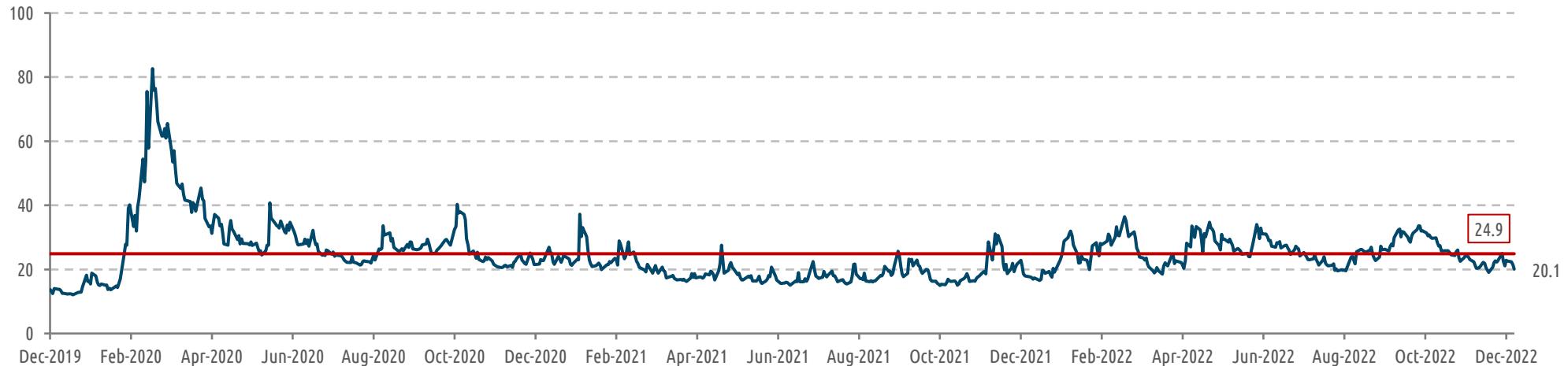
Sources: Boursorama, S&P Dow Jones as of 22/12/2022

## Volatility on US financial markets are (moderately) edging up

VIX index – Since 2000



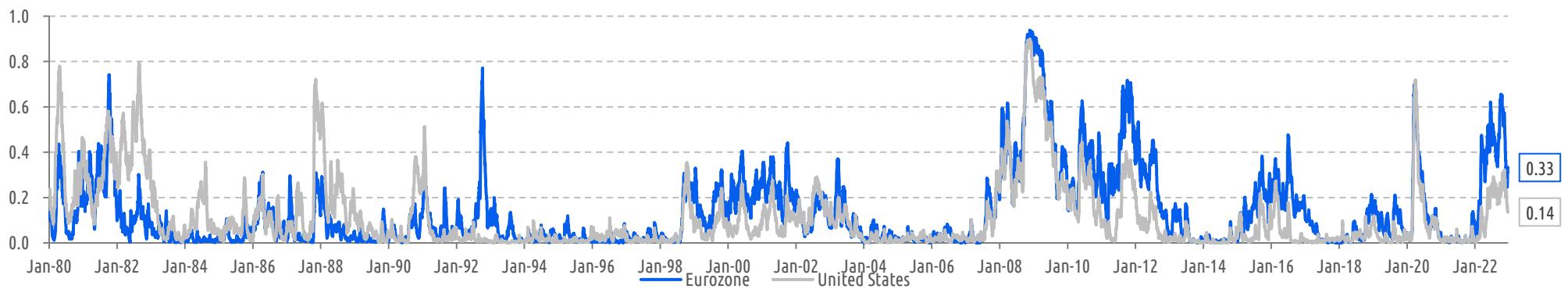
VIX index – Since 2020



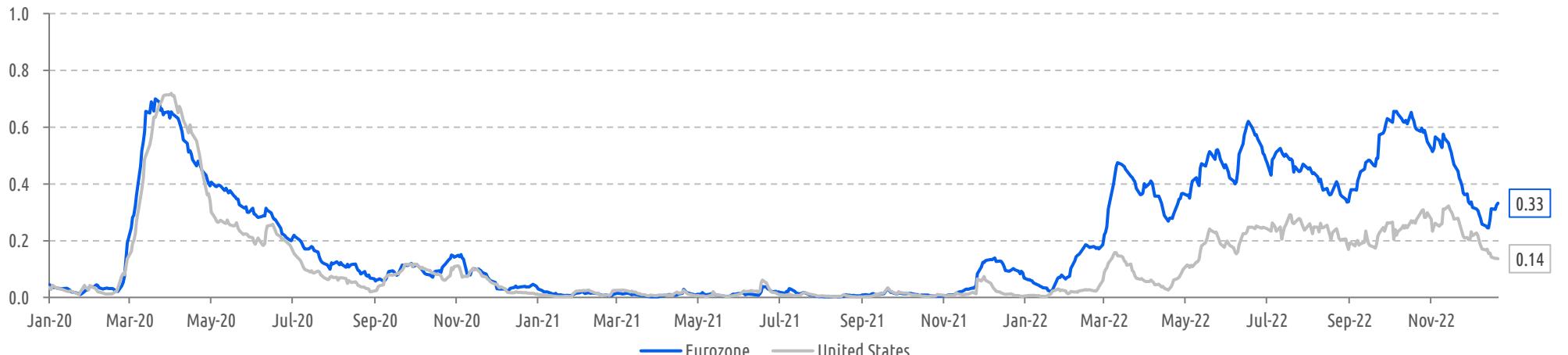
## ... while financial stress indicators moved up to high plateaus

But easing off since November especially in Europe

**Composite Indicator of Systemic Stress (daily) – Since Jan. 1980**



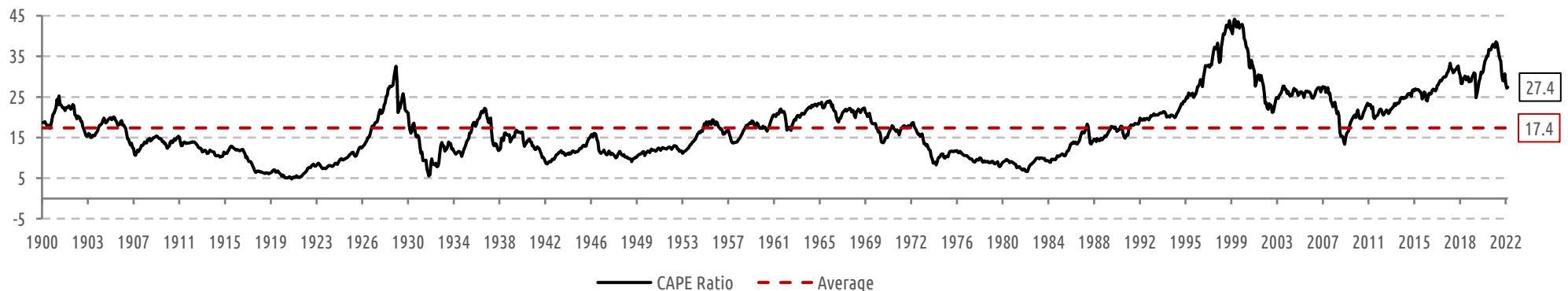
**Composite Indicator of Systemic Stress (daily) – Since Jan. 2020**



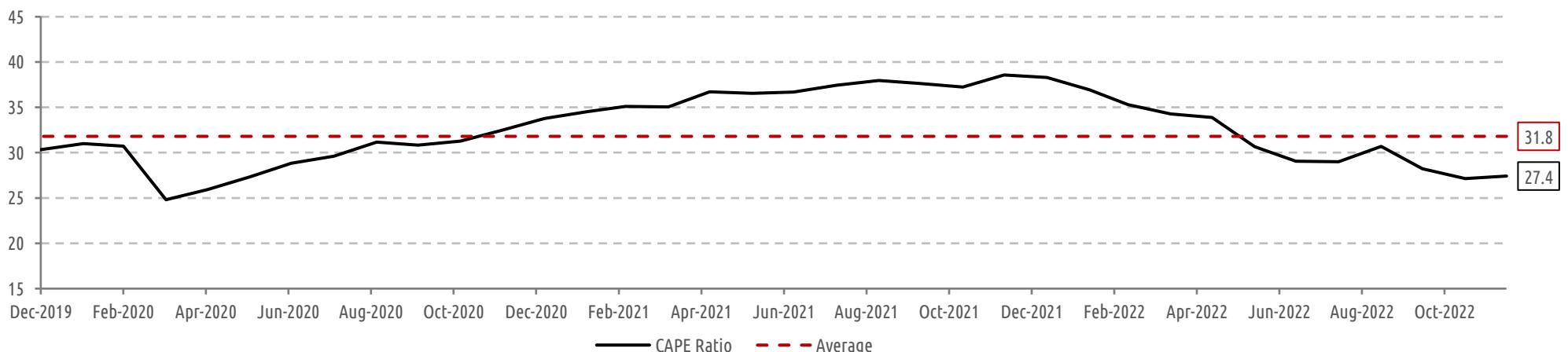
## US Shiller Cyclically Adjusted Price to Earnings ratio (CAPE ratio)<sup>1</sup>

Shiller CAPE ratio remains at record high level in historical perspective

Cyclically Adjusted Price Earnings ratio – Since 1900



Cyclically Adjusted Price Earnings ratio – Since 2020



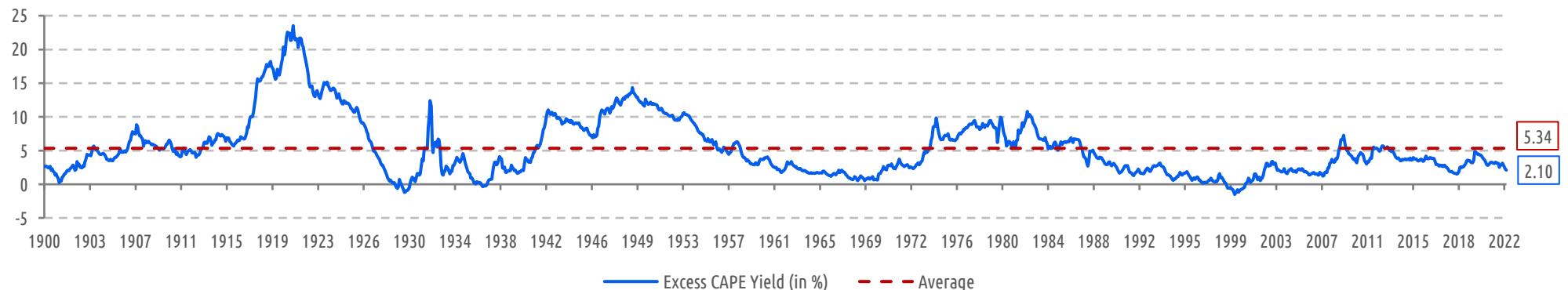
Source: Robert Shiller (last data available – Nov 22)

Note: CAPE divide current prices to 10Y average of earnings (adjusted for inflation)

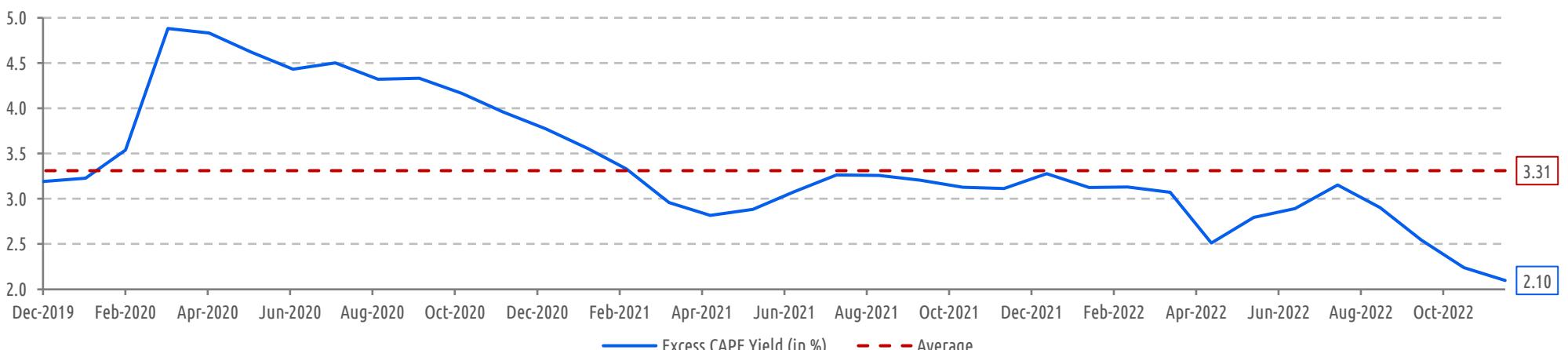
## Shiller excess CAPE return index remains at moderate level in the US

Trending down after the peak due to the Russian invasion

**Excess Cyclically Adjusted Price Earnings return – Since 1900**



**Excess Cyclically Adjusted Price Earnings return – Since 2020**



Source: Robert Shiller (last data available – Nov 22)

Note: Excess return is measured as average earning-to-price minus real interest rates

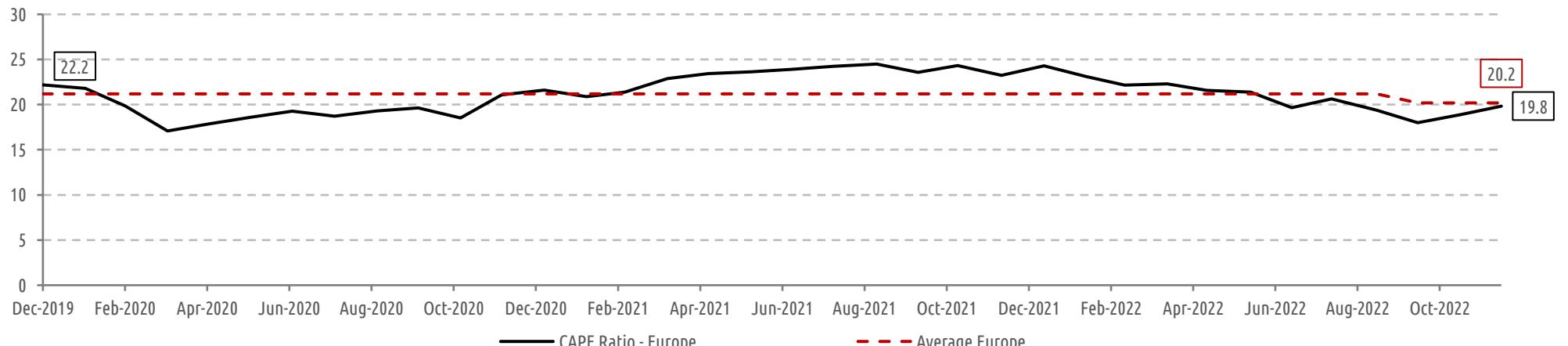
## Shiller CAPE ratio in Europe

Shiller CAPE ratio is still close to its pre-Covid level and to its historical average

Cyclically Adjusted Price Earnings ratio – Since 1982



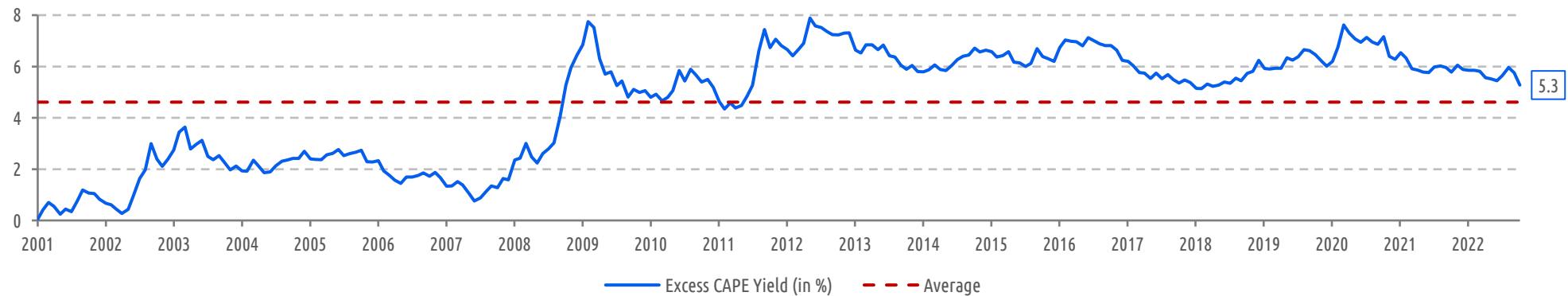
Cyclically Adjusted Price Earnings ratio – Since 2020



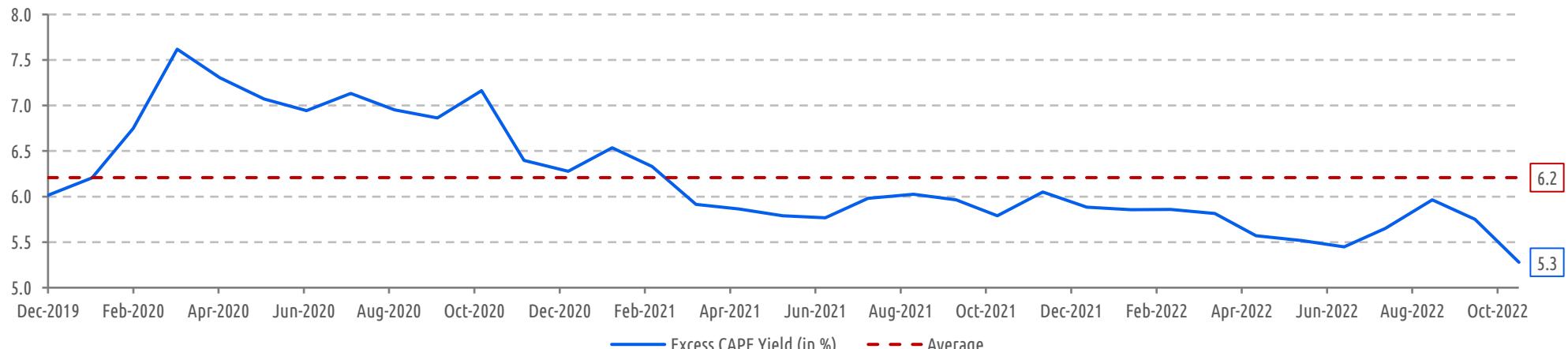
Source: Barclays (last data available – Nov. 22)

## Shiller excess CAPE return index in the Euro Area back to historical average

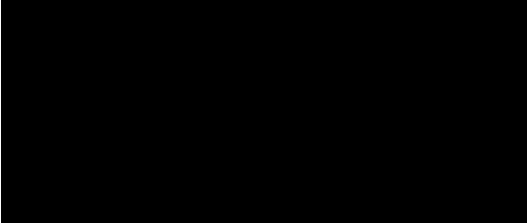
**Excess Cyclically Adjusted Price Earnings return – Since 2006**



**Excess Cyclically Adjusted Price Earnings return – Since 2020**



Sources: Barclays (last data available – Oct. 22), Eurostat, Bundesbank, Robert Shiller, Internal calculations



## V Appendix

## Links to DBnomics data

Page #	Graph / Table	Web link
4	Quarterly GDP growth (% change over the previous period) – Canada	<a href="#">OECD/KEI/NAEXKP01.CAN.GP.Q</a>
4	Quarterly GDP growth (% change over the previous period) – Germany	<a href="#">OECD/KEI/NAEXKP01.DEU.GP.Q</a>
4	Quarterly GDP growth (% change over the previous period) – Eurozone	<a href="#">OECD/KEI/NAEXKP01.EA19.GP.Q</a>
4	Quarterly GDP growth (% change over the previous period) – France	<a href="#">OECD/KEI/NAEXKP01.FRA.GP.Q</a>
4	Quarterly GDP growth (% change over the previous period) – UK	<a href="#">OECD/KEI/NAEXKP01.GBR.GP.Q</a>
4	Quarterly GDP growth (% change over the previous period) – Italy	<a href="#">OECD/KEI/NAEXKP01.ITA.GP.Q</a>
4	Quarterly GDP growth (% change over the previous period) – Japan	<a href="#">OECD/KEI/NAEXKP01.JPN.GP.Q</a>
4	Quarterly GDP growth (% change over the previous period) – US	<a href="#">OECD/KEI/NAEXKP01.USA.GP.Q</a>
4	IMF yearly GDP growth rate (YoY % change) – Canada	<a href="#">IMF/WEO:2022-10/CAN.NGDP_RPCH.pcent_change</a>
4	IMF yearly GDP growth rate (YoY % change) – Germany	<a href="#">IMF/WEO:2022-10/DEU.NGDP_RPCH.pcent_change</a>
4	IMF yearly GDP growth rate (YoY % change) – France	<a href="#">IMF/WEO:2022-10/FRA.NGDP_RPCH.pcent_change</a>
4	IMF yearly GDP growth rate (YoY % change) – UK	<a href="#">IMF/WEO:2022-10/GBR.NGDP_RPCH.pcent_change</a>
4	IMF yearly GDP growth rate (YoY % change) – Italy	<a href="#">IMF/WEO:2022-10/ITA.NGDP_RPCH.pcent_change</a>
4	IMF yearly GDP growth rate (YoY % change) – Japan	<a href="#">IMF/WEO:2022-10/JPN.NGDP_RPCH.pcent_change</a>

## Links to DBnomics data

Page #	Graph / Table	Web link
4	IMF yearly GDP growth rate (YoY % change) – US	<a href="#">IMF/WEO:2022-10/USA.NGDP_RPCH.pcent_change</a>
4	IMF yearly GDP growth rate (YoY % change) – Eurozone	<a href="#">IMF/WEOAGG:2022-10/163.NGDP_RPCH.pcent_change</a>
4	OECD Weekly growth tracker – Eurozone	<a href="#">OECD/GDP_GROWTH/W.Eurozone.tracker_yoy</a>
4	OECD Weekly growth tracker – United States	<a href="#">OECD/GDP_GROWTH/W.USA.tracker_yoy</a>
5	Quarterly GDP growth (% change over the previous period) – China	<a href="#">OECD/DP_LIVE/CHN.QGDP.TOT.PC_CHGPP.Q</a>
5	Quarterly GDP growth (% change over the previous period) – Brazil	<a href="#">OECD/KEI/NAEXKP01.BRA.GP.Q</a>
5	Quarterly GDP growth (% change over the previous period) – Mexico	<a href="#">OECD/KEI/NAEXKP01.MEX.GP.Q</a>
5	Quarterly GDP growth (% change over the previous period) – South Africa	<a href="#">OECD/KEI/NAEXKP01.ZAF.GP.Q</a>
5	Quarterly GDP growth (% change over the previous period) – Indonesia	<a href="#">OECD/KEI/NAEXKP01.IDN.GP.Q</a>
5	Quarterly GDP growth (% change over the previous period) – India	<a href="#">OECD/KEI/NAEXKP01.IND.GP.Q</a>
5	IMF yearly GDP growth rate (YoY % change) – Brazil	<a href="#">IMF/WEO:2022-10/BRA.NGDP_RPCH.pcent_change</a>
5	IMF yearly GDP growth rate (YoY % change) – Mexico	<a href="#">IMF/WEO:2022-10/MEX.NGDP_RPCH.pcent_change</a>
5	IMF yearly GDP growth rate (YoY % change) – South Africa	<a href="#">IMF/WEO:2022-10/ZAF.NGDP_RPCH.pcent_change</a>
5	IMF yearly GDP growth rate (YoY % change) – Indonesia	<a href="#">IMF/WEO:2022-10/IDN.NGDP_RPCH.pcent_change</a>

## Links to DBnomics data

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5	IMF yearly GDP growth rate (YoY % change) – China	<a href="#">IMF/WEO:2022-10/CHN.NGDP_RPCH.pcent_change</a>
5	OECD Weekly growth tracker – Brazil	<a href="#">OECD/GDP_GROWTH/W.BRA.tracker_yoy</a>
5	OECD Weekly growth tracker – Mexico	<a href="#">OECD/GDP_GROWTH/W.MEX.tracker_yoy</a>
5	OECD Weekly growth tracker – South Africa	<a href="#">OECD/GDP_GROWTH/W.ZAF.tracker_yoy</a>
5	OECD Weekly growth tracker – Indonesia	<a href="#">OECD/GDP_GROWTH/W.IDN.tracker_yoy</a>
5	OECD Weekly growth tracker – India	<a href="#">OECD/GDP_GROWTH/W.IND.tracker_yoy</a>
6	General government debt - Germany	<a href="#">Eurostat/gov_10dd_edpt1/A.PC_GDP.S13.GD.DE</a>
6	General government debt – France	<a href="#">Eurostat/gov_10dd_edpt1/A.PC_GDP.S13.GD.FR</a>
6	General government debt – United Kingdom	<a href="#">ONS/PUSF/BKPX.A</a>
6	General government debt – Italy	<a href="#">Eurostat/gov_10dd_edpt1/A.PC_GDP.S13.GD.IT</a>
6	General government debt – United States	<a href="#">OECD/DP_LIVE/USA.GGDEBT.TOT.PC_GDP.A</a>
6	General government deficit – Germany	<a href="#">OECD/DP_LIVE/DEU.GGNLEND.TOT.PC_GDP.A</a>
6	General government deficit – France	<a href="#">OECD/DP_LIVE/FRA.GGNLEND.TOT.PC_GDP.A</a>

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6	General government deficit – Italy	<a href="#">OECD/DP_LIVE/ITA.GGNLEND.TOT.PC_GDP.A</a>
6	General government deficit – United States	<a href="#">OECD/DP_LIVE/USA.GGNLEND.TOT.PC_GDP.A</a>
7	Consumer confidence index – United States	<a href="#">OECD/MEI_CLI/CSCICP03.USA.M</a>
7	Consumer confidence index – Germany	<a href="#">OECD/MEI_CLI/CSCICP03.DEU.M</a>
7	Consumer confidence index – France	<a href="#">OECD/MEI_CLI/CSCICP03.FRA.M</a>
7	Consumer confidence index – United Kingdom	<a href="#">OECD/MEI_CLI/CSCICP03.GBR.M</a>
7	Business confidence index – United States	<a href="#">OECD/MEI_CLI/BSCICP03.USA.M</a>
7	Business confidence index – Germany	<a href="#">OECD/MEI_CLI/BSCICP03.DEU.M</a>
7	Business confidence index – France	<a href="#">OECD/MEI_CLI/BSCICP03.FRA.M</a>
7	Business confidence index – United Kingdom	<a href="#">OECD/MEI_CLI/BSCICP03.GBR.M</a>
9/10	Natural Gas (Dutch TTF) prices in historical perspective (€/MWh)	<a href="#">ICE/DUTCH_TTF_GAS_FUTURES/D.5477499</a>
12	% of EU business reporting shortages of materials and equipment in the construction industry as a limiting production factor	<a href="#">EC/CONSTRUCTION/TOT.2.F5.EA.M</a>
13	Beveridge curve – Euro Area (Q1-17 – Q2-22), Quarterly	<a href="#">Eurostat/une_rt_q/Q.NSA.Y20-64.PC_POP.T.EA19</a> <a href="#">Eurostat/jvs_q_nace2/Q.NSA.B-S.TOTAL.JOBRATE.EA19</a>

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13	Beveridge curve - France (Q1-17 – Q2-22), Quarterly	<a href="Eurostat/jvs_q_nace2/Q.NSA.B-S.GE10.JOBRATE.FR">Eurostat/jvs_q_nace2/Q.NSA.B-S.GE10.JOBRATE.FR</a> <a href="INSEE/CHOMAGE-TRIM-NATIONAL/T.CTTXC.TAUX.FR-D976.0.00-POURCENT.CVS.FALSE">INSEE/CHOMAGE-TRIM-NATIONAL/T.CTTXC.TAUX.FR-D976.0.00-POURCENT.CVS.FALSE</a>
14	Wage growth tracker – France (Quarterly)	<a href="INSEE/ICT-2016/T.BDM_EUR.ICT.A21-BTN.INDICE.SSE.FE.SO.CVS-CJO.2016">INSEE/ICT-2016/T.BDM_EUR.ICT.A21-BTN.INDICE.SSE.FE.SO.CVS-CJO.2016</a>
15	CPI Inflation (YoY % change) – United States	<a href="BLS/cu/CUSR0000SA0">BLS/cu/CUSR0000SA0</a> <a href="BLS/cu/CUSR0000SA0L1E">BLS/cu/CUSR0000SA0L1E</a>
15	CPI Inflation (YoY % change) – Eurozone	<a href="Eurostat/prc_hicp_manr/M.RCH_A.CP00.EA">Eurostat/prc_hicp_manr/M.RCH_A.CP00.EA</a> <a href="Eurostat/prc_hicp_manr/M.RCH_A.TOT_X_NRG FOOD.EA">Eurostat/prc_hicp_manr/M.RCH_A.TOT_X_NRG FOOD.EA</a>
15	CPI Inflation (YoY % change) – France	<a href="INSEE/IPC-2015/M.IPC.SO.SO.4035.GLISSEMENT_ANNUEL.ENSEMBLE.FE.POURCENT.BRUT.SO.FALSE">INSEE/IPC-2015/M.IPC.SO.SO.4035.GLISSEMENT_ANNUEL.ENSEMBLE.FE.POURCENT.BRUT.SO.FALSE</a>
15	CPI Inflation (YoY % change) – Germany	<a href="DESTATIS/61111BM001/DG.PREIS1">DESTATIS/61111BM001/DG.PREIS1</a> <a href="DESTATIS/61111BM006/DG.CC13-63E.PREIS1">DESTATIS/61111BM006/DG.CC13-63E.PREIS1</a>
15	CPI Inflation (YoY % change) – United Kingdom	<a href="ONS/MM23/D7G7.M">ONS/MM23/D7G7.M</a> <a href="ONS/MM23/DK08.M">ONS/MM23/DK08.M</a>
15	CPI Inflation (YoY % change) – Japan	<a href="STATJP/CPIm/001">STATJP/CPIm/001</a> <a href="STATJP/CPIm/740">STATJP/CPIm/740</a>
16	CPI Inflation (YoY % change)	<a href="OECD/KEI/CPALTT01.CHN.GY.M">OECD/KEI/CPALTT01.CHN.GY.M</a>
17	Quarterly implied GDP deflator – Germany	<a href="Eurostat/namq_10_gdp/Q.PD_PCH_SM_NAC.SCA.B1GQ.DE">Eurostat/namq_10_gdp/Q.PD_PCH_SM_NAC.SCA.B1GQ.DE</a>
17	Quarterly implied GDP deflator – France	<a href="Eurostat/namq_10_gdp/Q.PD_PCH_SM_NAC.SCA.B1GQ.FR">Eurostat/namq_10_gdp/Q.PD_PCH_SM_NAC.SCA.B1GQ.FR</a>
17	Quarterly implied GDP deflator - United Kingdom	<a href="ONS/QNA/IHYU.Q">ONS/QNA/IHYU.Q</a>
17	Quarterly implied GDP deflator - United States	<a href="BEA/NIPA-T10109/A191RD-Q">BEA/NIPA-T10109/A191RD-Q</a>
18	Producer price index for industrial products - United Kingdom	<a href="ONS/MM22/GB7S.M">ONS/MM22/GB7S.M</a>

## Links to DBnomics data

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18	Producer price index for industrial products – France	<a href="#"><u>INSEE/IPPI-2015/M.BDM_EUR.ENS_IPP.SO.NA_A10-BE.INDICE.FE.SO.BRUT.2015.SO</u></a>
18	Producer price index for industrial products – Germany	<a href="#"><u>DESTATIS/61241BM001/DG.PRE001</u></a>
18	Producer price index for industrial products - United States	<a href="#"><u>BLS/pc/PCUOMFG--OMFG--</u></a>
24	10-Y Nominal yield – US	<a href="#"><u>FED/H15/RIFLGFCY10_N.B</u></a>
25	Yield curve – US	<a href="#"><u>FED/H15/RIFLGFCM03_N.B</u></a>
28	10-Y Nominal yield – German Bund	<a href="#"><u>BUBA/BBK01/WT1010</u></a>
28	Inflation Expectations - Germany	<a href="#"><u>BUBA/BBSSY/D.KCP.EUR.A607.DE0001102523.A</u></a>
28	Forward Rates on 10-Year German Bund	<a href="#"><u>BUBA/BBSIS/D.I.ZAR.ZI.EUR.S1311.B.A604.R10XX.R.A.A_Z_Z.A</u></a>
29	Yield curve – Germany	<a href="#"><u>BUBA/BBSSY/D.KCP.EUR.A607.DE0001102523.A</u></a>
30	Nominal Foreign exchange rate in historical perspective	<a href="#"><u>BUBA/BBEX3/D.USD.EUR.BB.AC.000</u></a>
33	Italian 10-Y yield	<a href="#"><u>Eurostat/irt_lt_mcby_d/D.MCBY.IT</u></a>
33	Greek 10-Y yield	<a href="#"><u>Eurostat/irt_lt_mcby_d/D.MCBY.EL</u></a>
33	French 10-Y yield	<a href="#"><u>BDF/FM/FM.D.FR.EUR.FR2.BB.FR10YT_RR.YLD</u></a>
38	Composite Indicator of Systemic Stress (daily)	<a href="#"><u>ECB/CISS/D.U2.Z0Z.4F.EC.SS_CIN.IDX</u></a>