### CEPREMAP / DBNOMICS

Macroeconomic Outlook – November 2023



### **DBnomics**

- Most data presented in the forthcoming slides are extracted from DBnomics
   (<a href="https://db.nomics.world/">https://db.nomics.world/</a>), an open-sourced databank created at CEPREMAP, and will be updated every Thursday at 6:00pm
- 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 slides have been designed by Daniel Cohen and are updated by Jocelyn Maillard and François Langot at CEPREMAP
- Links to the DBnomics data are available in the Appendix
- All materials presented here can be freely used with proper acknowledgment
- Questions and comments about the presentation can be addressed at jocelyn.maillard@cepremap.org



### **Executive summary**

- Markets and policymakers are following in parallel headline inflation, financial market and labor market trends.
- In response to inflationary pressures, monetary policy has been tightened up to levels unheard of for the last 20 years. However, both the Fed and the ECB have recently paused the hikes.
- Headline inflation dropped below 3% in Europe in October although core inflation remains at high levels. In the US, headline inflation decreased, but it is now larger than in the Euro Area; and the return to the 2% inflation target may be complex as the Fed must deal with labor-market overheating and financial-market issues.
- Most raw-material prices have come back to their pre-war levels. However, oil prices have surged again since June as Saudi Arabia and Russia have cut their supply.
- GDP growth beat market expectations in the third quarter in the US. However, it was negative in the Euro Area as private consumption dropped. Notably, Germany growth remains low as its manufacturing sector is suffering.
- Sovereign yields are at a high level in the Euro Area as the uncertainty about inflation remains. However, the spreads between core countries and the periphery have been decreasing (except for Italy). Indeed, macroeconomic results have overcome expectations in countries as Spain or Greece.



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Growth and inflation in selected G20 countries



A The growth slowdown



### Growth in advanced economies

Growth was higher than expected in the US during the third quarter of 2023 while it was negative in the Euro Area. The OECD has moderately revised downward its growth projections for 2023 and 2024 for European countries, and upwards for the US.

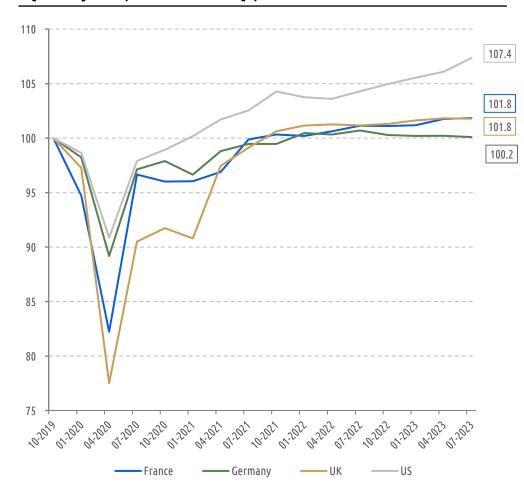
### Yearly GDP growth rate (YoY % change)

|                                | Yea                | ırly GDP grow | th rate % |       |     |  |  |  |  |
|--------------------------------|--------------------|---------------|-----------|-------|-----|--|--|--|--|
| Country 2020 2021 2022 2023(P) |                    |               |           |       |     |  |  |  |  |
| Euro Area                      | (6.1) <sup>1</sup> | 5.9           | 3.5       | 0.8   | 1.4 |  |  |  |  |
| Germany                        | (3.8)              | 3.2           | 1.8       | (0.1) | 1.1 |  |  |  |  |
| France                         | (7.5)              | 6.4           | 2.5       | 0.7   | 1.3 |  |  |  |  |
| Italy                          | (9.0)              | 8.3           | 3.7       | 0.7   | 0.8 |  |  |  |  |
| UK                             | (10.4)             | 8.7           | 4.4       | (0.3) | 1.0 |  |  |  |  |
| USA                            | (2.2)              | 5.8           | 1.9       | 1.6   | 1.1 |  |  |  |  |
| Japan                          | (4.2)              | 2.2           | 1.1       | 1.3   | 1.0 |  |  |  |  |

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

|           | Quarterly GDP growth rate % |      |       |       |       |       |       |       |       |  |  |
|-----------|-----------------------------|------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Country   | 21Q3                        | 21Q4 | 22Q1  | 22Q2  | 22Q3  | 22Q4  | 23Q1  | 23Q2  | 23Q3  |  |  |
| Еиго Агеа | 2.1                         | 0.5  | 0.7   | 0.8   | 0.3   | (0.0) | 0.0   | 0.2   | (0.1) |  |  |
| France    | 3.1                         | 0.5  | (0.1) | 0.4   | 0.5   | (0.0) | 0.1   | 0.6   | 0.1   |  |  |
| Germany   | 0.7                         | 0.0  | 1.0   | (0.1) | 0.4   | (0.4) | (0.1) | 0.0   | (0.1) |  |  |
| Italy     | 2.8                         | 0.8  | 0.1   | 1.4   | 0.3   | (0.2) | 0.6   | (0.4) | 0.0   |  |  |
| UK        | 1.7                         | 1.5  | 0.5   | 0.1   | (0.1) | 0.1   | 0.3   | 0.2   | 0.0   |  |  |
| USA       | 0.8                         | 1.7  | (0.5) | (0.1) | 0.7   | 0.6   | 0.6   | 0.5   | 1.2   |  |  |
| Japan     | (0.4)                       | 1.1  | (0.6) | 1.3   | (0.3) | 0.1   | 0.8   | 1.2   | -     |  |  |

#### Quarterly GDP (base 100 in 2019-Q4)



### Growth in emerging countries

Economic growth is going up again in China. The OECD has lifted 2023 and 2024 growth for Brazil and Mexico, but they have revised downwards the growth for the main emerging Asian countries.

### Yearly GDP growth rate (YoY % change)

|           | Yearly GDP growth rate % |      |      |         |         |  |  |  |  |  |  |
|-----------|--------------------------|------|------|---------|---------|--|--|--|--|--|--|
| Country   | 2020                     | 2021 | 2022 | 2023(P) | 2024(P) |  |  |  |  |  |  |
| China     | 2.2                      | 8.4  | 3.0  | 5.2     | 4.5     |  |  |  |  |  |  |
| S. Africa | (6.3)                    | 4.9  | 2.0  | 0.1     | 1.8     |  |  |  |  |  |  |
| Brazil    | (3.3)                    | 5.0  | 2.9  | 0.9     | 1.5     |  |  |  |  |  |  |
| India     | (5.8)                    | 9.1  | 6.8  | 5.9     | 6.3     |  |  |  |  |  |  |
| Mexico    | (8.0)                    | 4.7  | 3.1  | 1.8     | 1.6     |  |  |  |  |  |  |
| Indonesia | (2.1)                    | 3.7  | 5.3  | 5.0     | 5.1     |  |  |  |  |  |  |

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

|           | Quarterly GDP growth rate % |      |      |       |      |       |      |      |      |  |  |  |
|-----------|-----------------------------|------|------|-------|------|-------|------|------|------|--|--|--|
| Country   | 21Q3                        | 21Q4 | 22Q1 | 22Q2  | 22Q3 | 22Q4  | 23Q1 | 23Q2 | 23Q3 |  |  |  |
| China     | 0.6                         | 1.7  | 0.8  | (2.3) | 3.7  | 0.8   | 2.3  | 0.5  | 1.3  |  |  |  |
| S. Africa | (1.9)                       | 1.4  | 1.5  | (0.8) | 1.8  | (1.1) | 0.4  | 0.6  | -    |  |  |  |
| Brazil    | 0.4                         | 1.1  | 0.9  | 1.0   | 0.4  | 0.1   | 1.8  | 0.9  | -    |  |  |  |
| India     | 9.3                         | 2.0  | 0.5  | 0.9   | 2.0  | 1.1   | 2.1  | 1.9  | -    |  |  |  |
| Mexico    | (0.6)                       | 1.4  | 1.4  | 1.0   | 1.2  | 0.6   | 0.8  | 0.8  | 0.9  |  |  |  |
| Indonesia | 0.1                         | 3.2  | 1.0  | 0.9   | 0.8  | 2.3   | 0.8  | 0.9  | 0.8  |  |  |  |

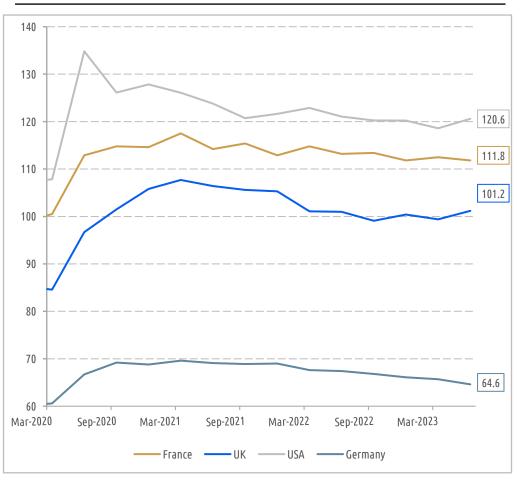
### Quarterly GDP (base 100 in 2019-Q4)



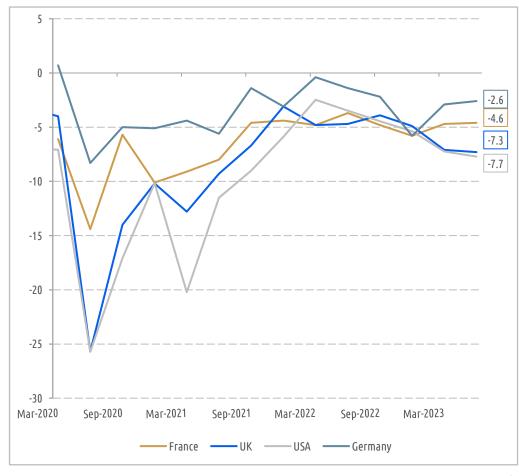
### Government debts have reached a new plateau in the G4 countries<sup>1</sup>

Inflation acted as a moderating factor on the evolution on debt ratios. Deficits decreased in France and Germany in the first two quarters of 2023 while they have been increasing in the UK and the US.

### General Government debt (% of GDP) - Since 2020



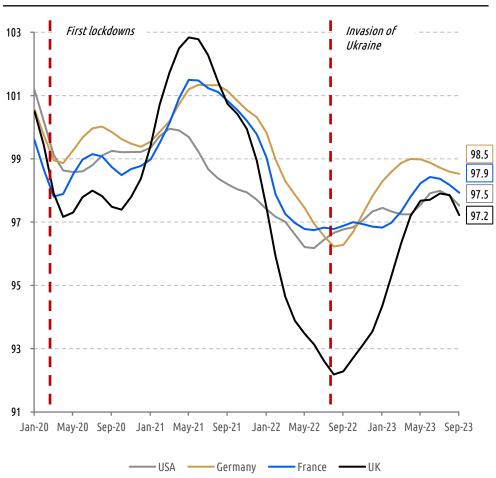
### General Government deficit (% of GDP) - Since 2020



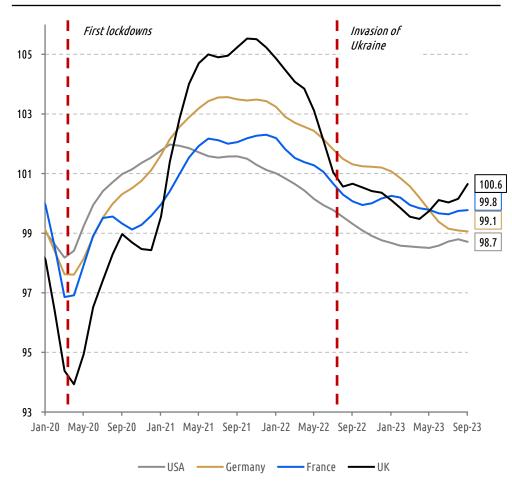
# Consumer confidence slightly decreased in October, remaining at rather low levels.

Business confidence has been on a decreasing path for the last two years. Nevertheless, it has been stabilizing for the last couple of months





#### Business confidence indicator - Since Jan. 2020



7

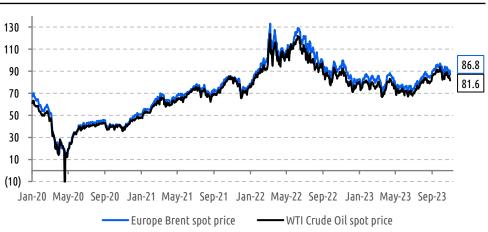


### B The seeds of inflation

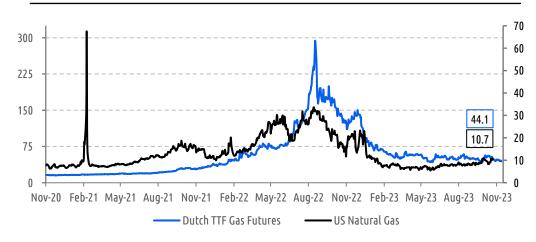
# Russian invasion added inflationary pressure. Yet, prices of raw materials have mostly returned to their pre-war range.

Natural-gas-price difference between the US and Europe has decreased but a one-to-four discrepancy remains between the two markets. Wheat and copper prices are slowly decreasing, almost reaching their pre-COVID levels. However, oil prices have been increasing again since June as OPEC+ has cut production.

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



### EU (left scale) and US (right scale) natural gas prices $(\epsilon/MWh)$



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



#### **CBOT Wheat** (USD/Bushel)





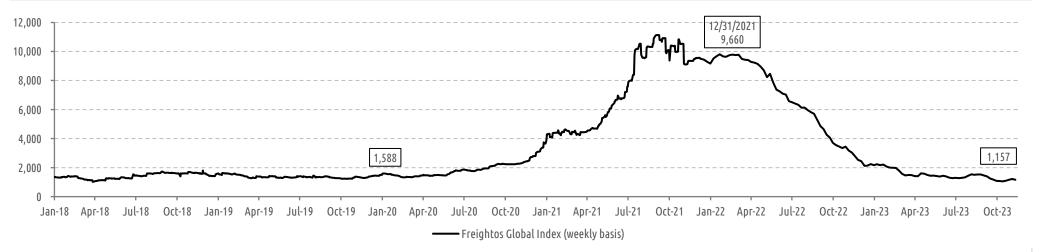
### Supply chain disruptions are easing up significantly

Transportation costs have returned to their pre-crisis level.

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



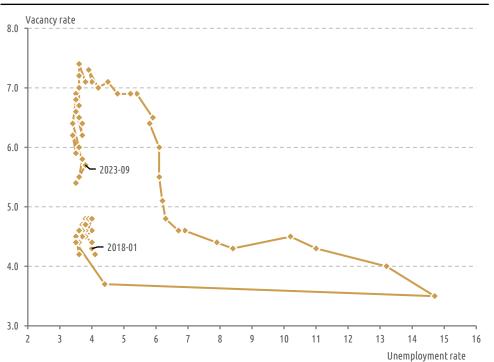
### Shipping Container Index (based on spot rate for 40 feet containers)



### Labor markets remain tight... (1/2)

The unemployment rate, both in the US and the EZ, remain at very low levels. In the US, after falling for a few months, the vacancy/unemployment ratio seems to be stabilizing above pre-covid levels.

### Beveridge curve - USA, Monthly



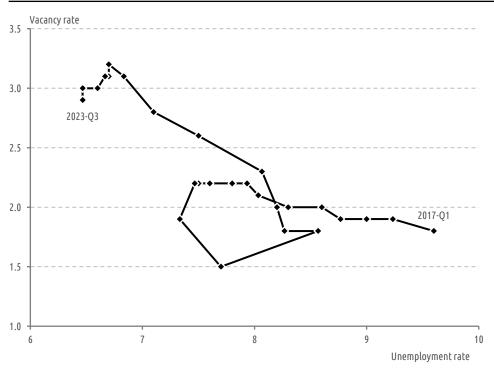
### Unemployment rate (% of labor force) - Monthly

Civilian unemployment rate - Total - USA - Seasonally adjusted

Indicator | 11-22 | 12-22 | 01-23 | 02-23 | 03-23 | 04-23 | 05-23 | 06-23 | 07-23 | 08-23 | 09-23 | 10-23

Rate | 3.6 | 3.5 | 3.4 | 3.6 | 3.5 | 3.4 | 3.7 | 3.6 | 3.5 | 3.8 | 3.9

#### Beveridge curve - Euro Area, Quarterly



### Unemployment rate (% of labor force) - Monthly

 Unemployment according to ILO definition - Total - Euro area - Seasonally adjusted

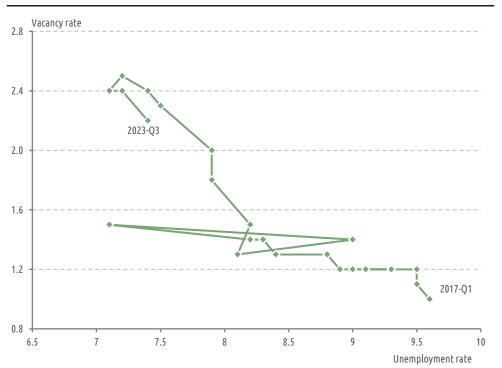
 Indicator
 10-22
 11-22
 12-22
 01-23
 02-23
 03-23
 04-23
 05-23
 06-23
 07-23
 08-23
 09-23

 Rate
 6.6
 6.7
 6.7
 6.6
 6.5
 6.5
 6.5
 6.4
 6.5
 6.4
 6.5

### Labor markets remain tight... (2/2)

The vacancy/unemployment ratio still at record high levels in France.

### Beveridge curve - France, Quarterly



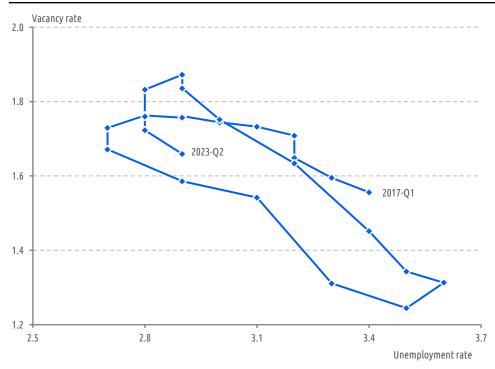
### Unemployment rate (% of labor force) – Monthly (Eurostat)

Unemployment rate – Total – France- Seasonally adjusted
Indicator | 10-22 | 11-22 | 12-22 | 01-23 | 02-23 | 03-23 | 04-23 | 05-23 | 06-23 | 07-23 | 08-23 | 09-23

Rate 7.2 7.2 7.2 7.1 7.1 7.1 7.3 7.3 7.3 7.4 7.3 7.3

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Beveridge curve - Germany, Quarterly



### Unemployment rate (% of labor force) - Monthly

 Unemployment according to ILO definition - Total - Germany - Seasonally adjusted

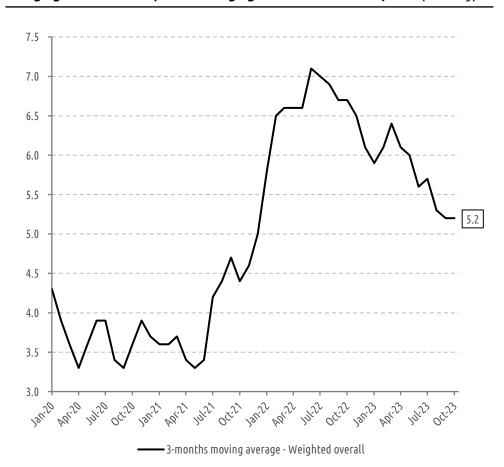
 Indicator
 10-22
 11-22
 12-22
 01-23
 02-23
 03-23
 04-23
 05-23
 06-23
 07-23
 08-23
 09-23

 Rate
 3.1
 3.0
 3.0
 3.0
 2.9
 2.9
 3.0
 3.0
 3.0
 3.0

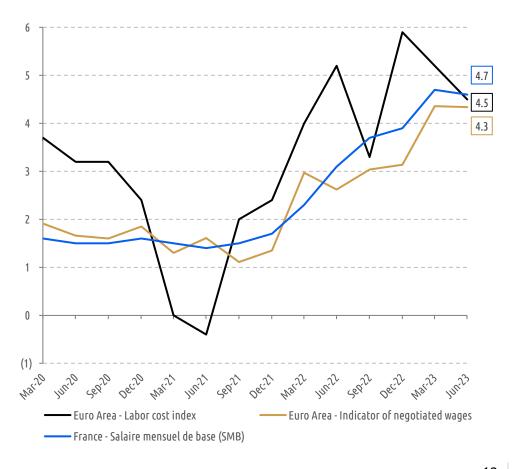
### The verdict on wage inflation in 2023, both in the US and the EZ, is still open

Although wage inflation is lower in the Euro Area, it may not have reached its peak yet, leaving open the question of the extend of monetary tightening.

### Wage growth tracker (nominal wage growth of individuals) - US (Monthly)



#### Indicator of negotiated wages in the Euro Area (Quarterly)





C Inflation unbound

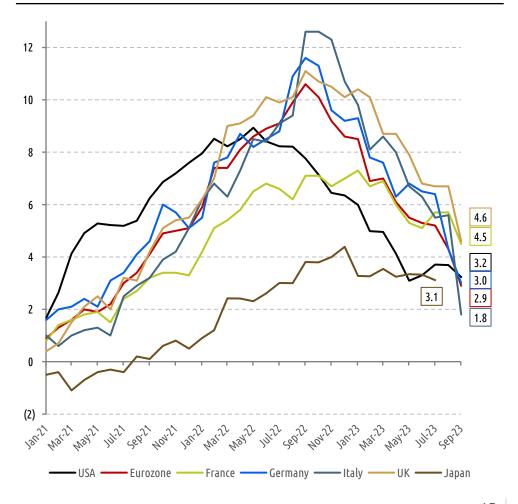
### Inflation is coming down from its peak both in Europe and the US

Headline inflation dropped in September in the Euro Area (but it is still above 4% for France). Inflation also decreased in the US, but it is now higher than in the Euro Area. Core inflation is at high levels for all countries.

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

| CPI and core initiation in advanced economies (404 % change) |        |      |      |      |      |     |     |     |       |     |     |     |
|--|--------|------|------|------|------|-----|-----|-----|-------|-----|-----|-----|
| Mon  | thly \ |      |      |      |      |     |     |     | 22/20 | 23  |     |     |
| Country  | Nov    | Dec  | Jan  | Feb  | Маг  | Арг | May | Jun | Jul   | Aug | Sep | Oct |
| US   | 7.1    | 6.4  | 6.3  | 6.0  | 5.0  | 5.0 | 4.1 | 3.1 | 3.3   | 3.7 | 3.7 | 3.2 |
| US core  | 6.0    | 5.7  | 5.5  | 5.5  | 5.6  | 5.5 | 5.3 | 4.9 | 4.7   | 4.4 | 4.1 | 4.0 |
| Euro Area*   | 10.1   | 9.2  | 8.6  | 8.5  | 6.9  | 7.0 | 6.1 | 5.5 | 5.3   | 5.2 | 4.3 | 2.9 |
| Euro Area core*  | 5.0    | 5.2  | 5.3  | 5.6  | 5.7  | 5.6 | 5.3 | 5.5 | 5.5   | 5.3 | 4.5 | 4.2 |
| France*  | 7.1    | 6.7  | 7.0  | 7.3  | 6.7  | 6.9 | 6.0 | 5.3 | 5.1   | 5.7 | 5.7 | 4.5 |
| France core*   | 4.2    | 4.2  | 4.2  | 4.6  | 4.6  | 4.7 | 4.4 | 4.4 | 4.3   | 4.0 | 3.6 | 3.5 |
| France INSEE   | 6.2    | 5.9  | 6.0  | 6.3  | 5.7  | 5.9 | 5.1 | 4.5 | 4.3   | 4.9 | 4.9 | 4.0 |
| France core INSEE  | 5.3    | 5.3  | 5.6  | 6.1  | 6.2  | 6.3 | 5.8 | 5.7 | 5.0   | 4.6 | 4.6 | 4.2 |
| Germany*   | 11.3   | 9.6  | 9.2  | 9.3  | 7.8  | 7.6 | 6.3 | 6.8 | 6.5   | 6.4 | 4.3 | 3.0 |
| Germany core*  | 5.1    | 5.4  | 5.1  | 5.4  | 5.9  | 5.6 | 5.1 | 6.1 | 6.2   | 6.3 | 4.8 | 4.2 |
| Italy*   | 12.6   | 12.3 | 10.7 | 9.8  | 8.1  | 8.6 | 8.0 | 6.7 | 6.3   | 5.5 | 5.6 | 1.8 |
| Italy core*  | 4.7    | 4.8  | 5.2  | 5.5  | 5.3  | 5.3 | 5.1 | 4.9 | 4.7   | 4.0 | 4.1 | 3.8 |
| UK   | 10.7   | 10.5 | 10.1 | 10.4 | 10.1 | 8.7 | 8.7 | 7.9 | 6.8   | 6.7 | 6.7 | 4.6 |
| UK core  | 6.3    | 6.3  | 5.8  | 6.2  | 6.2  | 6.8 | 7.1 | 6.9 | 6.9   | 6.2 | 6.1 | 5.7 |
| Japan  | 3.8    | 4.0  | 4.4  | 3.3  | 3.3  | 3.5 | 3.2 | 3.3 | 3.3   | 3.1 | -   | -   |
| Japan core   | 2.8    | 3.0  | 3.2  | 3.4  | 3.7  | 4.1 | 4.2 | 4.3 | 4.3   | 4.3 | -   | -   |

#### CPI Inflation (YoY % change) – since January 2021



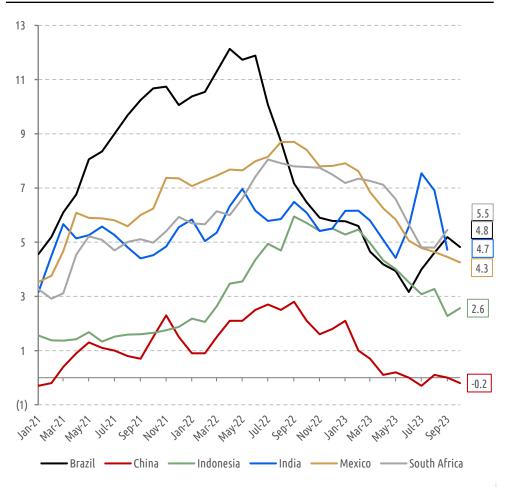
### Inflation in emerging economies is slowly cooling but remains at high levels

China remains an extraordinary exception with extremely low inflation levels

#### CPI inflation in advanced economies (YoY % change)

| CFT IIII (action iii advanced economies (101 % change) |     |        |        |       |        |       |       |       |       |      |     |       |
|--|-----|--------|--------|-------|--------|-------|-------|-------|-------|------|-----|-------|
|  | Mon | thly Y | 'еаг-о | n-Yea | r infl | ation | rates | (%) – | 2022/ | 2023 |     |       |
| Country  | Nov | Dec    | Jan    | Feb   | Маг    | Арг   | May   | Jun   | Jul   | Aug  | Sep | Oct   |
| China  | 1.6 | 1.8    | 2.1    | 1.0   | 0.7    | 0.1   | 0.2   | 0.0   | (0.3) | 0.1  | 0.0 | (0.2) |
| India  | 5.4 | 5.5    | 6.2    | 6.2   | 5.8    | 5.1   | 4.4   | 5.6   | 7.5   | 6.9  | 4.7 | -     |
| South<br>Africa  | 7.7 | 7.5    | 7.2    | 7.3   | 7.3    | 7.1   | 6.6   | 5.7   | 4.8   | 4.8  | 5.5 | -     |
| Brazil   | 5.9 | 5.8    | 5.8    | 5.6   | 4.7    | 4.2   | 3.9   | 3.2   | 4.0   | 4.6  | 5.2 | 4.8   |
| Mexico   | 7.8 | 7.8    | 7.9    | 7.6   | 6.8    | 6.3   | 5.8   | 5.1   | 4.8   | 4.6  | 4.5 | 4.3   |
| Indonesia  | 5.4 | 5.5    | 5.3    | 5.5   | 5.0    | 4.3   | 4.0   | 3.5   | 3.1   | 3.3  | 2.3 | 2.6   |

### CPI Inflation (YoY % change) - since January 2021



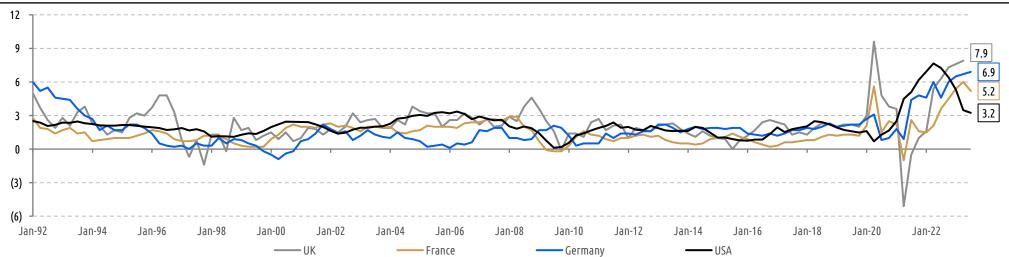
### Implied GDP deflators remain at high levels in Europe

In the US, it is lower, close to headline inflation levels.

### Quarterly implied GDP deflator

|         | Implied GDP deflator (YoY % change) – Since Q1-2021 |       |       |       |       |       |       |       |  |  |  |  |
|---------|---|-------|-------|-------|-------|-------|-------|-------|--|--|--|--|
| Country | Q4-21   | Q1-22 | Q2-22 | Q3-22 | Q4-22 | Q1-23 | Q2-23 | Q3-23 |  |  |  |  |
| USA     | 6.2   | 6.9   | 7.7   | 7.3   | 6.4   | 5.3   | 3.5   | 3.2   |  |  |  |  |
| Germany | 4.8   | 4.6   | 6.0   | 4.6   | 6.0   | 6.5   | 6.7   | 6.9   |  |  |  |  |
| France  | 1.6   | 1.5   | 2.1   | 3.6   | 4.5   | 5.4   | 6.0   | 5.2   |  |  |  |  |
| UK      | 1.0   | 1.6   | 5.4   | 6.3   | 7.3   | 7.6   | 7.9   | -     |  |  |  |  |

### **Quarterly implied GDP deflator –** Since Q1-1992





II Monetary policy



A In the US



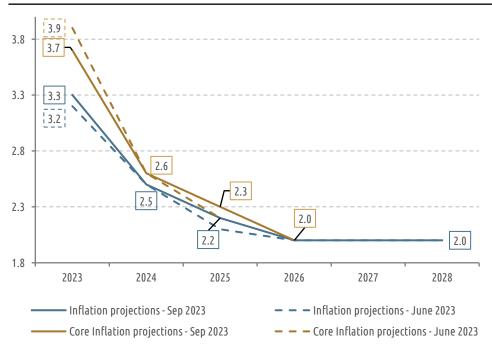
### Monetary policy decisions from the Fed (1/2)

The Fed decided to maintain interest rates at their levels in November despite the plateauing of inflation and a stronger-than-expected economic growth.

#### Personal consumption expenditures (PCE) – Monthly (YoY % change)

| Price indexes for Personal Consumption Expenditures |       |       |       |       |       |       |       |  |  |  |
|---|-------|-------|-------|-------|-------|-------|-------|--|--|--|
| Indicator   | 03-23 | 04-23 | 05-23 | 06-23 | 07-23 | 08-23 | 09-23 |  |  |  |
| PCE inflation                                       | 4.4   | 4.4   | 4.0   | 3.2   | 3.4   | 3.4   | 3.4   |  |  |  |

#### PCE Inflation Projections as of September 2023 (%)



#### **Key considerations**

- The target range of the federal fund rates was maintained at 5.25%-5.50% on November 1st.
- The decision comes after a first pause in the hikes in September. Interest rates are at their highest levels since 2001.
- The Fed revised up GDP growth from 1% to 2.1%. The main concern is whether the labor market will cool down, decreasing pressures on prices.
- Next meeting will be on December 13<sup>th</sup>. The key issue is whether a new hike will occur.

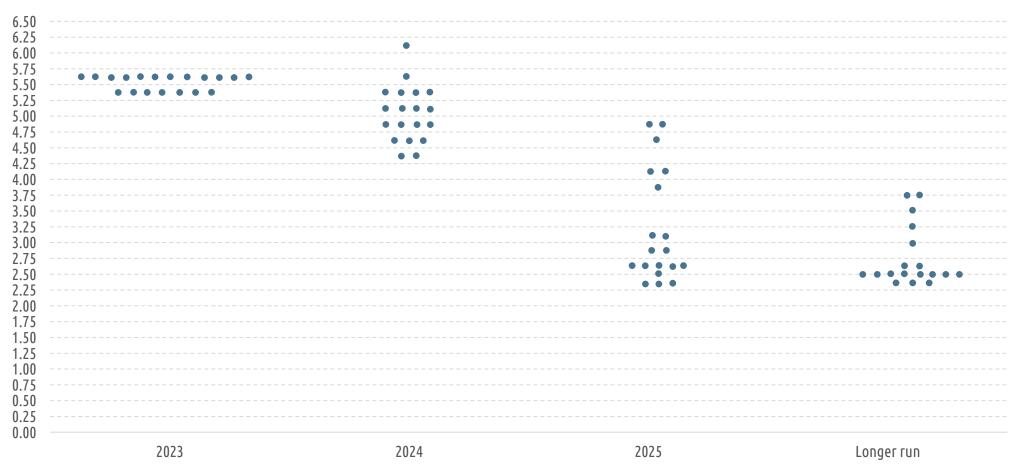
| Federal Reserve economic projections as of 20th September 2023 |      |      |      |            |  |  |  |  |  |  |
|--|------|------|------|------------|--|--|--|--|--|--|
| Indicator  | 2023 | 2024 | 2025 | Longer run |  |  |  |  |  |  |
| Change in real GDP   | 2.1  | 1.5  | 1.8  | 1.8        |  |  |  |  |  |  |
| Unemployment rate  | 3.8  | 4.1  | 4.1  | 4.0        |  |  |  |  |  |  |
| Inflation  | 3.3  | 2.5  | 2.2  | 2.0        |  |  |  |  |  |  |
| Federal funds rate   | 5.6  | 5.1  | 3.9  | 2.5        |  |  |  |  |  |  |

"Evidence of growth persistently above potential, or that tightness in the labor market is no longer easing, could put further progress on inflation at risk and could warrant further tightening of monetary policy."

### 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 estimates in September remain close to the previous ones in June. They imply another 25-pp hike at next meeting in December. However, most analysts believe that no increase will occur.

FOMC participants' assessments of appropriate monetary policy: Midpoint of target range or target level for the federal funds rate as of 20th September



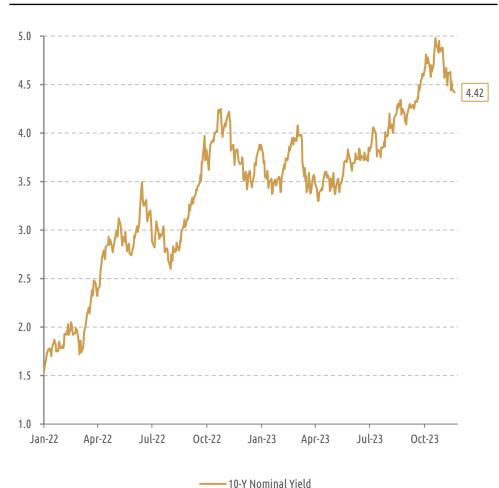


Source: Fed as of 20/09/2023

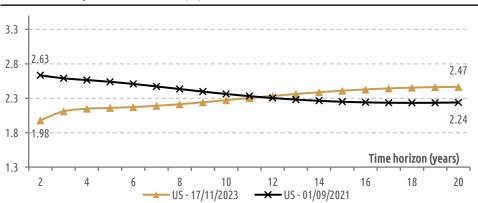
### Nominal long-term rates are at their highest level since the Great Recession

Real rate however are expected to stay around 2% in real terms

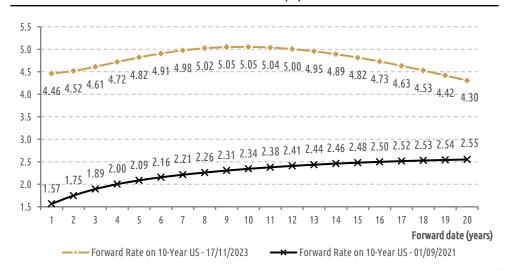
### 10-Y Nominal yield – US



#### Inflation Expectations – US (%)



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



### The US yield curve has been inverted for more than a year

### U.S. 10Yr/2Yr Spread - Since Jan. 1978





Source: Fed as of 22/11/2023

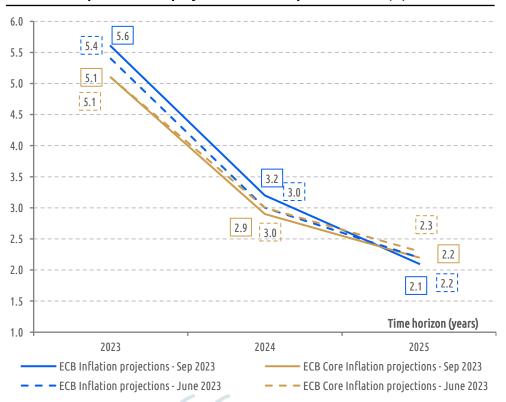


B In the Euro Area

### The ECB decided to keep its interest rates unchanged in the November meeting

President Lagarde explained that considering the strong decrease of inflation in September, no new hike is required. The ECB is waiting to see the effects of current interest rate levels for reaching the 2% inflation target.

#### Inflation expectations & projections as of September 2023 (%)



#### **Key considerations**

- The Governing Council decided to maintain the three key ECB interest rates at their September value. This pause comes after continuous increases for more than 18 months.
- Looking ahead, ECB staff have slightly revised their inflation projections up in September. Headline inflation is now expected to average 5.6% in 2023 while core inflation should reach 5.1%.
- The benchmark deposit rate is now set at 4%, coming from minus 0.5% a year and a half ago. It is the highest level since 2000.
- The next meeting is set on December 14<sup>th</sup> The ECB hinted that the interest rate will probably remain unchanged.

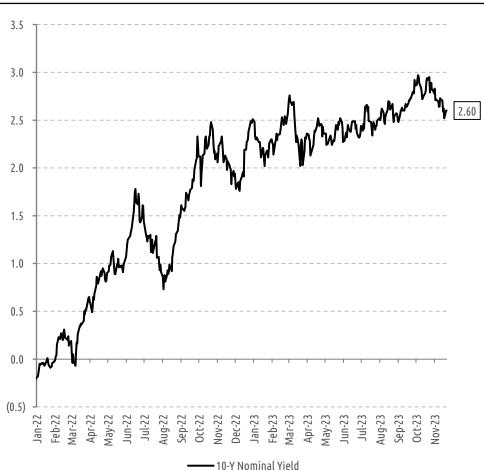
| ECB economic projections as of 14 September 2023 |      |      |      |  |  |  |  |  |  |  |  |
|--|------|------|------|--|--|--|--|--|--|--|--|
| Indicator  | 2023 | 2024 | 2025 |  |  |  |  |  |  |  |  |
| Change in real GDP                               | 0.7  | 1.0  | 1.5  |  |  |  |  |  |  |  |  |
| Unemployment rate                                | 6.5  | 6.7  | 6.7  |  |  |  |  |  |  |  |  |
| Inflation  | 5.6  | 3.2  | 2.1  |  |  |  |  |  |  |  |  |

"Our past interest rate increases continue to be transmitted forcefully into financing conditions. This is increasingly dampening demand and thereby helps push down inflation."

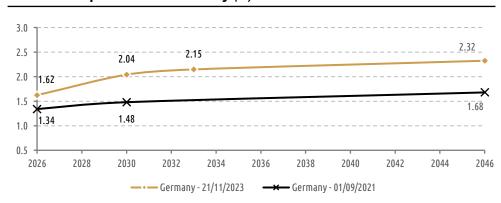
### In the Eurozone, nominal rates keep increasing despite the decrease of inflation

Expected real rates, however, are near zero in the longer run.

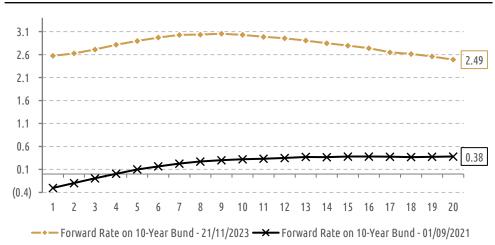
### 10-Y Nominal yield – German Bund



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



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



# The German yield curve is inverted for the first time since 2008, reflecting risk of recession/sluggish growth

#### Bund 2Yr/10Yr Spread - Since Jan 1998

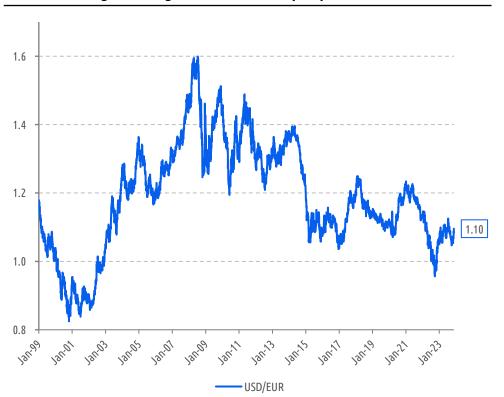




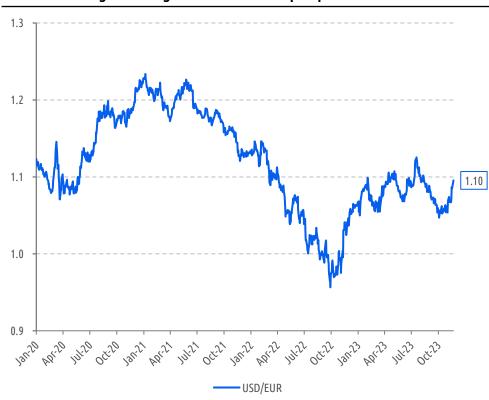
Source: Bundesbank as of 22/11/2023

# After an appreciation at the end of 2022, the Euro has been rather stable in 2023.

#### Nominal Foreign exchange rate in historical perspective — Since Jan. 1999



#### Nominal Foreign exchange rate in historical perspective — Since Jan. 2020



"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 2022



III Impact on yields and spreads

### In Europe, sovereign yields are at particularly high levels

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

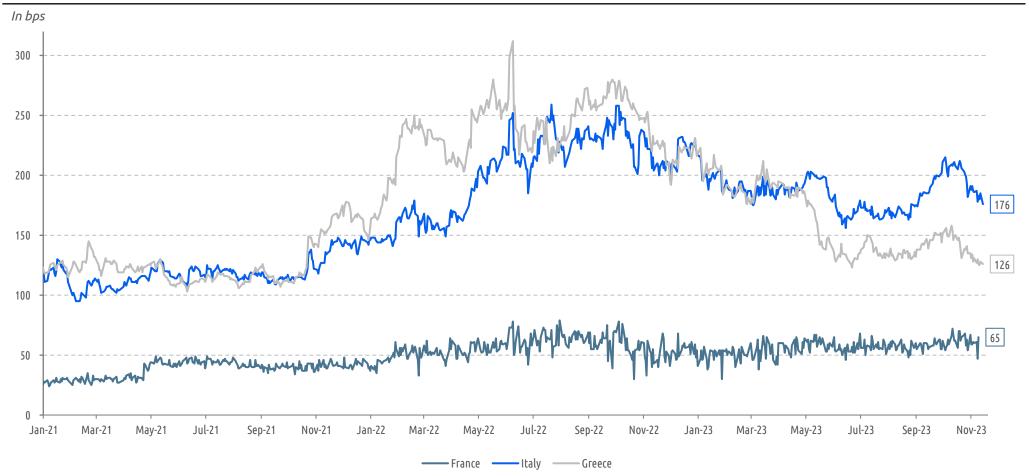




### Tensions on spreads have moderately eased off since their peak late 2022

Except for Italy where spreads are now way higher than in Greece, notably due to fears over larger-than-expected public deficits.

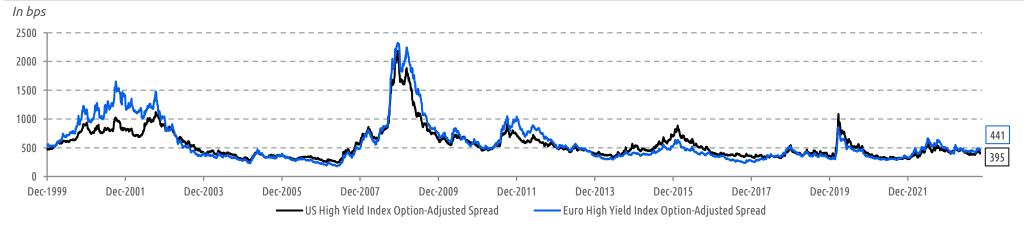
### Italian, Greek and French spreads over 10Y German bund - Since Jan. 2021



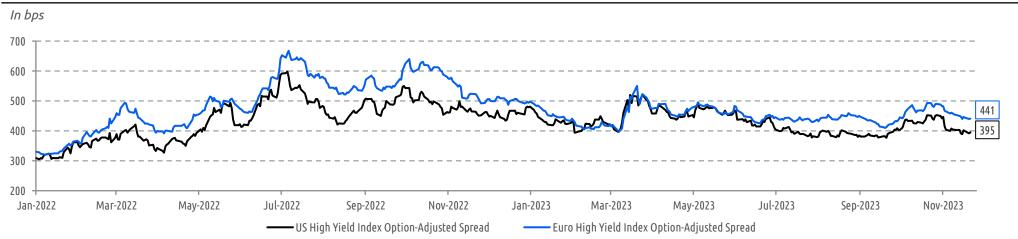


## High yield corporate bond spreads have slightly increased in the last couple of months both in the US and the Euro Area.

### High yield corporate bond spreads – Since 2000



### High yield corporate bond spreads—Since 2022





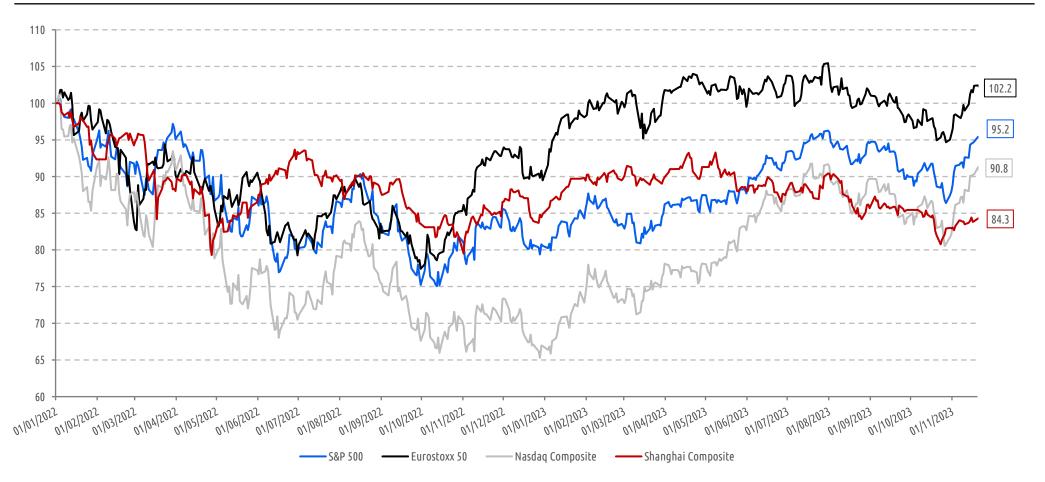


IV Impact on stock markets

## Stock-market prices remain below pre-war levels, except for the Eurostoxx 50

They have been going up for the last month, notably as the Fed and the ECB paused their interest-rate hikes.

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





# Volatility on US financial markets has fallen below its historical average level

### VIX index - Since 2000 100 60 2000 2000 2002 2003 2004 2005 2007 2008 2009 2010 2011 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2012 VIX index - Since 2022 35 15

Feb-2023

Арг-2023

May-2023

Jul-2023

Aug-2023

Jan-2022

Feb-2022

Арг-2022

Source: CBOE as of 22/11/2023

May-2022

Jul-2022

Aug-2022

Oct-2022

Nov-2022

Jan-2023

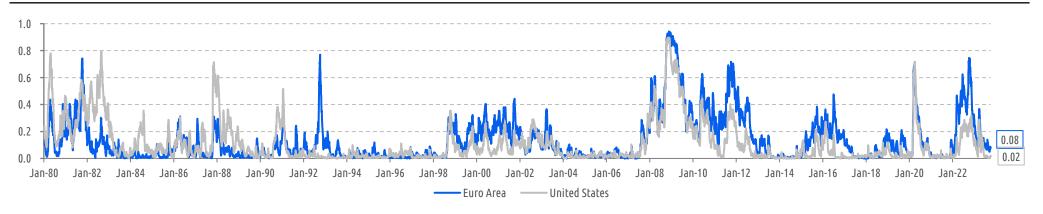
Nov-2023

Oct-2023

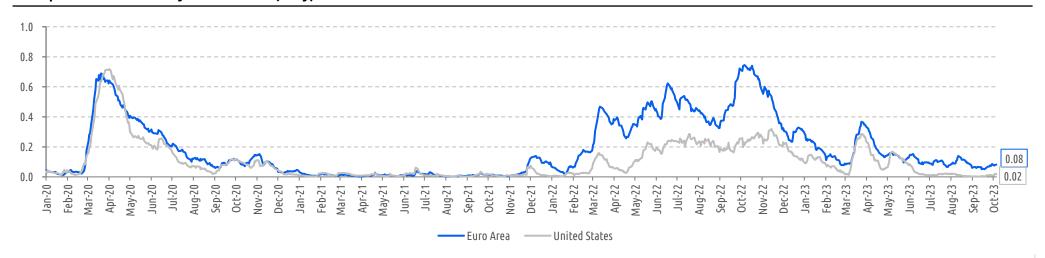
## Financial stress indicators returned to pre-war levels

The index, however, is higher in Europe than in the US.

### Composite Indicator of Systemic Stress (daily) - Since Jan. 1980



### Composite Indicator of Systemic Stress (daily) - Since Jan. 2020



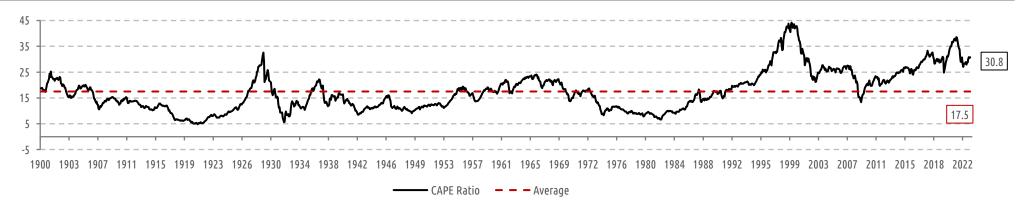


Source: ECB as of 22/11/2023

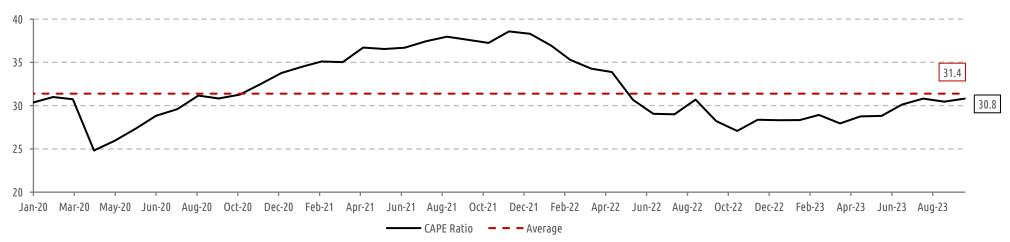
## US Shiller Cyclically Adjusted Price to Earnings ratio (CAPE ratio)<sup>1</sup>

Shiller CAPE ratio remains at record high level in historical perspective and back to its pre-covid level.

#### Cyclically Adjusted Price Earnings ratio – Since 1900



### Cyclically Adjusted Price Earnings ratio - Since 2020





Source: Robert Shiller (last data available – September 23)

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

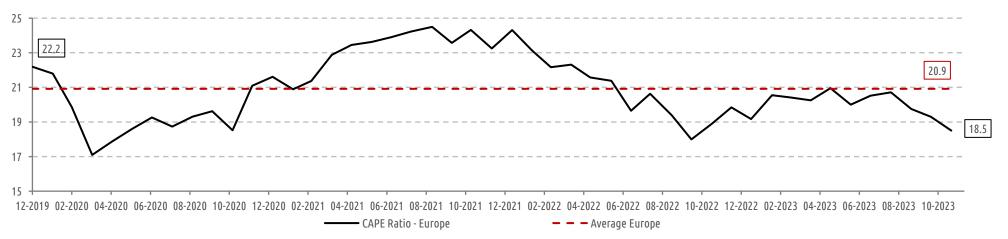
## Shiller CAPE ratio in Europe

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

### Cyclically Adjusted Price Earnings ratio – Since 1982



### Cyclically Adjusted Price Earnings ratio – Since 2020



Source: Barclays (last data available – August 23)



V Appendix

| Page # | Graph / Table   | Web link                             |
|--------|---|--------------------------------------|
| 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           |
| 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           |



| Page # | Graph / Table                               | Web link                                   |
|--------|---|--|
| 6      | General government debt - Germany           | Eurostat/gov 10q ggdebt/Q.GD.S13.PC GDP.DE |
| 6      | General government debt – France            | Eurostat/gov 10q ggdebt/Q.GD.S13.PC GDP.FR |
| 6      | General government debt – United Kingdom    | ONS/EDP1/YEQJ.Q                            |
| 6      | General government deficit – United States  | BEA/NIPA-T30100/AD01RC-Q                   |
| 6      | General government deficit – Germany        | Eurostat/teina205/Q.B9.S13.PC_GDP_SCA.DE   |
| 6      | General government deficit – France         | Eurostat/teina205/Q.B9.S13.PC GDP SCA.FR   |
| 6      | General government deficit – United Kingdom | ONS/UKEA/CT8O.Q                            |
| 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                |



| Page # | Graph / Table  | Web link  |
|--------|--|---|
| 9      | Natural Gas (Dutch TTF) prices in historical perspective (€/MWh)   | ICE/DUTCH TTF GAS FUTURES/D.5614690   |
| 10     | % of EU business reporting shortages of materials and equipment in the construction industry as a limiting production factor | EC/CONSTRUCTION/TOT.2.F5S.EU.M  |
| 11     | Beveridge curve – Euro Area (Q1-17 – Q2-22), Quarterly   | OECD/MEI/EA20.LRHUTTTT.STSA.Q<br>Eurostat/jvs q nace2/Q.NSA.B-S.TOTAL.JOBRATE.EA19  |
| 11     | Beveridge curve – United States (Q1-17 – Q2-22), Monthly   | <u>BLS/ln/LNS14000000</u><br>BLS/jt/JTS0000000000000JOR   |
| 11     | Unemployment according to ILO definition - Total – Euro area – Seasonally adjusted, Monthly                                  | Eurostat/ei lmhr m/M.PC ACT.SA.LM-UN-T-TOT.EA20   |
| 12     | Beveridge curve - France, Quarterly  | Eurostat/jvs_q_nace2/Q.NSA.B-S.GE10.JOBRATE.FR<br>INSEE/CHOMAGE-TRIM-NATIONAL/T.CTTXC.TAUX.FR-D976.0.00-<br>.POURCENT.CVS.FALSE |
| 12     | Beveridge curve - Germany, Quarterly   | Eurostat/jvs_q_nace2/Q.NSA.B-S.GE10.JOBRATE.DE<br>DESTATIS/81000BV001/DG.BV4SB.ERW089   |
| 12     | Unemployment according to ILO definition - Total – France – Seasonally adjusted, Monthly                                     | Eurostat/une rt m/M.SA.TOTAL.PC ACT.T.FR  |
| 12     | Unemployment according to ILO definition - Total – Germany – Seasonally adjusted, Monthly                                    | Eurostat/une rt_m/M.SA.TOTAL.PC_ACT.T.DE  |
| 13     | Wage growth tracker – France (Quarterly)   | INSEE/ICT-2016/T.BDM_EUR.ICT.A21-BTN.INDICE.SSE.FE.SO.CVS-CJO.2016  |



| Page # | Graph / Table                                 | Web link  |
|--------|---|---|
| 15     | CPI Inflation (YoY % change) – United States  | BLS/cu/CUSR0000SA0<br>BLS/cu/CUSR0000SA0L1E   |
| 15     | CPI Inflation (YoY % change) – Eurozone       | <u>Eurostat/prc hicp manr/M.RCH A.CP00.EA</u> <u>Eurostat/prc hicp manr/M.RCH A.TOT X NRG FOOD.EA</u>   |
| 15     | CPI Inflation (YoY % change) – France         | <u>Eurostat/prc_hicp_manr/M.RCH_A.CP00.FR</u> <u>Eurostat/prc_hicp_manr/M.RCH_A.TOT_X_NRG_FOOD.FR</u>   |
| 15     | CPI Inflation (YoY % change) – France INSEE   | INSEE/IPC- 2015/M.IPC.SO.SO.4035.GLISSEMENT_ANNUEL.ENSEMBLE.FE.POURCENT.BRUT.SO.FALSE INSEE/IPC-2015/M.ISJ.SO.SO.4035.GLISSEMENT_ANNUEL.ENSEMBLE.FM.POURCENT.CVS- FISC.SO.FALSE |
| 15     | CPI Inflation (YoY % change) – Germany        | <u>Eurostat/prc_hicp_manr/M.RCH_A.CP00.DE</u> <u>Eurostat/prc_hicp_manr/M.RCH_A.TOT_X_NRG_FOOD.DE</u>   |
| 15     | CPI Inflation (YoY % change) – Italy          | <u>Eurostat/prc_hicp_manr/M.RCH_A.CP00.IT</u><br><u>Eurostat/prc_hicp_manr/M.RCH_A.TOT_X_NRG_FOOD.IT</u>  |
| 15     | CPI Inflation (YoY % change) – United Kingdom | ONS/MM23/D7G7.M<br>ONS/MM23/DKO8.M  |
| 15     | CPI Inflation (YoY % change) – Japan          | STATJP/CPIm/001<br>STATJP/CPIm/740  |
| 16     | CPI Inflation (YoY % change) – South Africa   | OECD/KEI/CPALTT01.ZAF.GY.M  |
| 16     | CPI Inflation (YoY % change) - Brazil         | OECD/KEI/CPALTT01.BRA.GY.M  |
| 16     | CPI Inflation (YoY % change) – China          | OECD/KEI/CPALTT01.CHN.GY.M  |
| 16     | CPI Inflation (YoY % change) – Indonesia      | OECD/KEI/CPALTT01.IDN.GY.M  |
| 16     | CPI Inflation (YoY % change) – India          | OECD/KEI/CPALTT01.IND.GY.M  |
| 16     | CPI Inflation (YoY % change) – Mexico         | OECD/KEI/CPALTT01.MEX.GY.M  |



| Page # | Graph / Table                                   | Web link   |
|--------|---|--|
| 17     | Quarterly implied GDP deflator – France         | 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-BEA/NIPA-T10109/A191RD-Q/A191RD-Q                 |
| 20     | Personal consumption expenditures (PCE)         | BEA/NIPA-T20804/DPCERG-M                                   |
| 23     | 10-Y Nominal yield – US                         | FED/H15/RIFLGFCY10 N.B                                     |
| 24     | Yield curve – US                                | FED/H15/RIFLGFCM03 N.B                                     |
| 27     | 10-Y Nominal yield – German Bund                | BUBA/BBK01/WT1010  |
| 27     | Inflation Expectations - Germany                | BUBA/BBSSY/D.KCP.EUR.A607.DE0001102523.A                   |
| 27     | Forward Rates on 10-Year German Bund            | BUBA/BBSIS/D.I.ZAR.ZI.EUR.S1311.B.A604.R10XX.R.A.A. Z. Z.A |
| 27     | Yield curve – Germany                           | BUBA/BBSSY/D.KCP.EUR.A607.DE0001102523.A                   |



| Page # | Graph / Table  | Web link                           |
|--------|--|------------------------------------|
| 28     | Nominal Foreign exchange rate in historical perspective        | BUBA/BBEX3/D.USD.EUR.BB.AC.000     |
| 30     | Italian10-Y yield  | Eurostat/irt lt mcby d/D.MCBY.IT   |
| 30     | Greek 10-Y yield   | Eurostat/irt lt mcby d/D.MCBY.EL   |
| 30     | French 10-Y yield  | Eurostat/irt lt mcby d/D.MCBY.FR   |
| 30     | German 10-Y yield  | Eurostat/irt lt mcby d/D.MCBY.DE   |
| 36     | Composite Indicator of Systemic Stress (daily) – Euro Area     | ECB/CISS/D.U2.Z0Z.4F.EC.SS CIN.IDX |
| 36     | Composite Indicator of Systemic Stress (daily) – United States | ECB/CISS/D.US.Z0Z.4F.EC.SS CIN.IDX |

