06 JANUARY 2023

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Macroeconomic Outlook - January 2023

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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.
- 2023 is announced as a year of low and potentially negative growth both in the US and in the EZ.
- In response to inflationary pressure, 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.
- 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

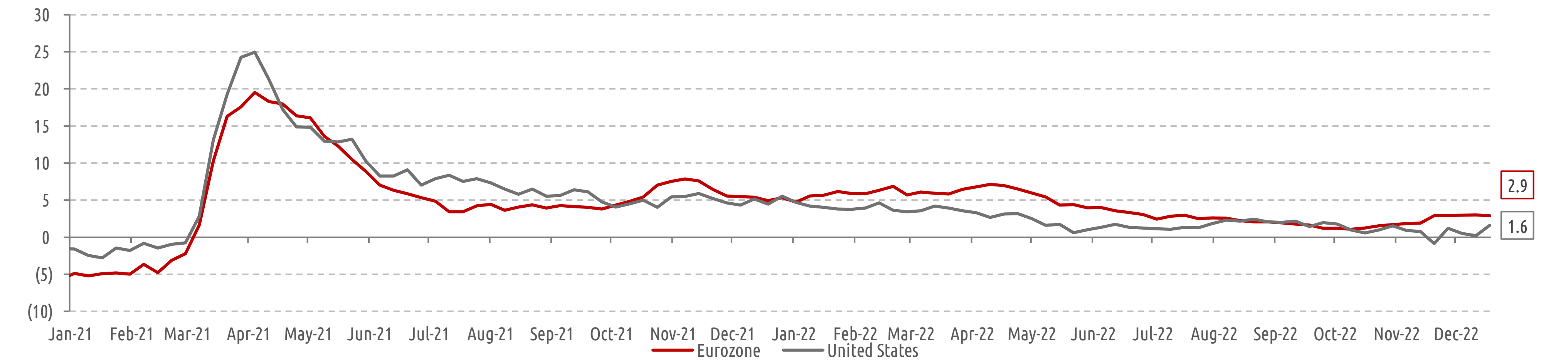
Yearly GDP growth rate (YoY % change)

Yearly GDP growth rate %					
Country	2020	2021	2022(P)	2023(P)	2024(P)
Euro Area	(6.1)[1]	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)

Quarterly GDP growth rate %										YoY[2] 25/09	YoY[2] 18/12
Country	20Q3	20Q4	21Q1	21Q2	21Q3	21Q4	22Q1	22Q2	22Q3		
Euro Area	12.4	(0.3)	(0.1)	2.0	2.3	0.5	0.6	0.8	0.3	1.2	2.9
France	18.3	(0.9)	0.1	1.1	3.3	0.6	(0.2)	0.5	0.2	1.3	2.5
Germany	9.0	0.6	(1.5)	1.9	0.8	(0.0)	0.8	0.1	0.4	(0.6)	1.4
Italy	14.5	(0.8)	0.3	2.5	2.8	0.8	0.2	1.1	0.5	2.4	3.9
UK	16.6	1.2	(1.1)	6.5	1.7	1.5	0.6	0.1	(0.3)	0.8	0.8
USA	7.9	1.0	1.5	1.7	0.7	1.7	(0.4)	(0.1)	0.8	2.0	1.6
Canada	9.0	2.1	1.3	(0.6)	1.4	1.7	0.7	0.8	0.7	3.3	5.5
Japan	5.6	1.9	(0.1)	0.3	(0.5)	1.2	(0.5)	1.1	(0.2)	1.9	1.9

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



Sources: OECD, OECD Weekly tracker of economic activity as of 18/12/2022, OECD economic outlook November 2022
Note: (1) Negative number, (2) Extract from the OECD Weekly growth tracker to compare latest YoY growth data to its level 3 months before

Growth in emerging countries

The end of China's zero-covid policy opens a new round of uncertainties which could entail the first semester growth prospect

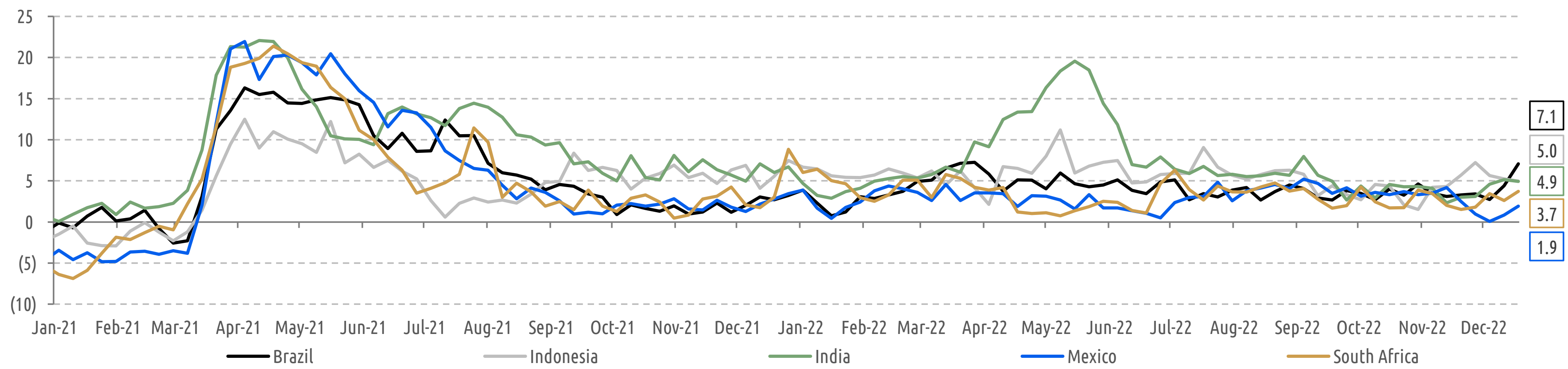
Yearly GDP growth rate (YoY % change)

Yearly GDP growth rate %					
Country	**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)

Quarterly GDP growth rate %										YoY[1] 25/09	YoY[1] 18/12
Country	**20Q3**	**20Q4**	**21Q1**	**21Q2**	**21Q3**	**21Q4**	**22Q1**	**22Q2**	**22Q3**		
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	2.0	3.7
Brazil	8.1	3.2	1.1	(0.3)	0.4	0.9	1.3	1.0	0.4	3.8	7.1
India	21.4	7.8	0.8	(8.6)	8.7	5.0	(0.1)	(0.0)	0.8	2.7	4.9
Mexico	13.2	4.2	0.5	0.7	(1.1)	1.0	1.2	1.1	0.9	4.2	1.9
Indonesia	3.4	2.5	0.9	0.1	0.2	3.8	0.8	0.7	0.6	3.3	5.0

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

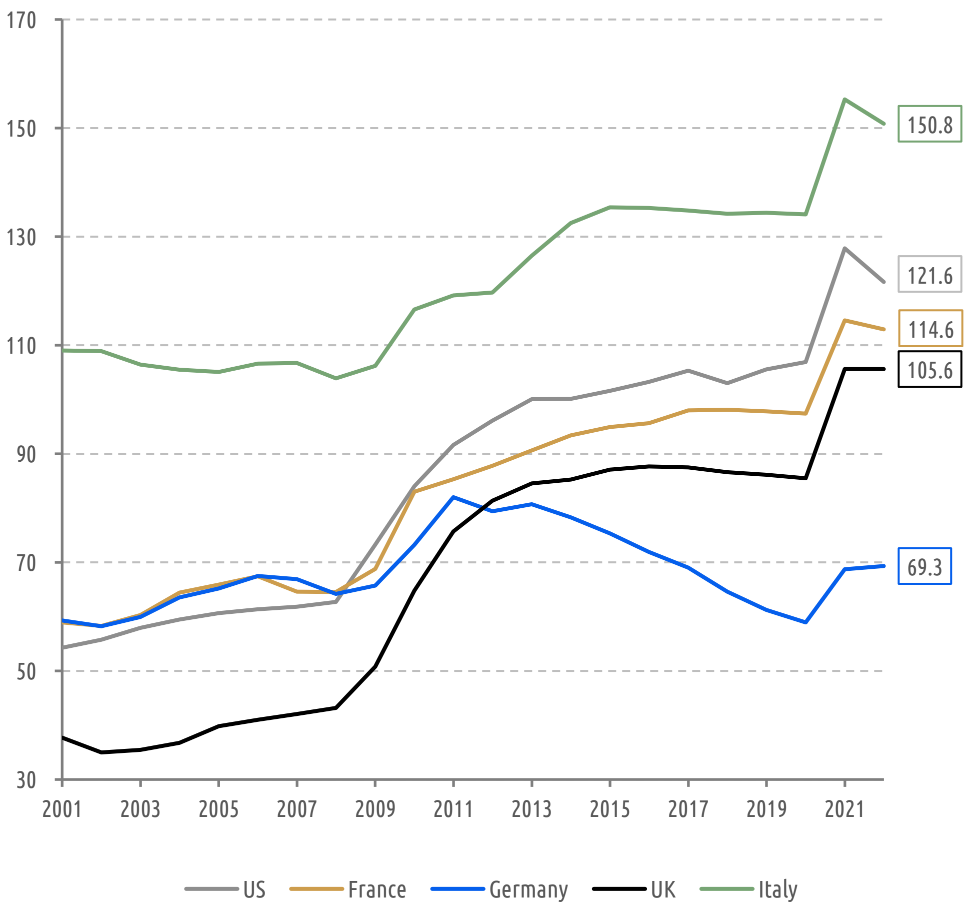


Sources: OECD, OECD Weekly tracker of economic activity as of 18/12/2022, OECD economic outlook November 2022
Note: (1) Extract from the OECD Weekly growth tracker to compare latest YoY growth data to its level 3 months before

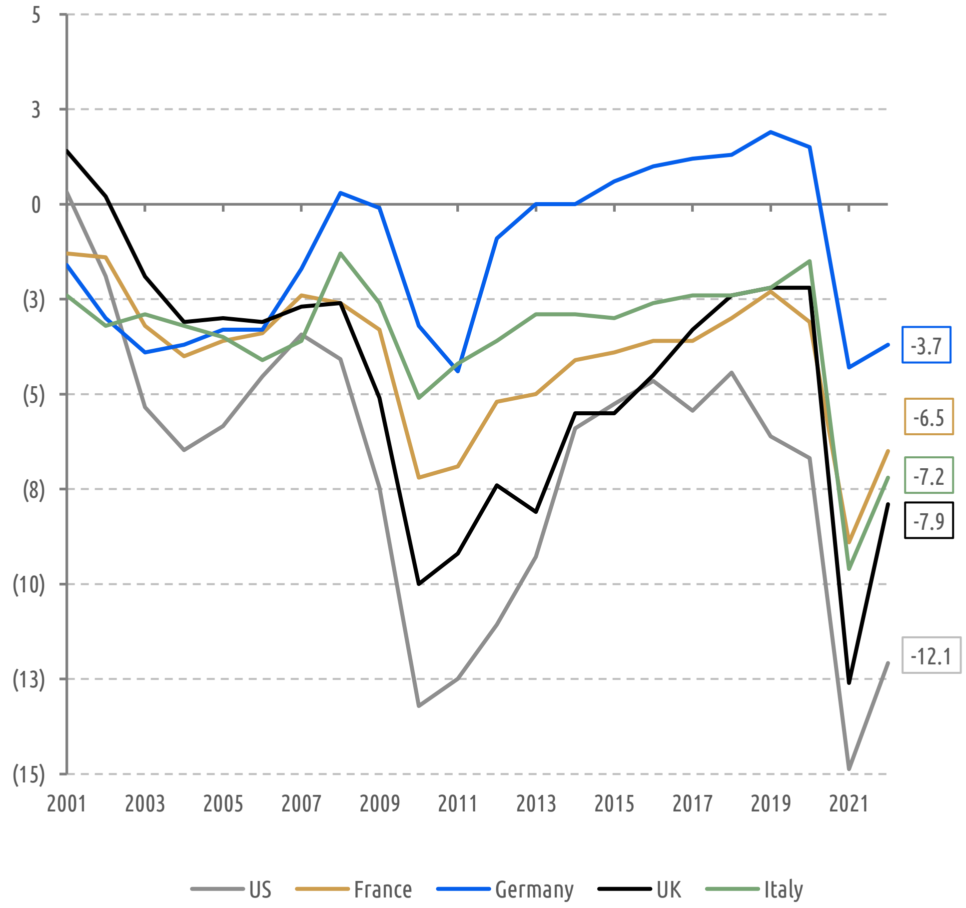
Government debts and deficits have reached a new plateau in the G5 countries[1]

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*

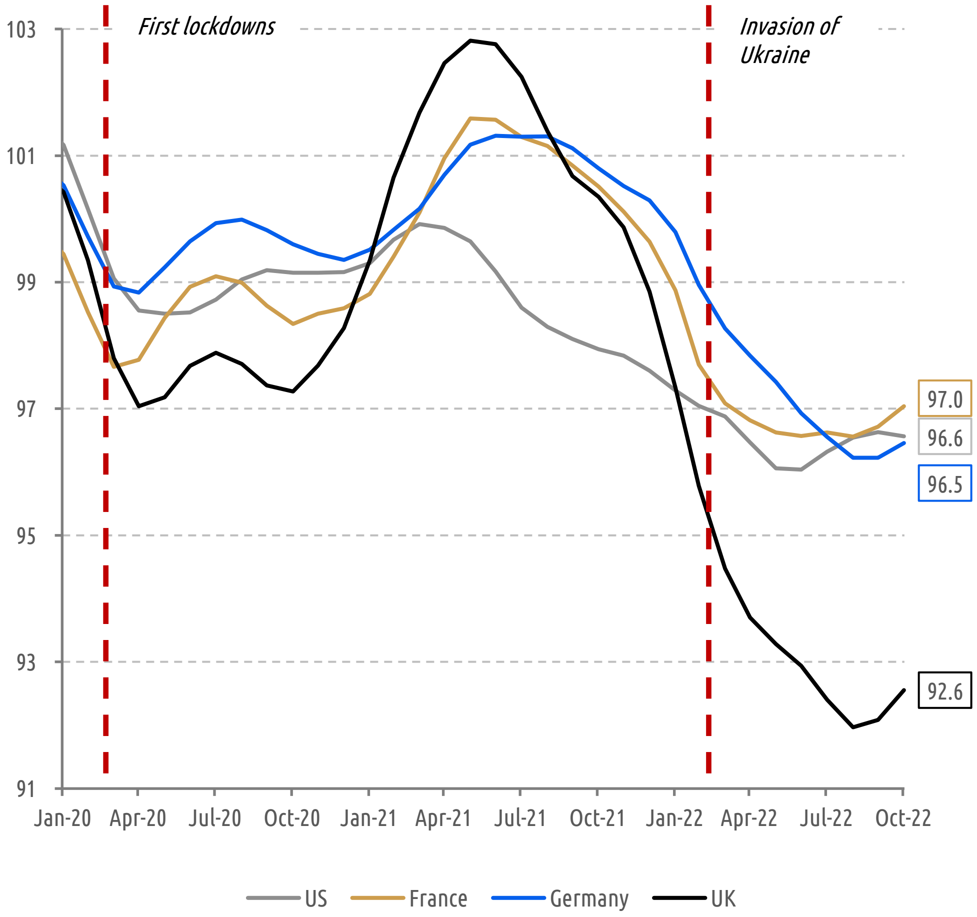


Source: Eurostat, Office of National Statistics, Bureau of Economic Analysis, US Office of Management and Budget
Note: (1) G5 includes France, Germany, Italy, US and UK

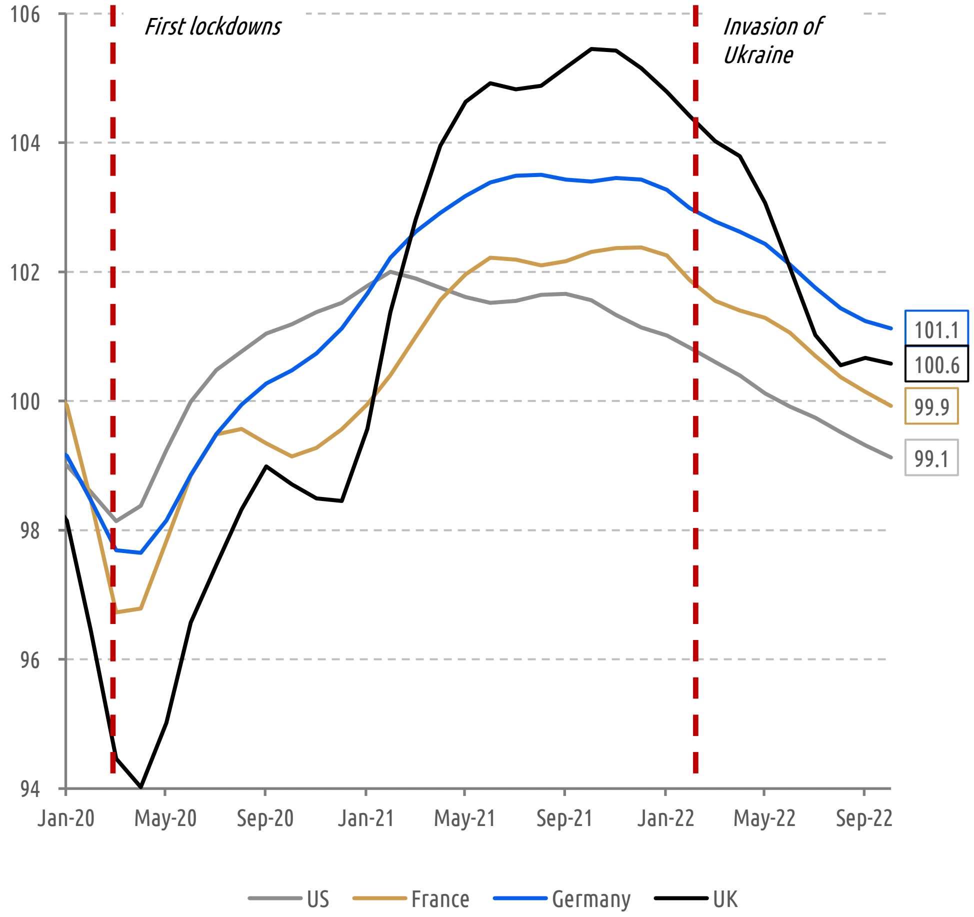
Consumer confidence indicators are falling in the G4 countries[1]

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*



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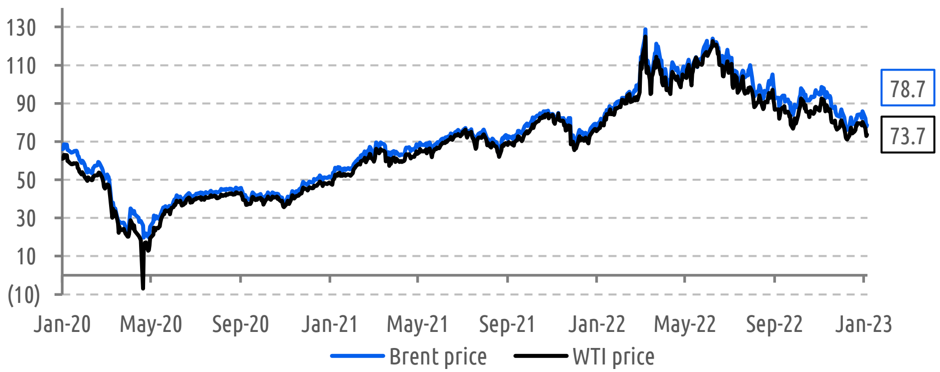
Source: OECD as of November 2022
Note: (1) G4 includes France, Germany, US and UK

B The seeds of inflation

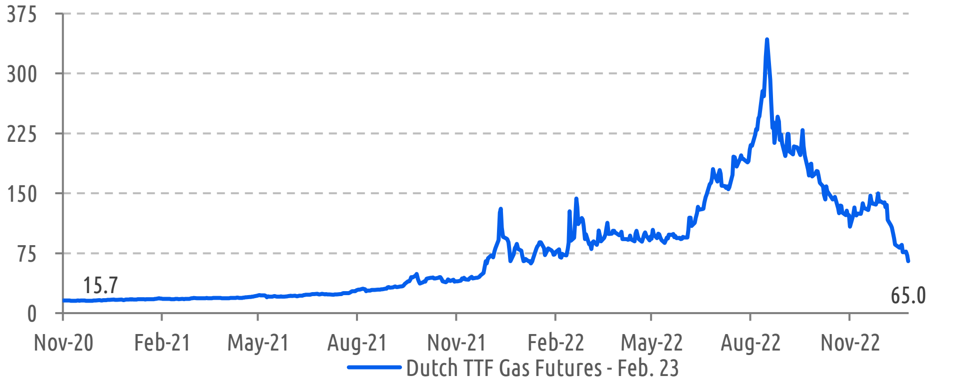
Energy prices have sharply increased over the last 2 years… *- (1/2)*

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

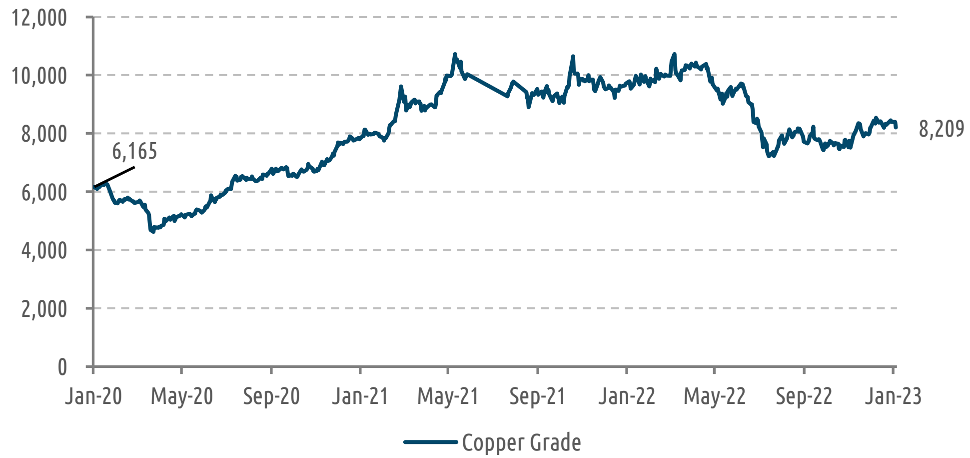
Oil prices in historical perspective *(USD per barrel)*



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



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



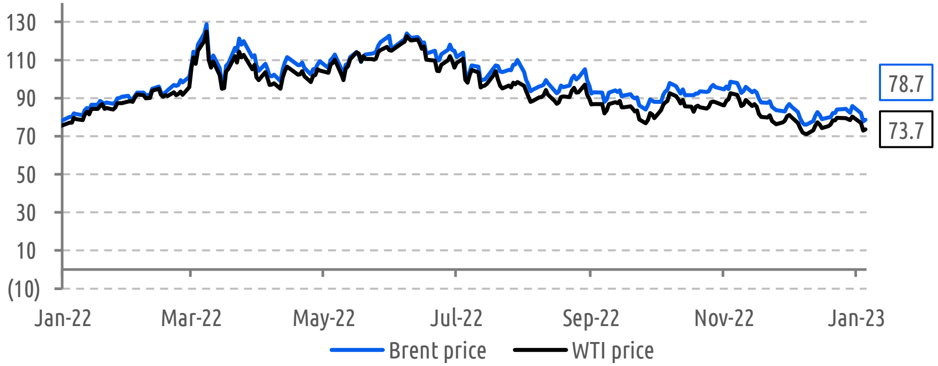
CBOT Wheat *(USD/Bushel)*

Sources: Nasdaq, ICE, NYSE as of 05/01/2023

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

Ukrainian invasion lifted up prices, but fear of recession are cooling off pressure. European gas prices below pre-war levels.

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



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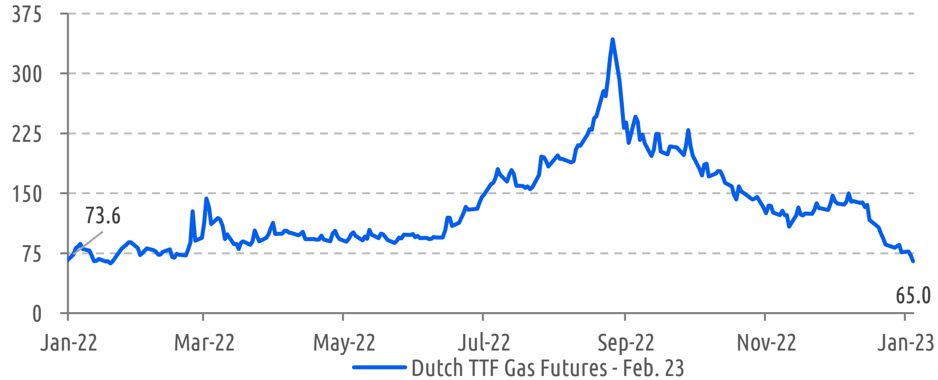
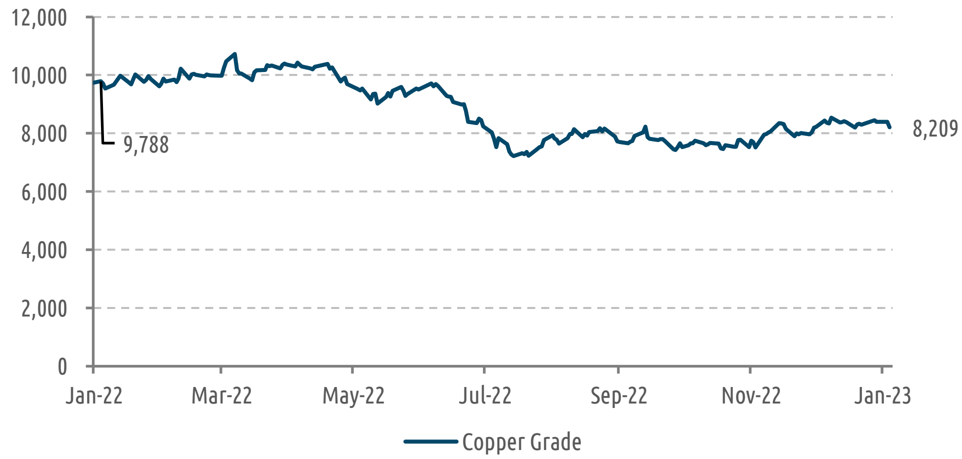
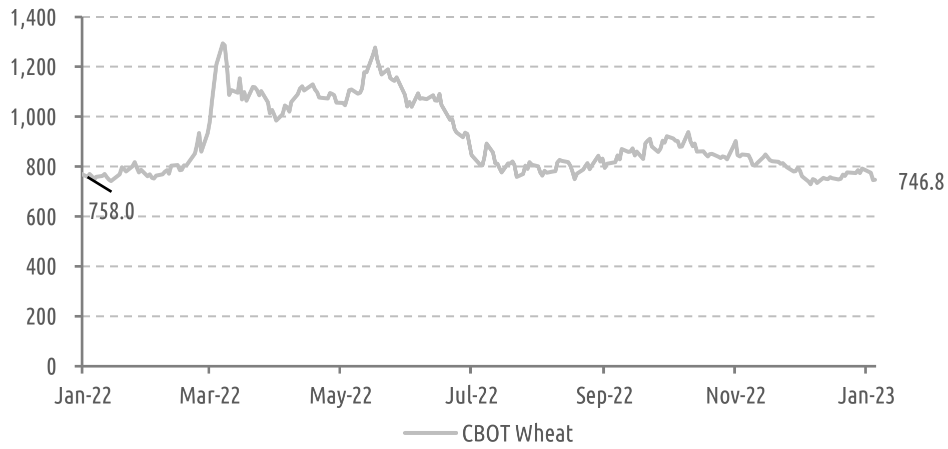


Copper prices in historical perspective *(USD/tonne)*



CBOT Wheat *(USD/Bushel)*

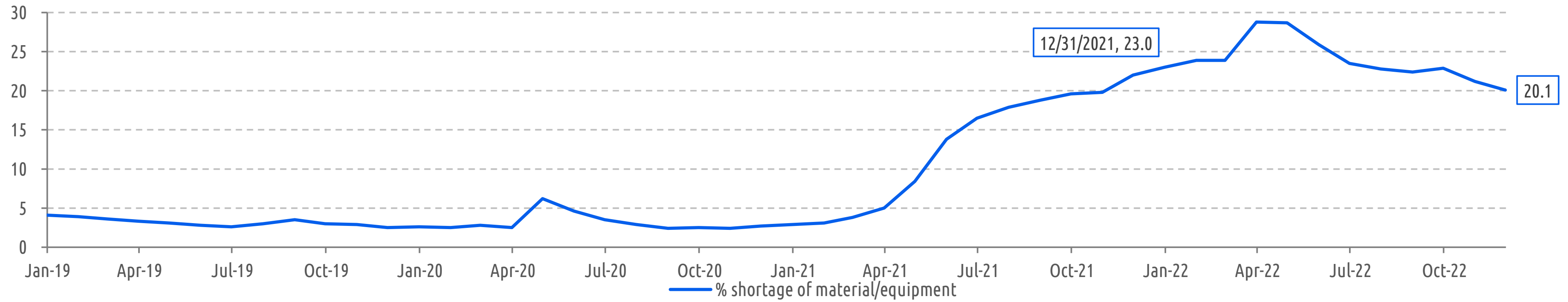


Sources: Nasdaq, ICE, NYSE as of 05/01/2023

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



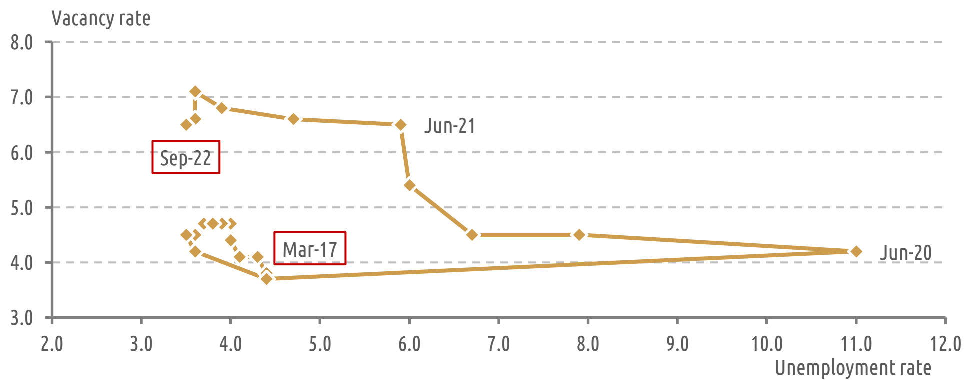
Shipping Container Index (based on spot rate for 40 feet containers)

Sources: Eurostat, Freightos Data, Sea intelligence as of 06/01/2023

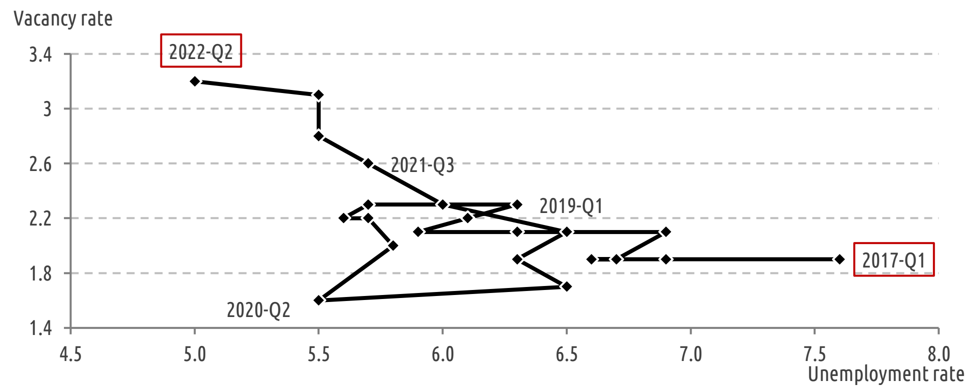
Labor markets remain tight…

The vacancy/unemployment ratio still at record high levels

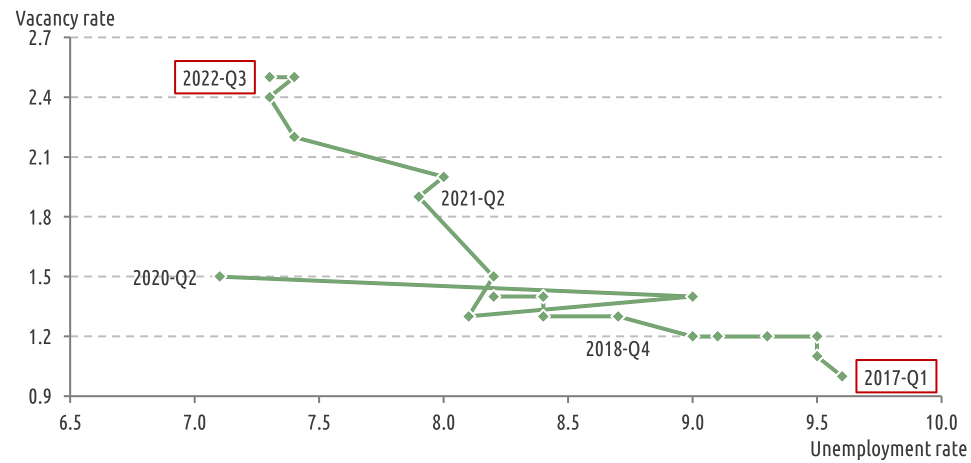
Beveridge curve - USA (Q1-17 – Q2-22), Quarterly



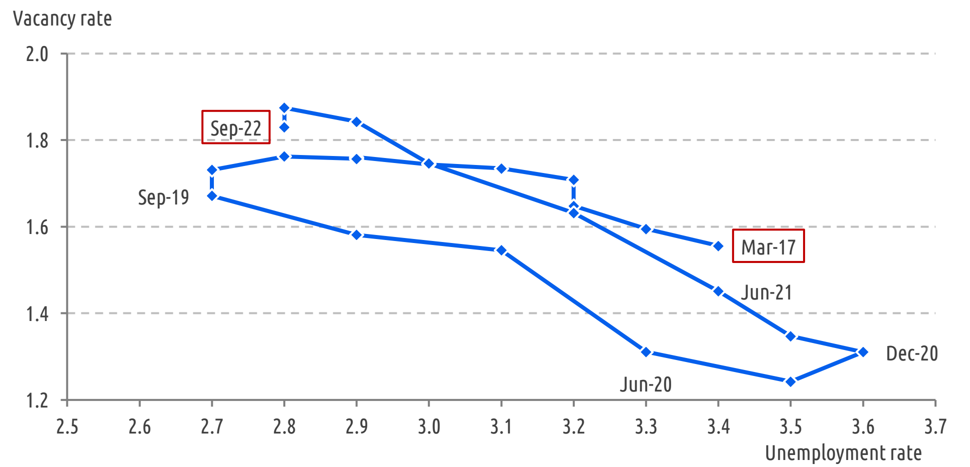
Beveridge curve – Euro Area (Q1-17 – Q2-22), Quarterly



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

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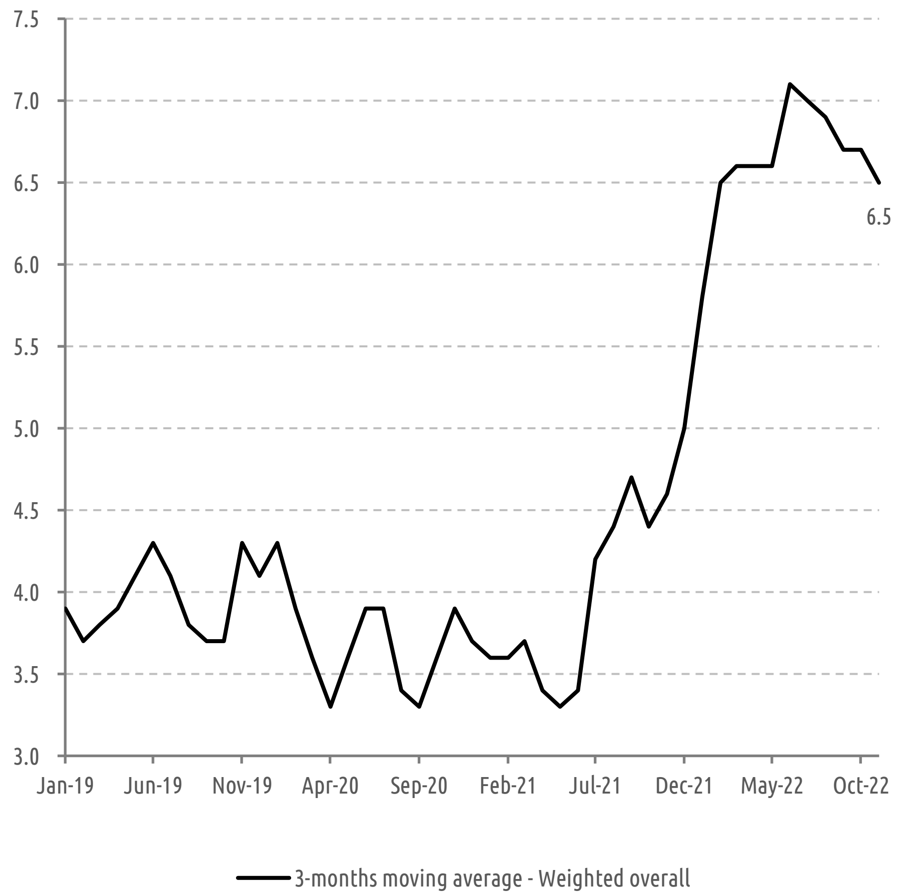
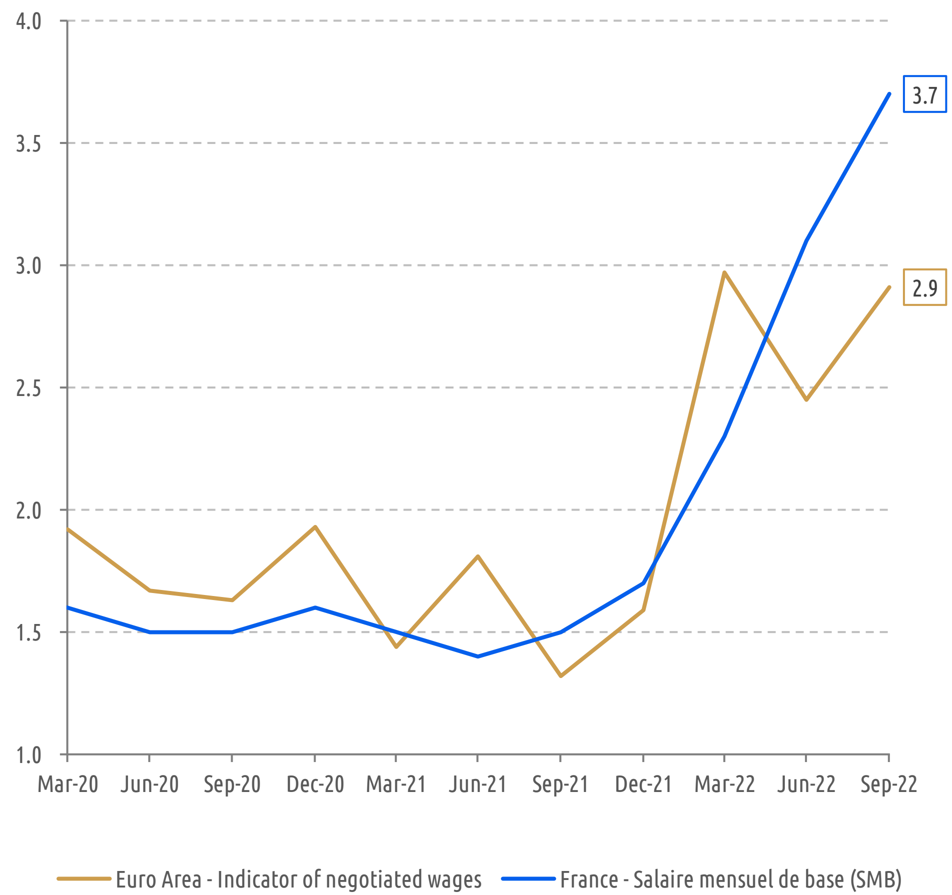
… resulting in rising labor costs, especially in the US

The verdict on EZ wage inflation still open

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



Indicator of negotiated wages[1] in the Euro Area (*Quarterly*)



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

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C Inflation unbound

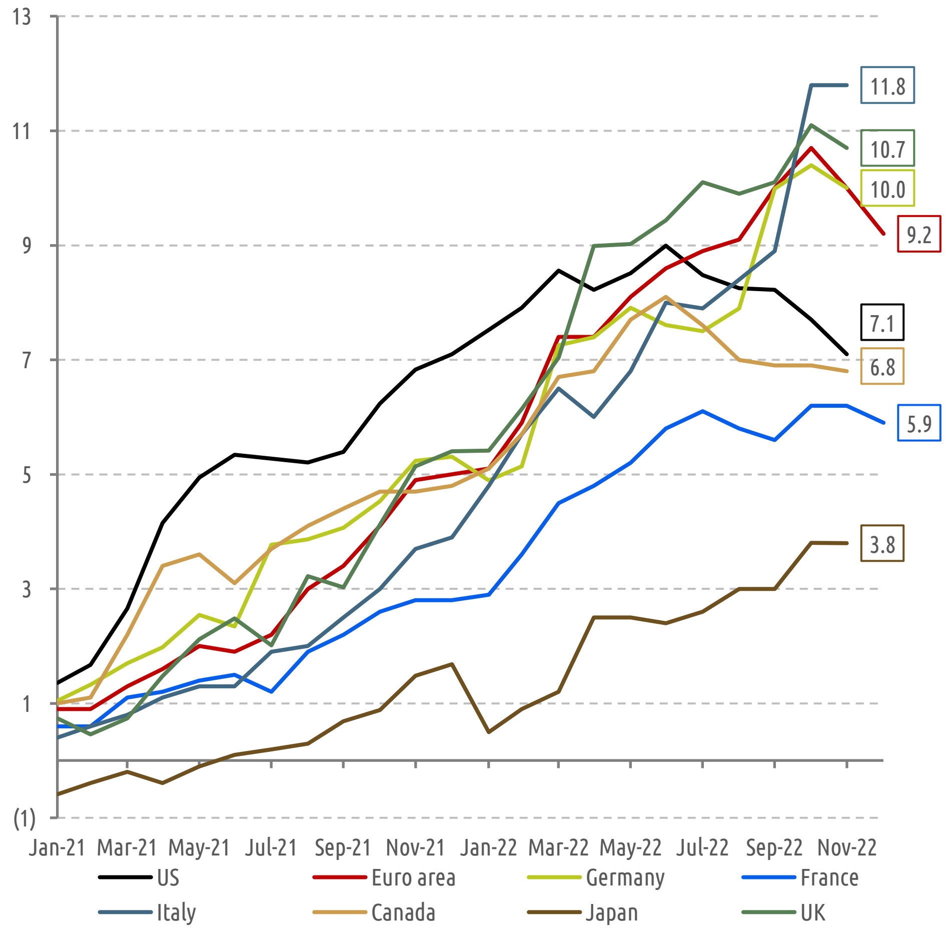
In 2022, inflation have reached record high levels

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)

Monthly Year-on-Year inflation rates (%) - 2022												
Country	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
US	7.5	7.9	8.6	8.2	8.5	9.0	8.5	8.2	8.2	7.7	7.1	-
Core	6.0	6.4	6.4	6.1	6.0	5.9	5.9	6.3	6.6	6.3	6.0	-
Euro Area	5.1	5.9	7.4	7.4	8.1	8.6	8.9	9.1	10.0	10.7	10.0	9.2
Core	2.3	2.7	3.0	3.5	3.8	3.7	4.0	4.3	4.8	5.0	5.0	5.2
France	2.9	3.6	4.5	4.8	5.2	5.8	6.1	5.8	5.6	6.2	6.2	5.9
Core	1.6	2.5	2.5	3.2	3.7	3.7	4.3	4.7	4.5	5.0	5.3	-
Germany	4.9	5.1	7.3	7.4	7.9	7.6	7.5	7.9	10.0	10.4	10.0	-
Core	2.9	3.0	3.4	3.8	3.8	3.2	3.2	3.5	4.6	5.0	5.0	-
Italy	4.8	5.7	6.5	6.0	6.8	8.0	7.9	8.4	8.9	11.8	11.8	-
Core	1.5	1.7	1.9	2.4	3.2	3.8	4.1	4.4	5.0	5.3	5.7	-
UK	5.4	6.1	7.0	9.0	9.0	9.4	10.1	9.9	10.1	11.1	10.7	-
Core	4.4	5.2	5.7	6.2	5.9	5.8	6.2	6.3	6.5	6.5	6.3	-
Canada	5.1	5.7	6.7	6.8	7.7	8.1	7.6	7.0	6.9	6.9	6.8	-
Core	3.5	3.9	4.7	4.6	5.2	5.3	5.5	5.3	5.4	5.3	5.4	-
Japan	0.5	0.9	1.2	2.5	2.5	2.4	2.6	3.0	3.0	3.8	3.8	-
Core	(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*



Sources: Banque de France, Destatis, Eurostat, Bureau of Labor Statistics, Office of National Statistics, Statistics of Japan, OECD, Italian National Institute of Statistics; Statcan

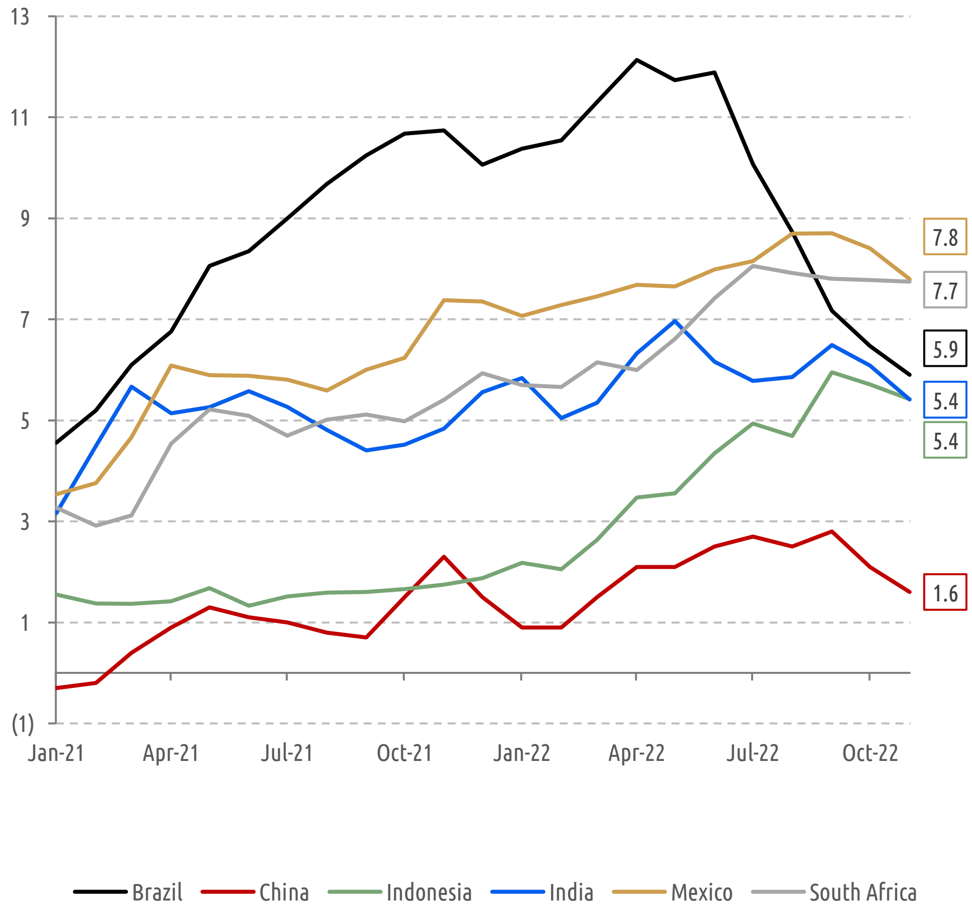
Inflation in emerging economies

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

CPI inflation in advanced economies (YoY % change)

Monthly Year-on-Year inflation rates (%) – 2022											
Country	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	5.4
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*



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Sources: OECD

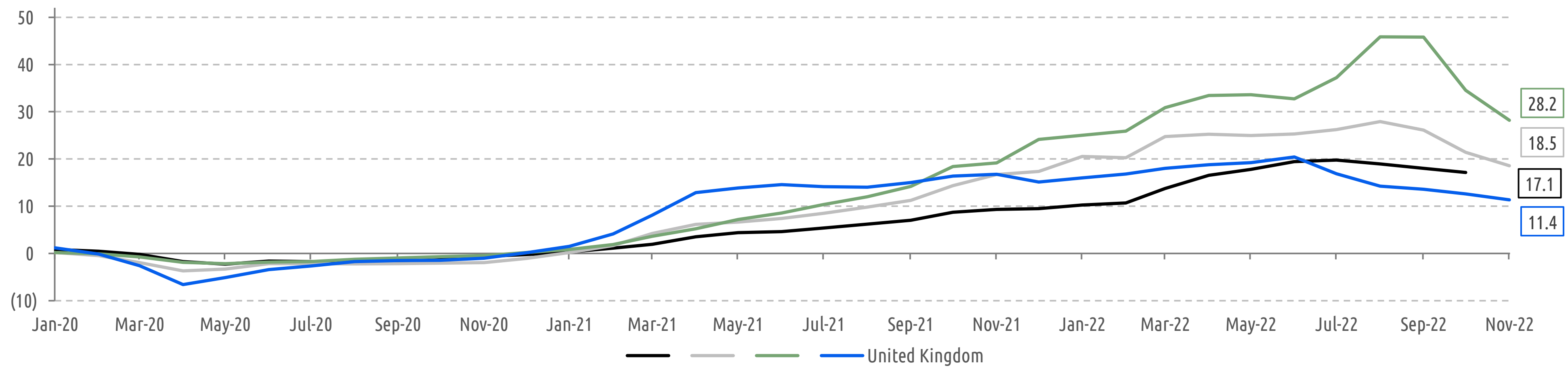
Producer price index for the G4 countries[1]

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	26.1	21.4	18.5
UK	10.2	10.7	13.7	16.6	17.8	19.4	19.8	18.9	18.0	17.1	-

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



Sources: INSEE, Bureau of Labor Statistics, Destatis, Office of National Statistics
Note: (1) G4 includes France, Germany, US and UK

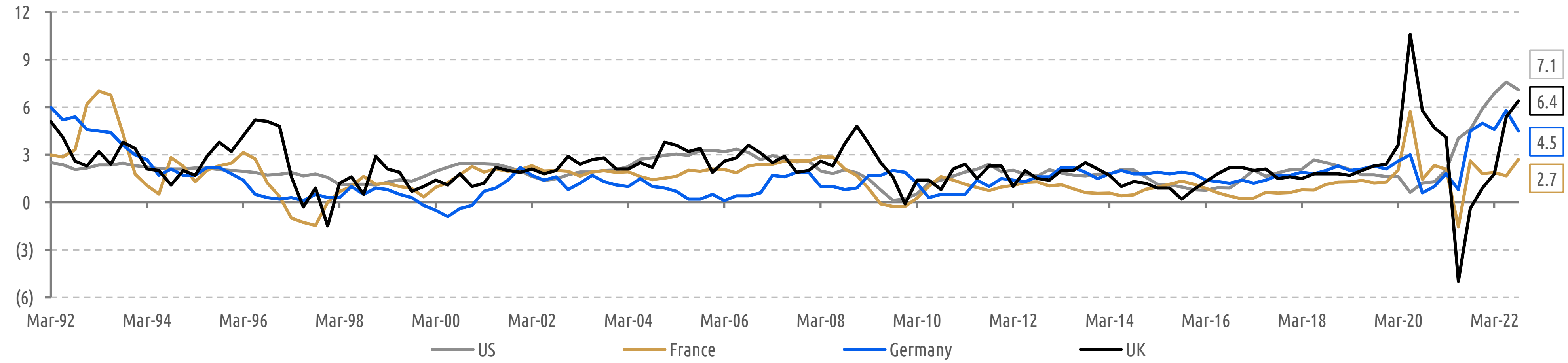
Implied GDP deflator in G4 countries[1]

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

Quarterly implied GDP deflator – *Since Q1-2021*

Implied GDP deflator (YoY % change) – Since Q1-2019							
Country	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*



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

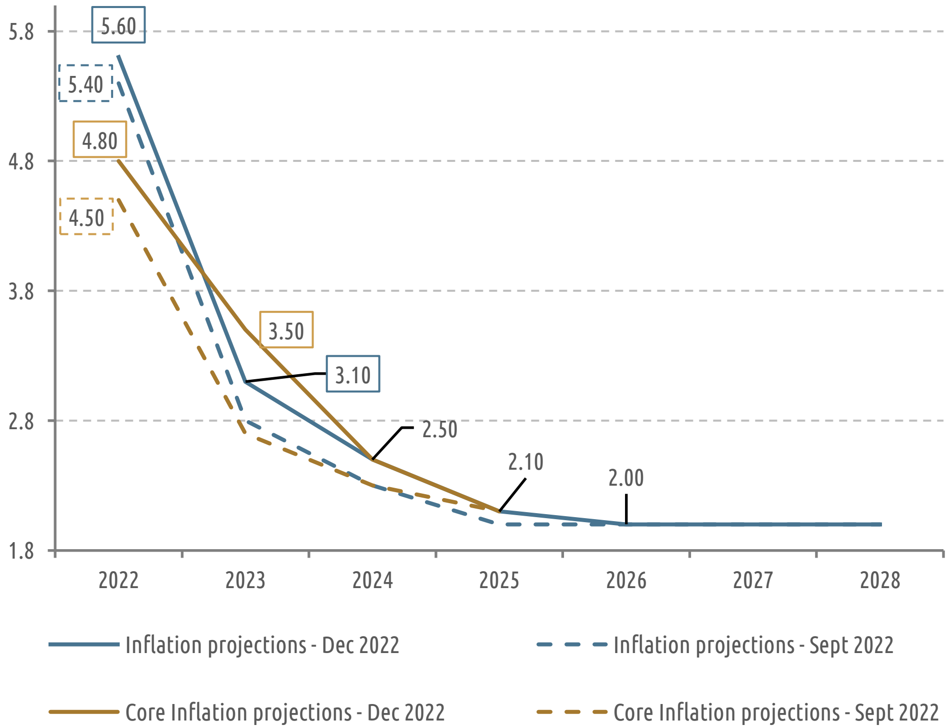
II Monetary policy

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 14th**
- "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 31st and February 1st**

Federal Reserve economic projections as of 14 December 2022				
Indicator	**2022**	**2023**	**2024**	**2025**
Change in real GDP	0.5	0.5	1.6	1.8
Unemployment rate	3.7	4.6	4.6	4.5
Inflation	5.6	3.1	2.5	2.1
Federal funds rate	4.4	5.1	4.1	3.1

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

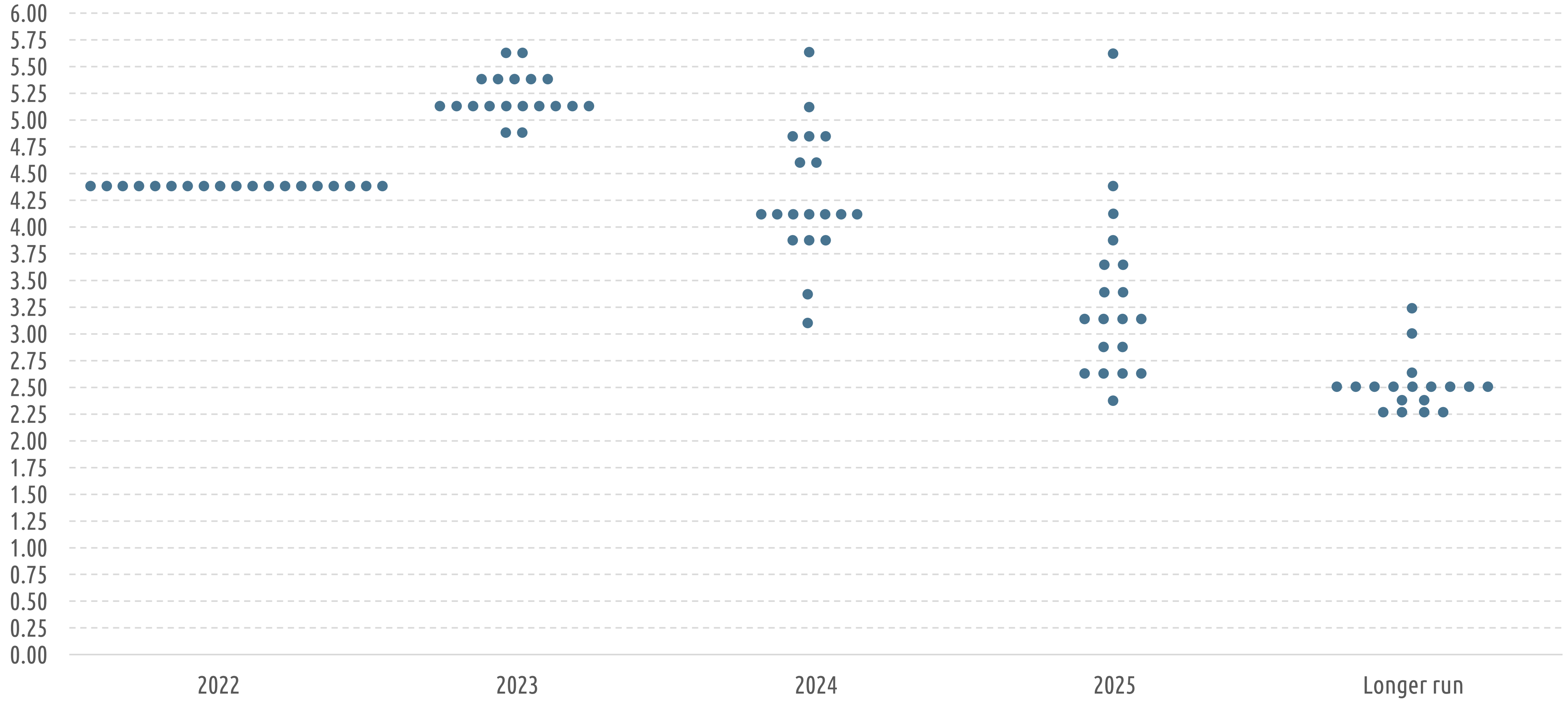
JEROME POWELL, PRESS CONFERENCE, 14 DECEMBER 2022

Source: Fed as of 14/12/2022

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



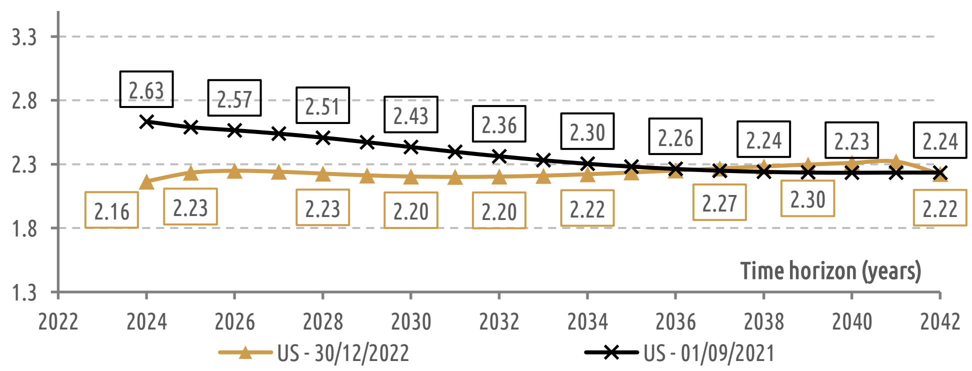
Source: *Fed as of 14/12/2022*
Note: Each shaded circle indicates the value (rounded to the nearest 1/8 percentage point) of an individual participant's judgment of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate at the 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

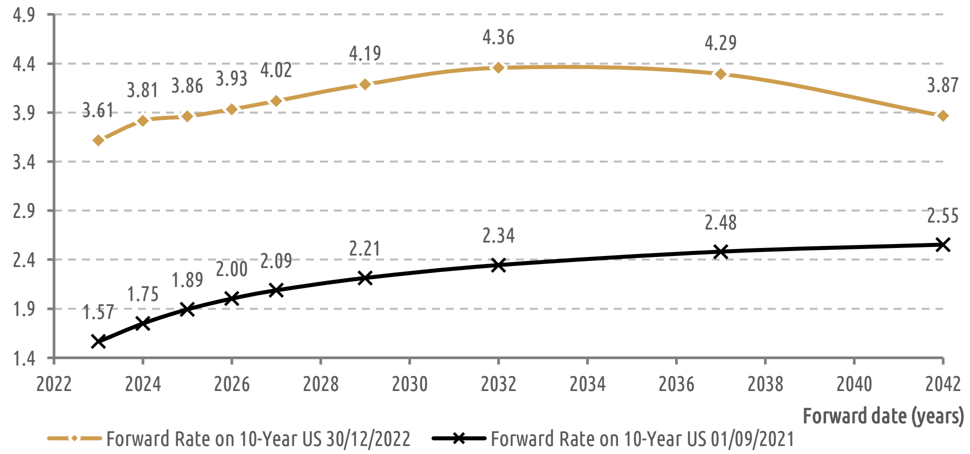
Latest Fed comments, however, brought rates up again. Expected real rates have turned positive in the longer run as forward rates were lifted-up dramatically

10-Y Nominal yield – US

Inflation Expectations – US *(%)*



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

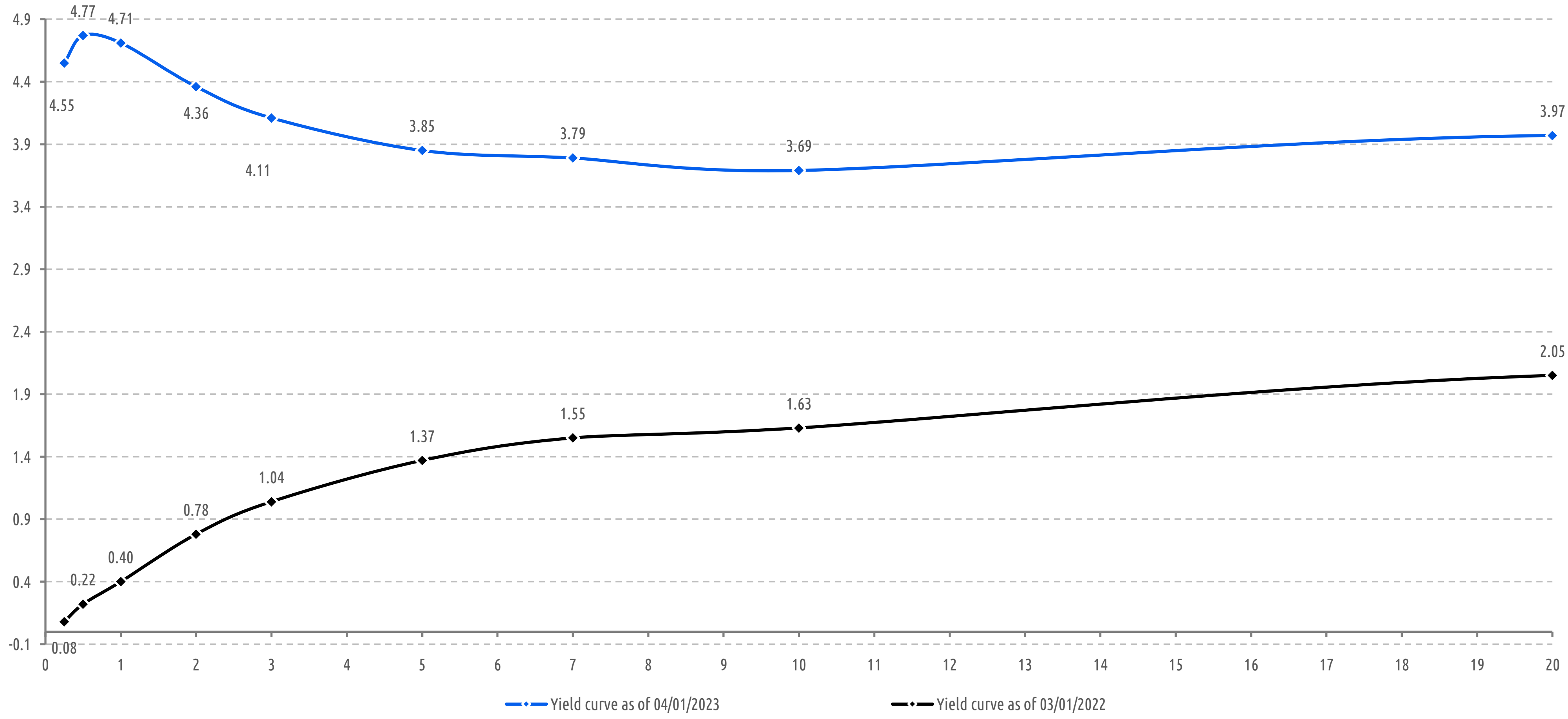


Source: Fed as of 06/01/2023, Internal calculations
Note: Inflation expectations are derived from US indexed bonds (TIPS) and US nominal bonds

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 04/01/2023*

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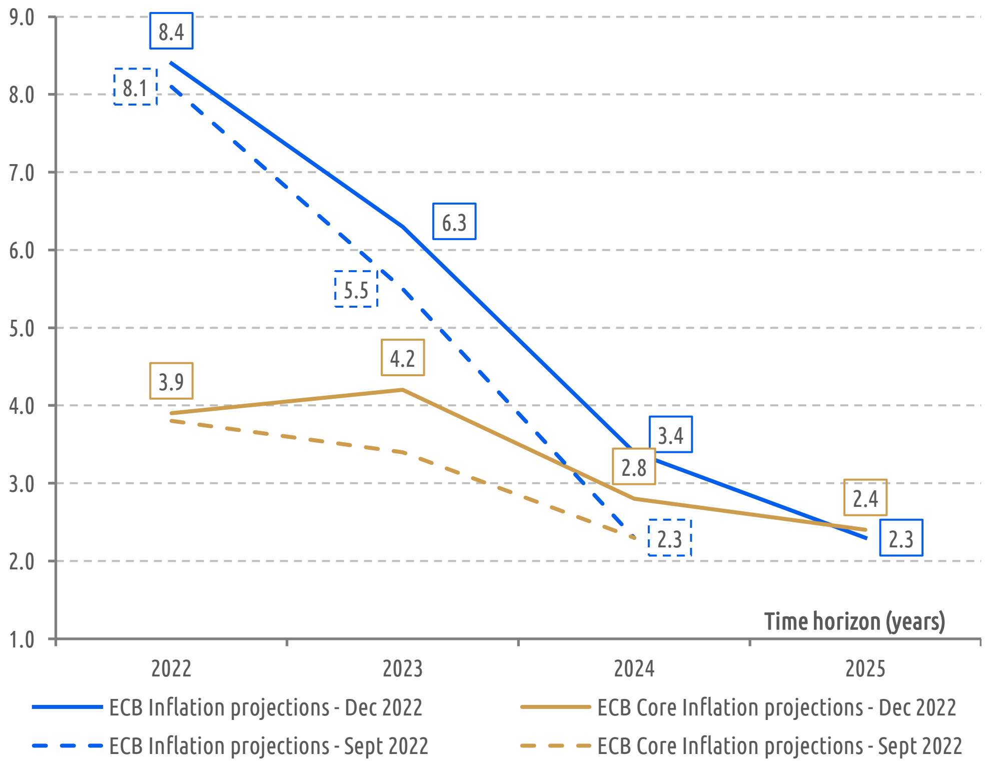
B In the Euro Area

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 2nd

ECB economic projections as of 14 December 2022

Indicator	2022	2023	2024	2025
Change in real GDP	3.4	0.5	1.9	1.8
Unemployment rate	6.7	6.9	6.8	6.6
Inflation	8.4	6.3	3.4	2.3

"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

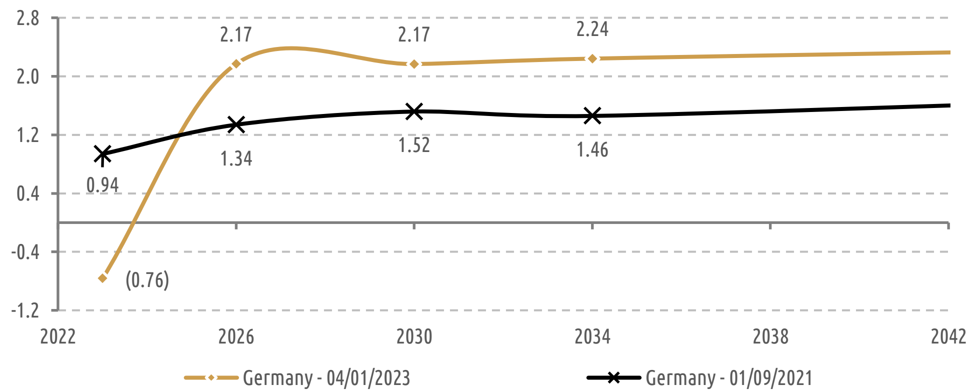
Source: ECB as of 14/12/2022

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

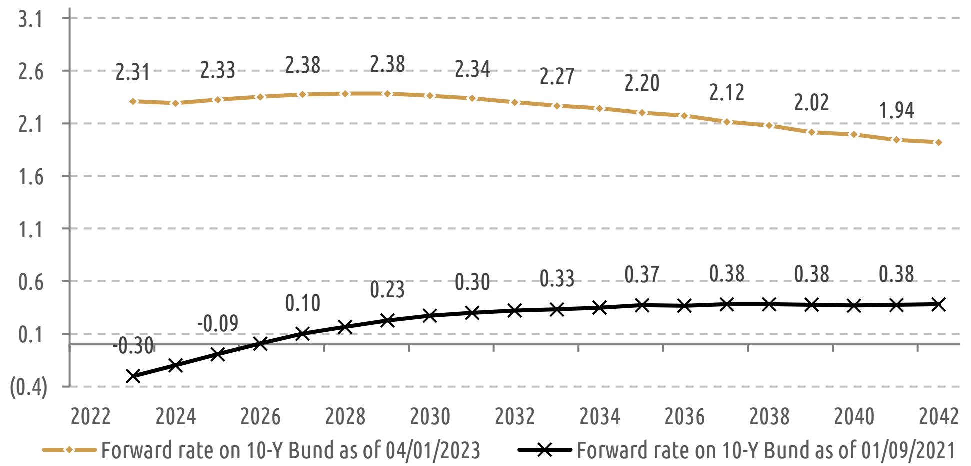
Expected real rates near zero in the longer run

10-Y Nominal yield – German Bund

Inflation Expectations[1] - Germany *(%)*



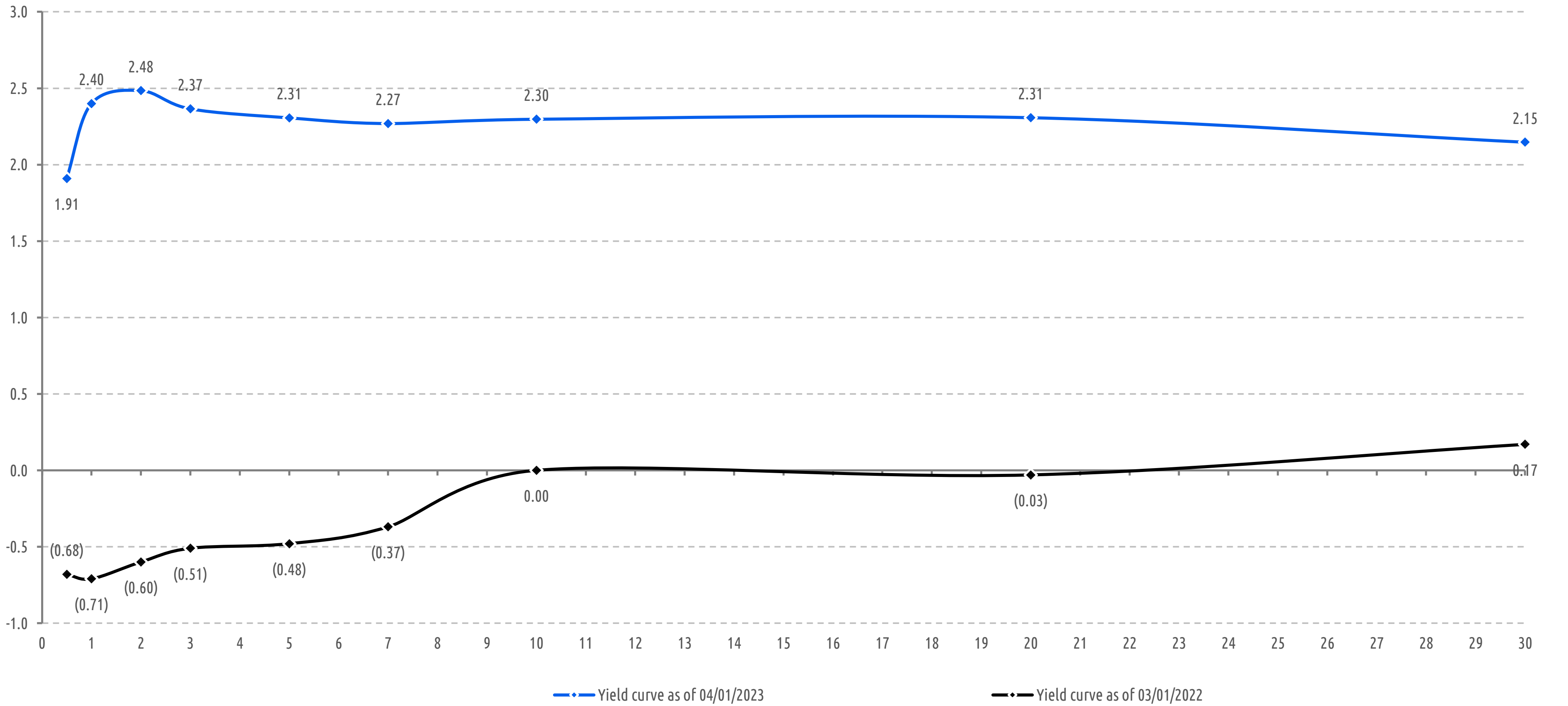
Forward Rates on 10-Year German Bund *(%)*



Source: Bundesbank as of 06/01/2023, 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 03/01/2023

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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

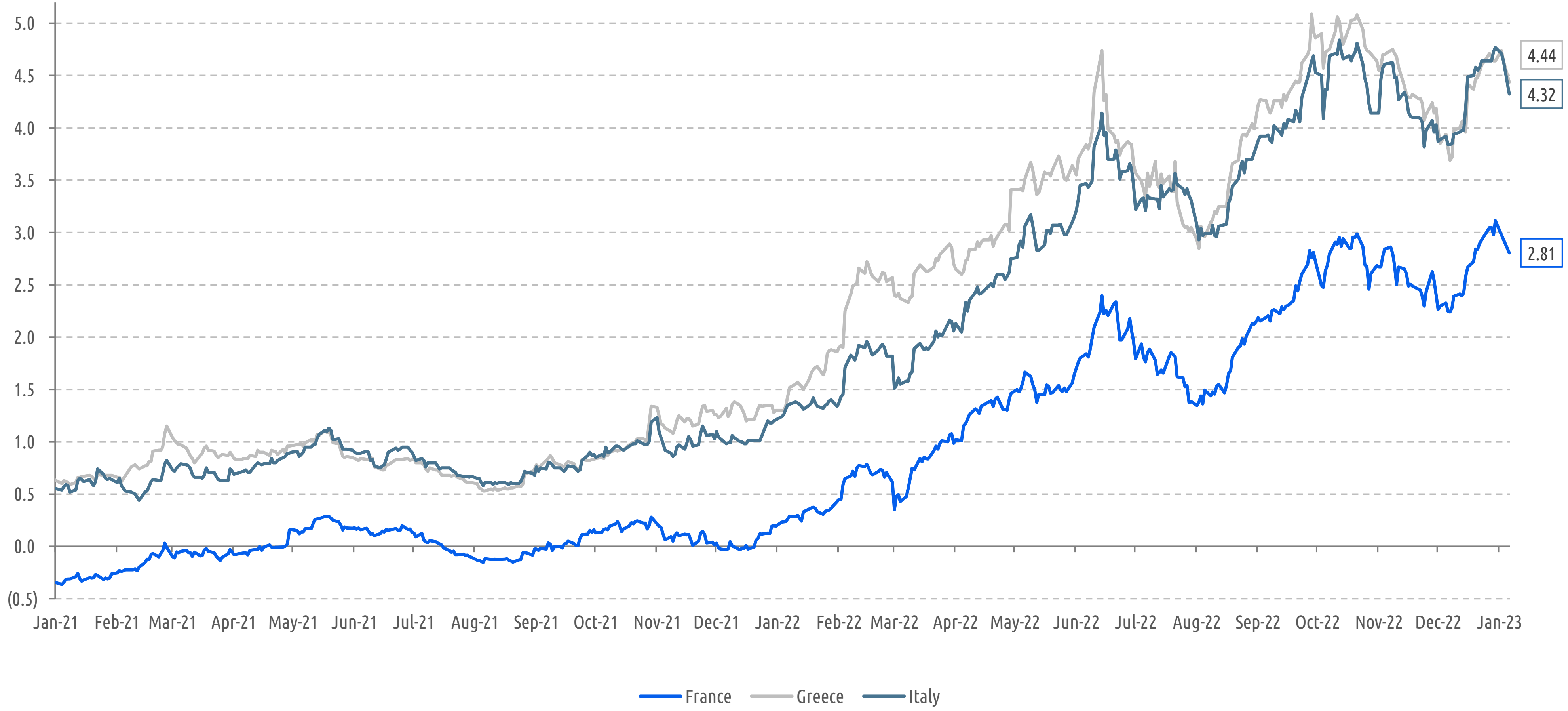
Source: Bundesbank as of 04/01/2023

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*



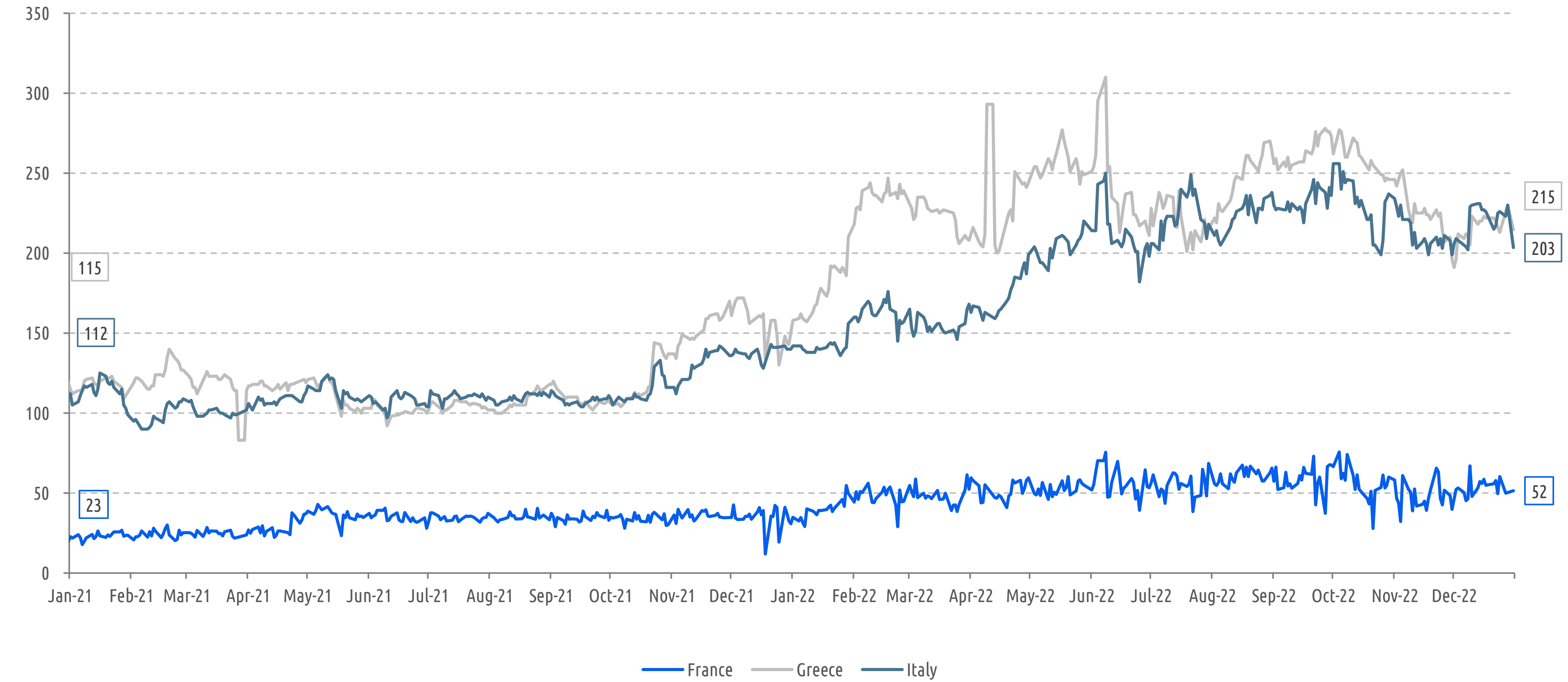
Sources: Banque de France as of 06/01/2023, Eurostat as of 06/01/2023

... 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*

In bps

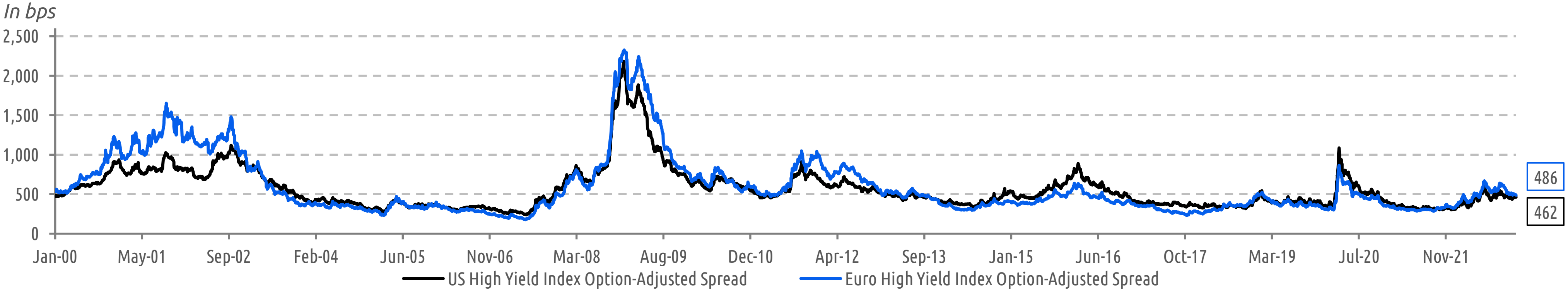


Sources: Banque de France as of 06/01/2023, Bundesbank as of 06/01/2023, Eurostat as of 06/01/2023, Internal calculations

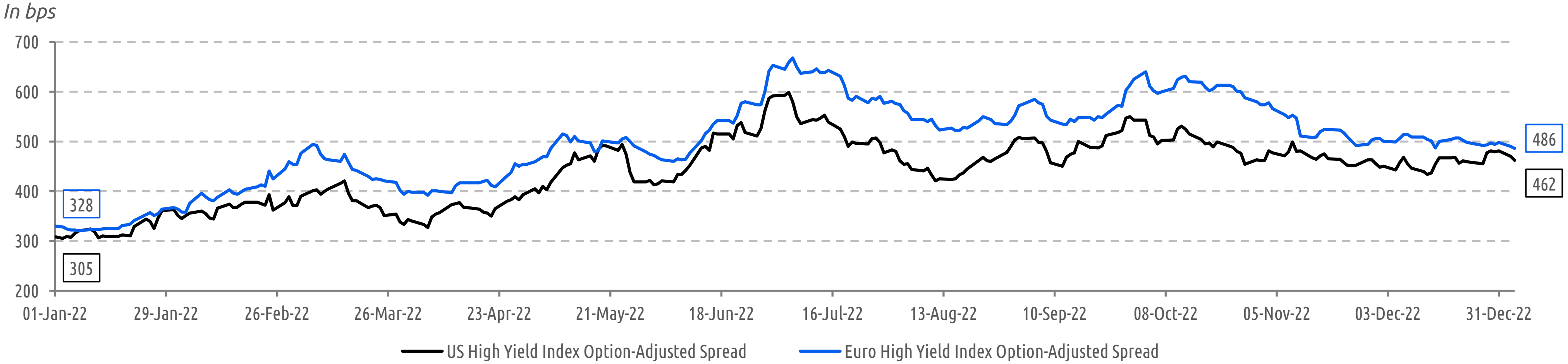
High yield corporate bond spreads have also risen

Spreads for corporate bonds[1] 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*



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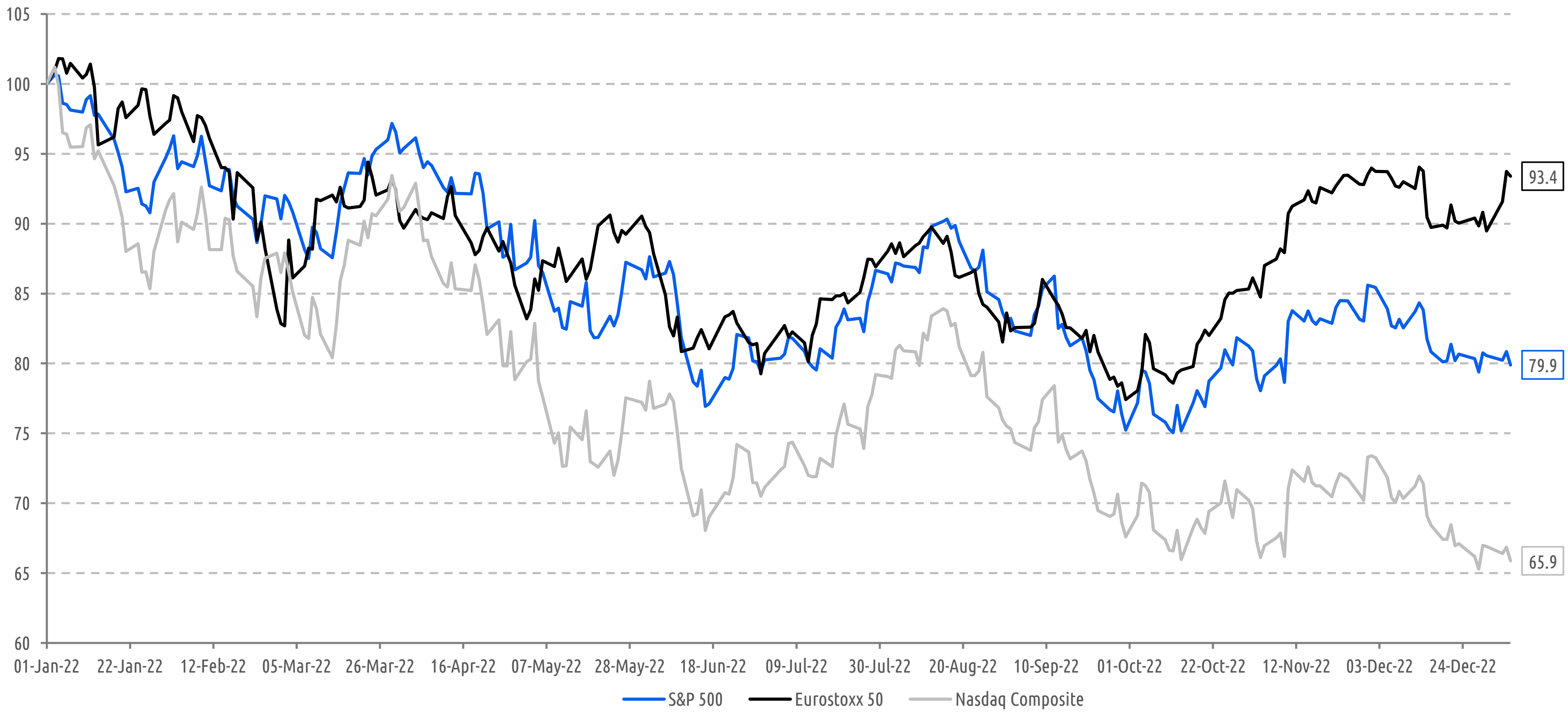
Source: ICE BofA Indices as of 04/01/2023
Note: High yield corporate bond spreads include BB-rated and lower corporate bonds

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, rebounced when inflation peaked and fell again following hawkish comments of central banks

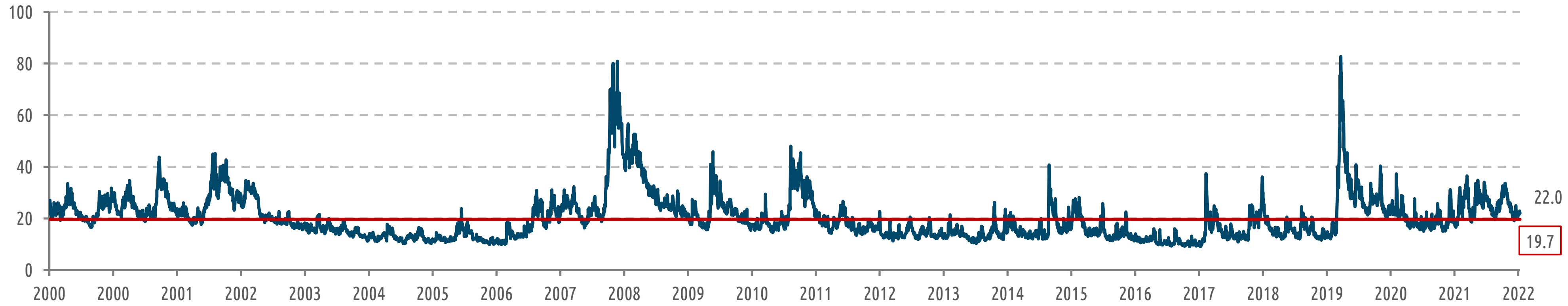
Nasdaq Composite, S&P 500 and Eurostoxx 50 indices – *Jan. 2022 = 100*



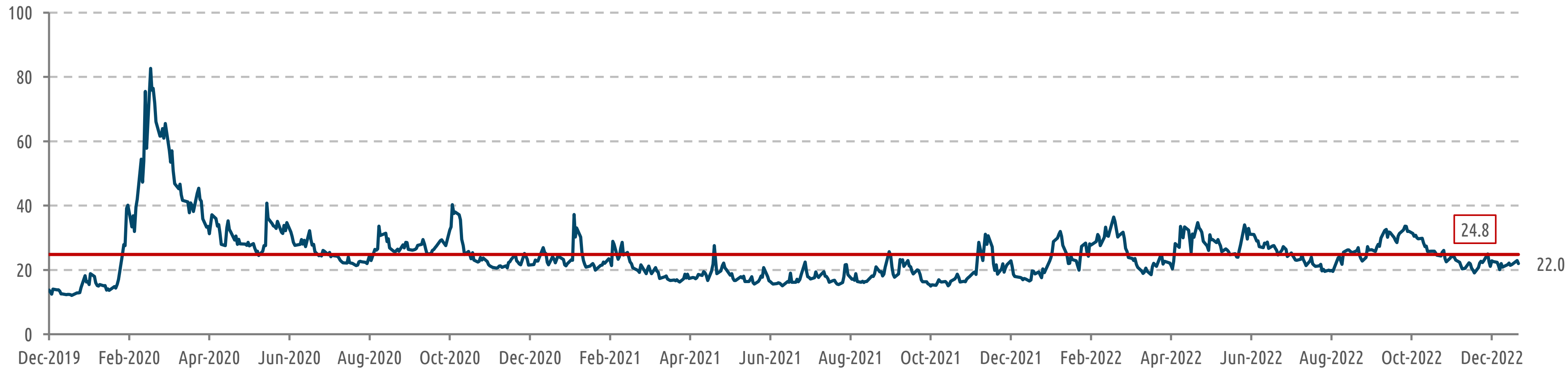
Sources: Boursorama, S&P Dow Jones as of 05/01/2023

Volatility on US financial markets are (moderately) edging up

VIX index – *Since 2000*



VIX index – *Since 2020*

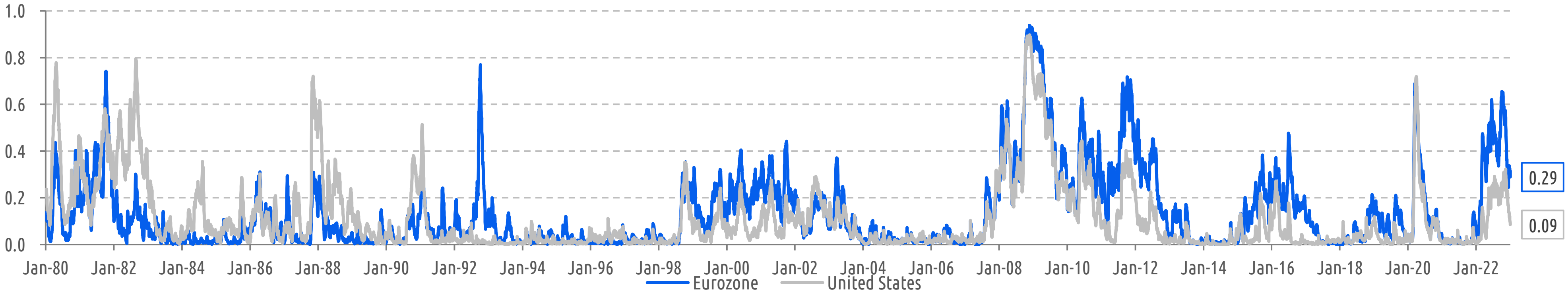


Source: CBOE as of 04/01/2023

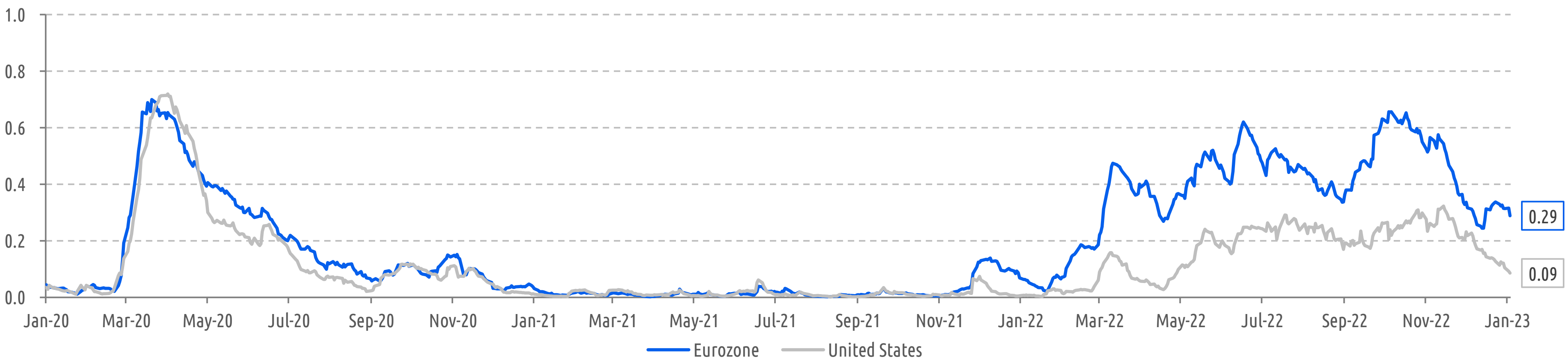
… while financial stress indicators moved up to high plateaus

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*



Source: ECB as of 03/01/2023

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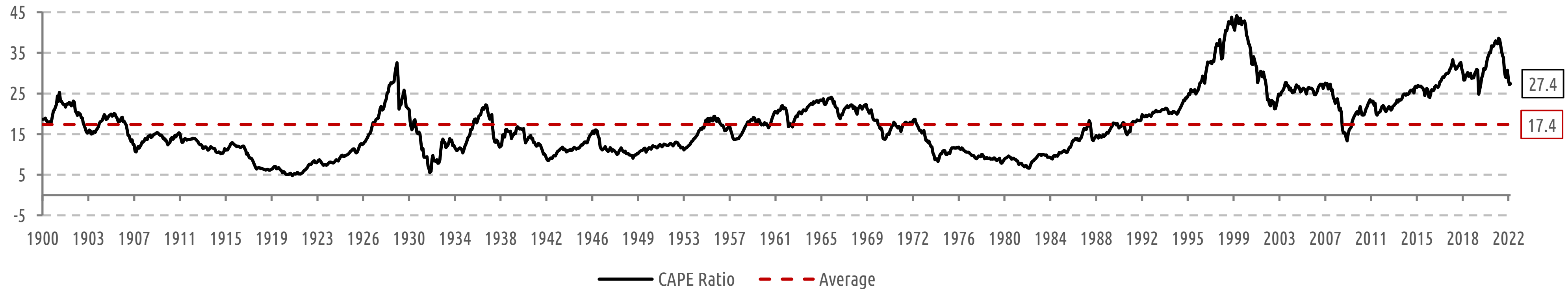
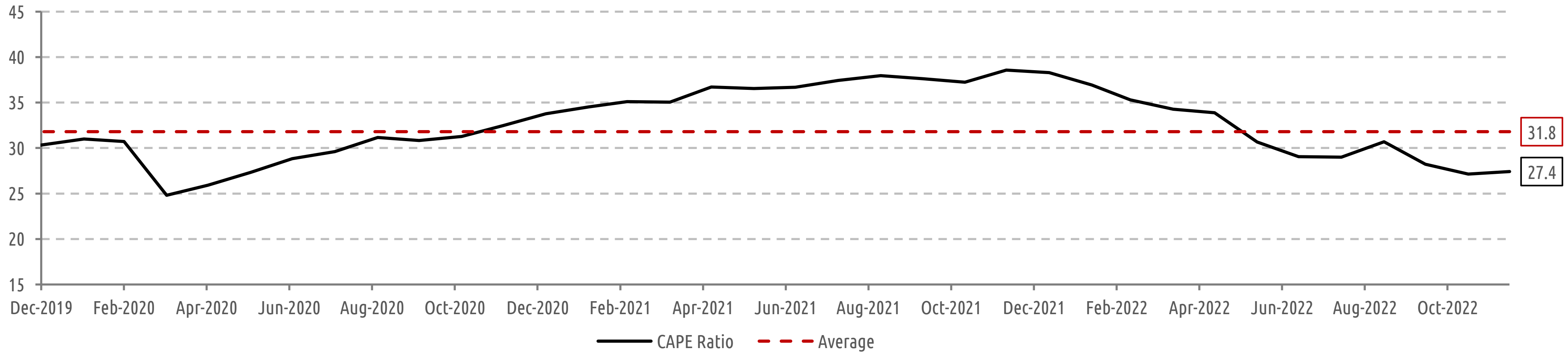
US Shiller Cyclically Adjusted Price to Earnings ratio (CAPE ratio)[1]

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)

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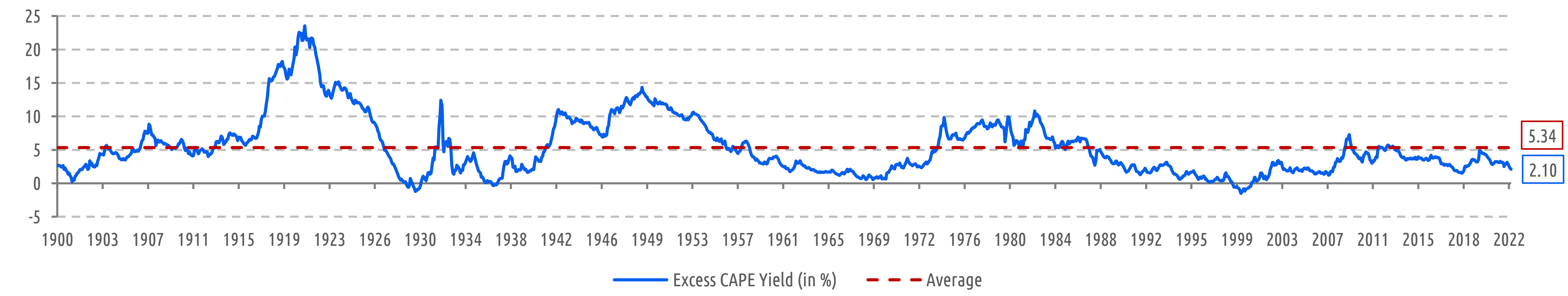
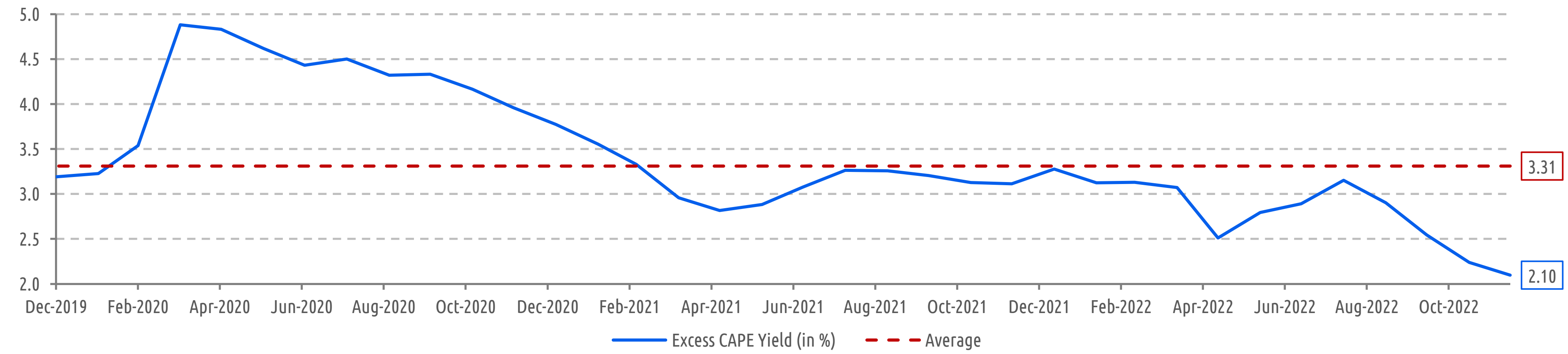
Shiller excess CAPE return index remains at moderate level in the US

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*



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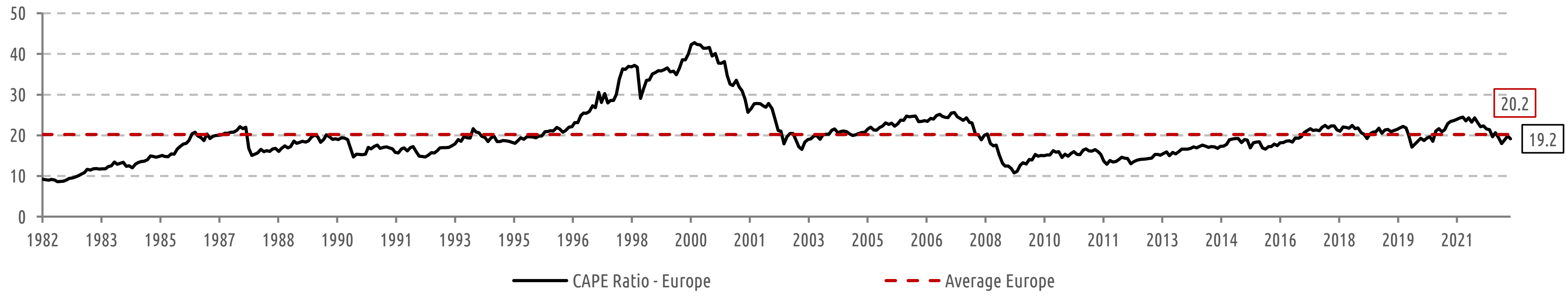
Source: Robert Shiller (last data available – Nov 22)
Note: Excess return is measured as average earning-to-price minus real interest rates

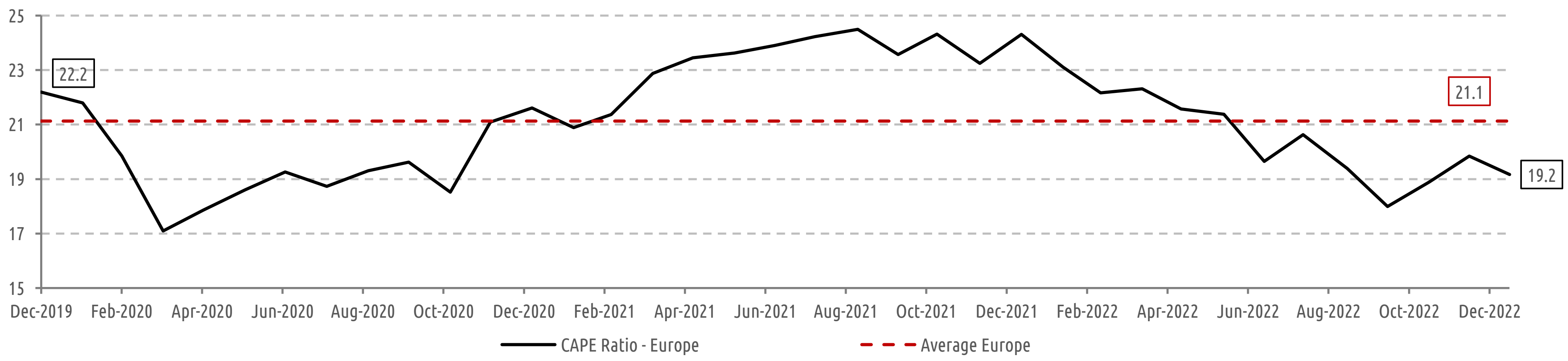
Shiller CAPE ratio in Europe

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

Cyclically Adjusted Price Earnings ratio – *Since 1982*



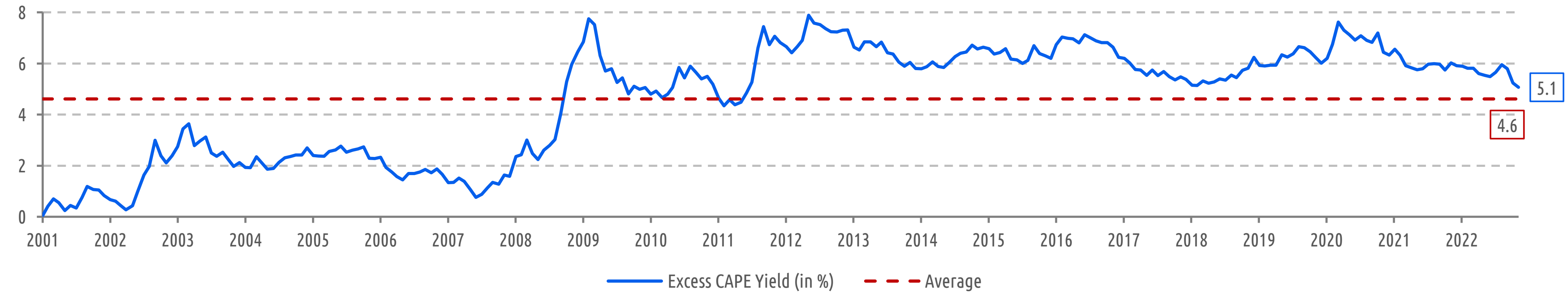
Cyclically Adjusted Price Earnings ratio – *Since 2020*



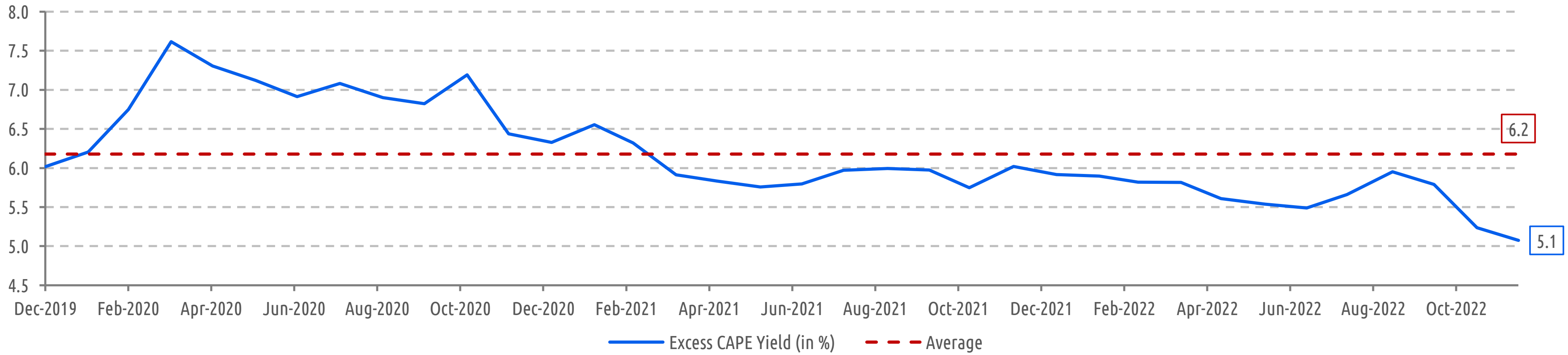
Source: Barclays (last data available – Dec. 22)

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 – Nov. 22), Eurostat, Bundesbank, Robert Shiller, Internal calculations

V Appendix

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4	Quarterly GDP growth (% change over the previous period) – Canada	OECD/KEI/NAEXKP01.CAN.GP.Q
4	Quarterly GDP growth (% change over the previous period) – Germany	OECD/KEI/NAEXKP01.DEU.GP.Q
4	Quarterly GDP growth (% change over the previous period) – Eurozone	OECD/KEI/NAEXKP01.EA19.GP.Q
4	Quarterly GDP growth (% change over the previous period) – France	OECD/KEI/NAEXKP01.FRA.GP.Q
4	Quarterly GDP growth (% change over the previous period) – UK	OECD/KEI/NAEXKP01.GBR.GP.Q
4	Quarterly GDP growth (% change over the previous period) – Italy	OECD/KEI/NAEXKP01.ITA.GP.Q
4	Quarterly GDP growth (% change over the previous period) – Japan	OECD/KEI/NAEXKP01.JPN.GP.Q
4	Quarterly GDP growth (% change over the previous period) – US	OECD/KEI/NAEXKP01.USA.GP.Q
4	Yearly GDP growth rate (YoY % change) – Canada	OECD/EO/CAN.GDPV_ANNPCT.A
4	Yearly GDP growth rate (YoY % change) – Germany	OECD/EO/DEU.GDPV_ANNPCT.A
4	Yearly GDP growth rate (YoY % change) – France	OECD/EO/FRA.GDPV_ANNPCT.A
4	Yearly GDP growth rate (YoY % change) – UK	OECD/EO/GBR.GDPV_ANNPCT.A
4	Yearly GDP growth rate (YoY % change) – Italy	OECD/EO/ITA.GDPV_ANNPCT.A
4	Yearly GDP growth rate (YoY % change) – Japan	OECD/EO/JPN.GDPV_ANNPCT.A

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4	Yearly GDP growth rate (YoY % change) – US	OECD/EO/USA.GDPV_ANNPCT.A
4	Yearly GDP growth rate (YoY % change) – Eurozone	OECD/EO/EA17.GDPV_ANNPCT.A
4	OECD Weekly growth tracker – Eurozone	OECD/GDP_GROWTH/W.Eurozone.tracker_yoy
4	OECD Weekly growth tracker – United States	OECD/GDP_GROWTH/W.USA.tracker_yoy
5	Quarterly GDP growth (% change over the previous period) – China	OECD/DP_LIVE/CHN.QGDP.TOT.PC_CHGPP.Q
5	Quarterly GDP growth (% change over the previous period) – Brazil	OECD/KEI/NAEXKP01.BRA.GP.Q
5	Quarterly GDP growth (% change over the previous period) – Mexico	OECD/KEI/NAEXKP01.MEX.GP.Q
5	Quarterly GDP growth (% change over the previous period) – South Africa	OECD/KEI/NAEXKP01.ZAF.GP.Q
5	Quarterly GDP growth (% change over the previous period) – Indonesia	OECD/KEI/NAEXKP01.IDN.GP.Q
5	Quarterly GDP growth (% change over the previous period) – India	OECD/KEI/NAEXKP01.IND.GP.Q
5	Yearly GDP growth rate (YoY % change) – Brazil	OECD/EO/BRA.GDPV_ANNPCT.A
5	Yearly GDP growth rate (YoY % change) – Mexico	OECD/EO/MEX.GDPV_ANNPCT.A
5	Yearly GDP growth rate (YoY % change) – South Africa	OECD/EO/ZAF.GDPV_ANNPCT.A
5	Yearly GDP growth rate (YoY % change) – Indonesia	OECD/EO/IDN.GDPV_ANNPCT.A

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5	Yearly GDP growth rate (YoY % change) – India	OECD/EO/IND.GDPV_ANNPCT.A
5	Yearly GDP growth rate (YoY % change) – China	OECD/EO/CHN.GDPV_ANNPCT.A
5	OECD Weekly growth tracker – Brazil	OECD/GDP_GROWTH/W.BRA.tracker_yoy
5	OECD Weekly growth tracker – Mexico	OECD/GDP_GROWTH/W.MEX.tracker_yoy
5	OECD Weekly growth tracker – South Africa	OECD/GDP_GROWTH/W.ZAF.tracker_yoy
5	OECD Weekly growth tracker – Indonesia	OECD/GDP_GROWTH/W.IDN.tracker_yoy
5	OECD Weekly growth tracker – India	OECD/GDP_GROWTH/W.IND.tracker_yoy
6	General government debt - Germany	Eurostat/gov_10dd_edpt1/A.PC_GDP.S13.GD.DE
6	General government debt – France	Eurostat/gov_10dd_edpt1/A.PC_GDP.S13.GD.FR
6	General government debt – United Kingdom	ONS/PUSF/BKPX.A
6	General government debt – Italy	Eurostat/gov_10dd_edpt1/A.PC_GDP.S13.GD.IT
6	General government debt – United States	OECD/DP_LIVE/USA.GGDEBT.TOT.PC_GDP.A
6	General government deficit – Germany	OECD/DP_LIVE/DEU.GGNLEND.TOT.PC_GDP.A
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6	General government deficit – United Kingdom	OECD/DP_LIVE/GBR.GGNLEND.TOT.PC_GDP.A
6	General government deficit – Italy	OECD/DP_LIVE/ITA.GGNLEND.TOT.PC_GDP.A
6	General government deficit – United States	OECD/DP_LIVE/USA.GGNLEND.TOT.PC_GDP.A
7	Consumer confidence index – United States	OECD/MEI_CLI/CSCICP03.USA.M
7	Consumer confidence index – Germany	OECD/MEI_CLI/CSCICP03.DEU.M
7	Consumer confidence index – France	OECD/MEI_CLI/CSCICP03.FRA.M
7	Consumer confidence index – United Kingdom	OECD/MEI_CLI/CSCICP03.GBR.M
7	Business confidence index – United States	OECD/MEI_CLI/BSCICP03.USA.M
7	Business confidence index – Germany	OECD/MEI_CLI/BSCICP03.DEU.M
7	Business confidence index – France	OECD/MEI_CLI/BSCICP03.FRA.M
7	Business confidence index – United Kingdom	OECD/MEI_CLI/BSCICP03.GBR.M
9/10	Natural Gas (Dutch TTF) prices in historical perspective (€/MWh)	ICE/DUTCH_TTF_GAS_FUTURES/D.5477499
12	% of EU business reporting shortages of materials and equipment in the construction industry as a limiting production factor	EC/CONSTRUCTION/TOT.2.F5.EA.M
13	Beveridge curve – Euro Area (Q1-17 – Q2-22), Quarterly	Eurostat/une_rt_q/Q.NSA.Y20-64.PC_POP.T.EA19 Eurostat/jvs_q_nace2/Q.NSA.B-S.TOTAL.JOBRATE.EA19

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13	Beveridge curve - France (Q1-17 – Q2-22), Quarterly	Eurostat/jvs_q_nace2/Q.NSA.B-S.GE10.JOBRATE.FR INSEE/CHOMAGE-TRIM-NATIONAL/T.CTTXC.TAUX.FR-D976.0.00-.POURCENT.CVS.FALSE
14	Wage growth tracker – France (Quarterly)	INSEE/ICT-2016/T.BDM_EUR.ICT.A21-BTN.INDICE.SSE.FE.SO.CVS-CJO.2016
15	CPI Inflation (YoY % change) – United States	BLS/cu/CUSR0000SA0 BLS/cu/CUSR0000SA0L1E
15	CPI Inflation (YoY % change) – Eurozone	Eurostat/prc_hicp_manr/M.RCH_A.CP00.EA Eurostat/prc_hicp_manr/M.RCH_A.TOT_X_NRG_FOOD.EA
15	CPI Inflation (YoY % change) – France	INSEE/IPC-2015/M.IPC.SO.SO.4035.GLISSEMENT_ANNUEL.ENSEMBLE.FE.POURCENT.BRUT.SO.FALSE
15	CPI Inflation (YoY % change) – Germany	DESTATIS/61111BM001/DG.PREIS1 DESTATIS/61111BM006/DG.CC13-63E.PREIS1
15	CPI Inflation (YoY % change) – United Kingdom	ONS/MM23/D7G7.M ONS/MM23/DKO8.M
15	CPI Inflation (YoY % change) – Japan	STATJP/CPIm/001 STATJP/CPIm/740
16	CPI Inflation (YoY % change)	OECD/KEI/CPALTT01.CHN.GY.M
17	Quarterly implied GDP deflator – Germany	Eurostat/namq_10_gdp/Q.PD_PCH_SM_NAC.SCA.B1GQ.DE
17	Quarterly implied GDP deflator – France	Eurostat/namq_10_gdp/Q.PD_PCH_SM_NAC.SCA.B1GQ.FR
17	Quarterly implied GDP deflator - United Kingdom	ONS/QNA/IHYU.Q
17	Quarterly implied GDP deflator - United States	BEA/NIPA-T10109/A191RD-Q
18	Producer price index for industrial products - United Kingdom	ONS/MM22/GB7S.M

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18	Producer price index for industrial products – France	INSEE/IPPI-2015/M.BDM_EUR.ENS_IPP.SO.NA_A10-BE.INDICE.FE.SO.BRUT.2015.SO
18	Producer price index for industrial products – Germany	DESTATIS/61241BM001/DG.PRE001
18	Producer price index for industrial products - United States	BLS/pc/PCUOMFG--OMFG--
24	10-Y Nominal yield – US	FED/H15/RIFLGFCY10_N.B
25	Yield curve – US	FED/H15/RIFLGFCM03_N.B
28	10-Y Nominal yield – German Bund	BUBA/BBK01/WT1010
28	Inflation Expectations - Germany	BUBA/BBSSY/D.KCP.EUR.A607.DE0001102523.A
28	Forward Rates on 10-Year German Bund	BUBA/BBSIS/D.I.ZAR.ZI.EUR.S1311.B.A604.R10XX.R.A.A._Z._Z.A
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30	Nominal Foreign exchange rate in historical perspective	BUBA/BBEX3/D.USD.EUR.BB.AC.000
33	Italian10-Y yield	Eurostat/irt_lt_mcby_d/D.MCBY.IT
33	Greek 10-Y yield	Eurostat/irt_lt_mcby_d/D.MCBY.EL
33	French 10-Y yield	BDF/FM/FM.D.FR.EUR.FR2.BB.FR10YT_RR.YLD
38	Composite Indicator of Systemic Stress (daily)	ECB/CISS/D.U2.Z0Z.4F.EC.SS_CIN.IDX