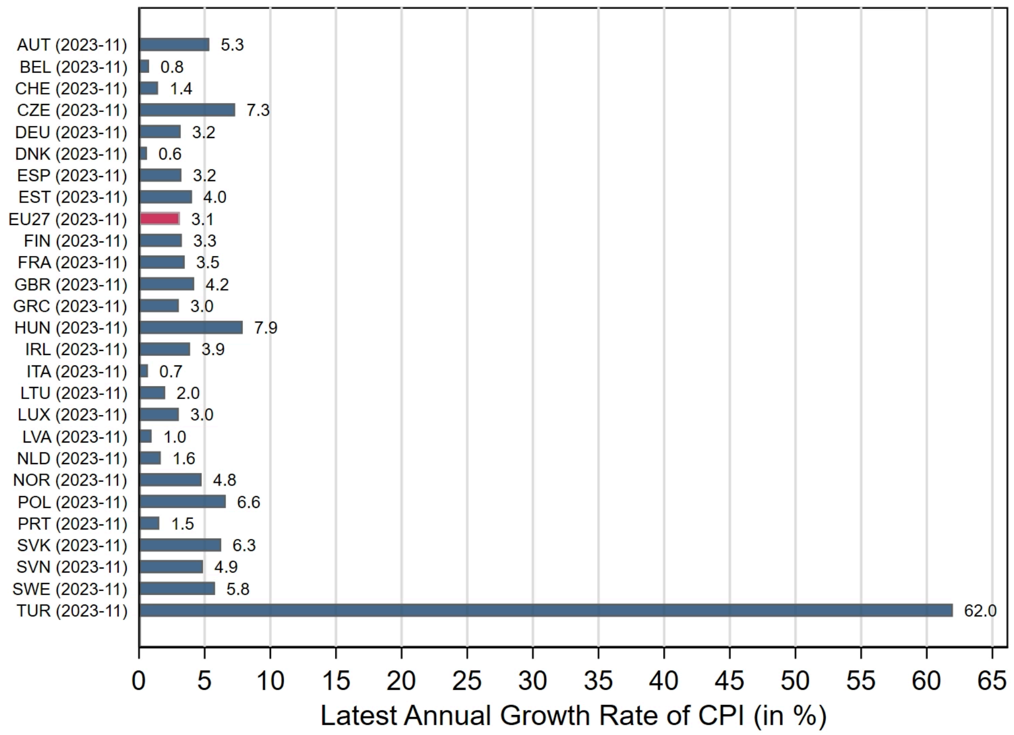
Consumer Price Inflation

The main indicator

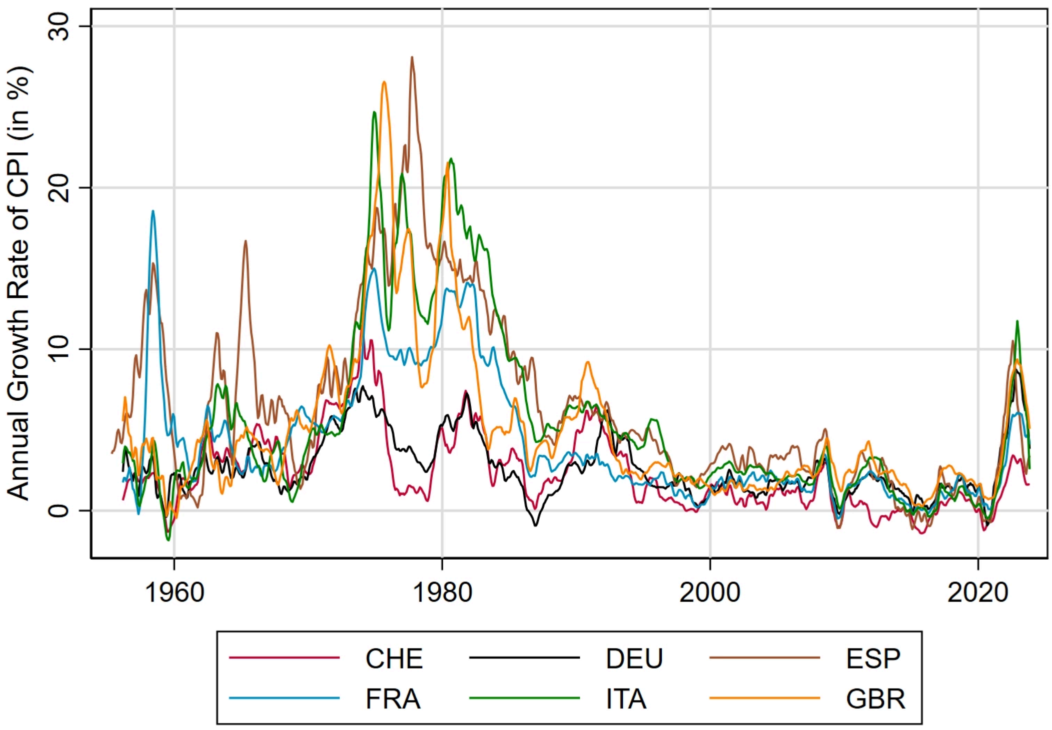
When economists or central banks refer to inflation, they typically refer to consumer price inflation (or short CPI). This is based on the prices of a basket of goods (see background). Notice that the weights assigned to various goods differs vastly across countries (see ECB (https://www.euro-area-statistics.org/digital-publication/statistics-insights-inflation/bloc-1b.html?lang=en)).

What do the latest data on CPI show?
Inflation rates vary substantially from 0.6% in Denmark to 62.0% in Türkiye.



Source: OECD (doi: 10.1787/eee82e6e-en) accessed on Feb 1, 2024

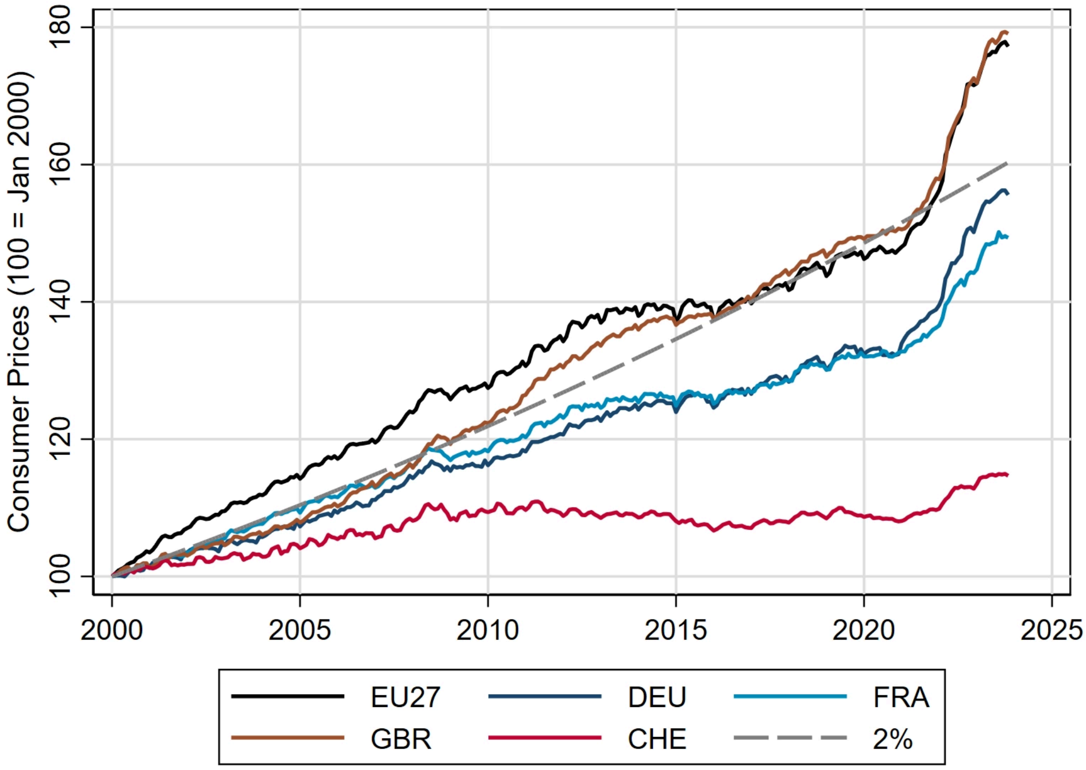
How do these numbers compare historically, are they low or high? We see below the annual CPI for six selected countries: Switzerland, Germany, Spain, France, Italy, and Great Britain. The latest uptick on the right-hand side documents why inflation is gaining attention. Rates of CPI reached a multi-decade high in many countries.



Note: Chart shows 3-month averages.
Source: OECD (doi: 10.1787/eee82e6e-en) accessed on Feb 1, 2024

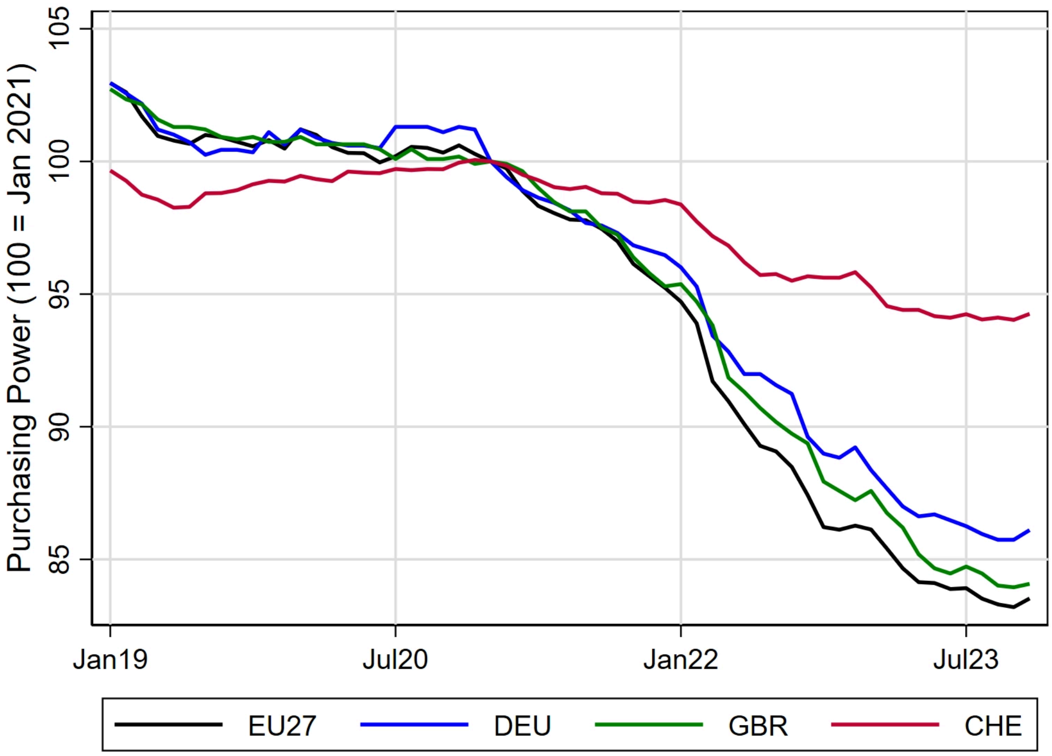
It is important to not just consider annual changes in the CPI. We must track the development of consumer prices over several years, especially because yearly rates of inflation can vary a lot. During the high-inflation period 1975-1985 in Great Britain, for example, the annual rate fluctuated between about 5 and 25% - with multiple ups and downs. Moreover, central banks like the ECB or Fed nowadays aim for less than 2% inflation on average over the medium term.

In the figure below, we see for the time since the year 2000 what a constant 2% rate of consumer price inflation would have led to: prices would be about 55% higher today than 22 years ago. The actual trend in Great Britain (GBR) matches this trend very well, the Euro area (EA19) only until 2014 and Switzerland has had far lower rates of inflation. The latest uptick on the right-hand side brings the UK and the EU-27 far above trend.



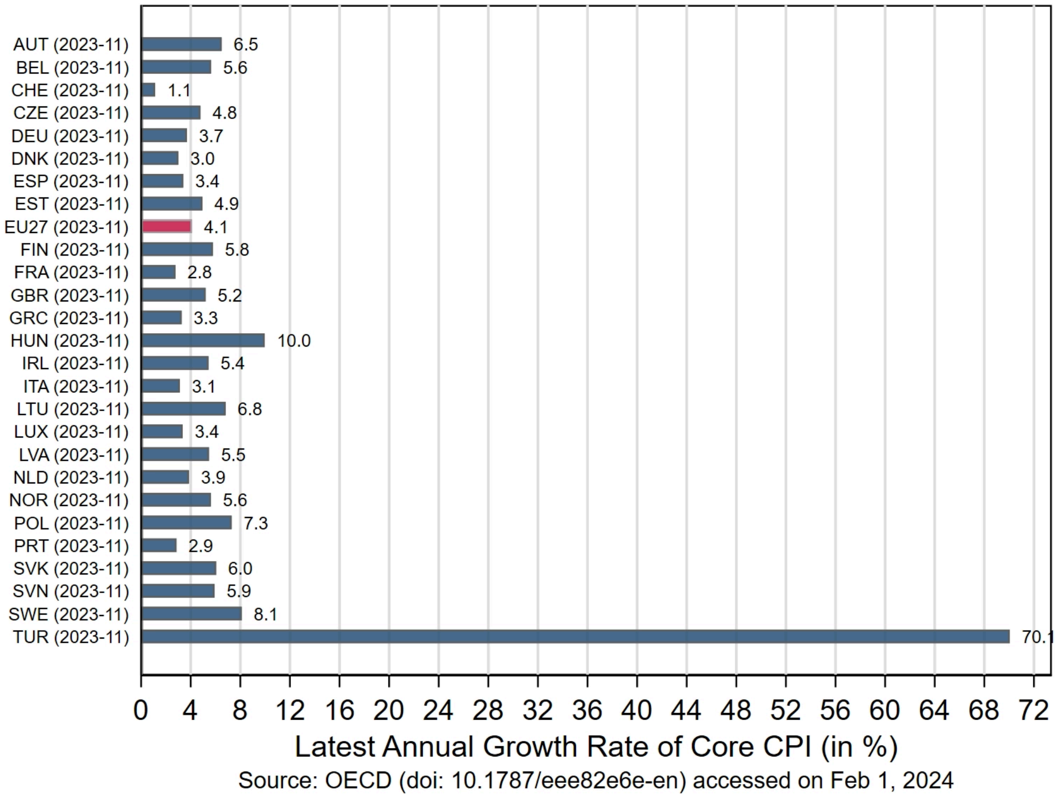
Source: OECD (doi: 10.1787/eee82e6e-en) accessed on Feb 1, 2024

What does the development on the right-hand side imply for the purchasing power of European currencies? We can use the index of consumer prices from the OECD and set it to 100 in January of 2021. The following chart shows the inverse of this index, thus the purchasing power of money. It illustrates that the Swiss Franc has lost more than 5% in value since the beginning of 2021 while the Euro has lost more than 10%. Inflation in the EU-27 implied that purchasing power eroded by more than 15% since January 2021.

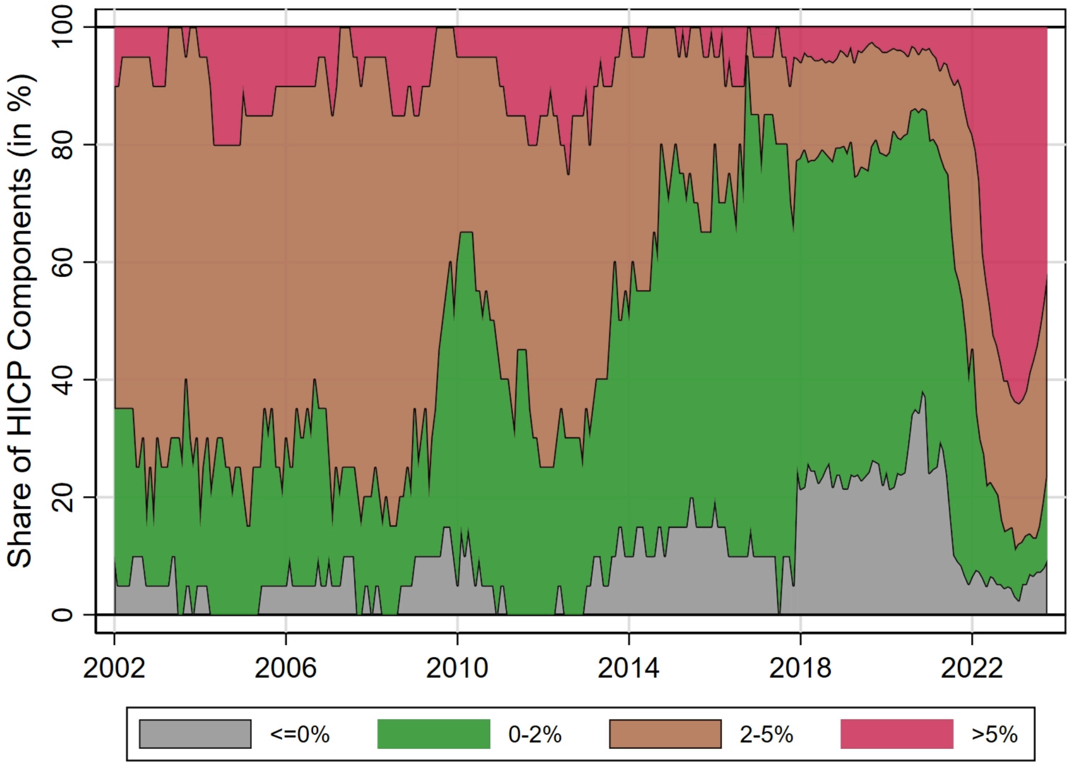


Source: OECD (doi: 10.1787/eee82e6e-en) accessed on Feb 1, 2024

Some economists emphasize the core inflation. This is the CPI without food or energy prices (see background). Given the sharp increase in food and energy prices, the core inflation rate is much lower. For the EU-27, it currently stands at 4.1 percent.

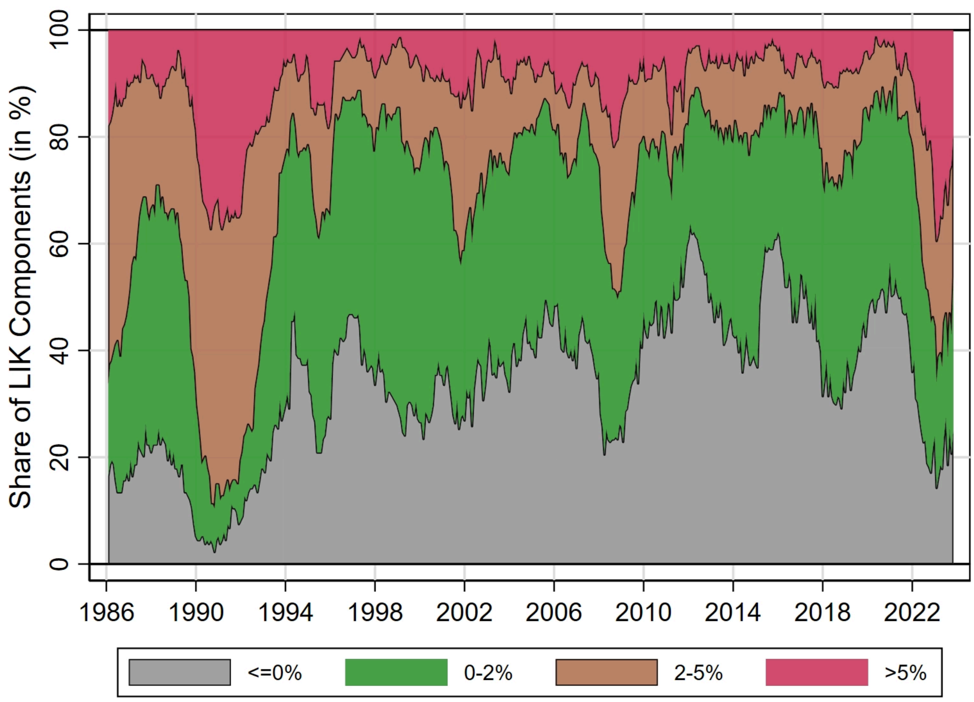


Since the CPI (or HICP, the term the ECB uses) is based on the prices of hundreds of individual goods and services, we can analyze how many of those prices are increasing at 2% or more. For the Euro area, currently more than 77% of goods and services face inflation above 2%. About 42% of items have increased by more than 5% in price.



Source: Eurostat (PRC_HICP_MANR) accessed on Dec 4, 2023

In Switzerland, the latest data show that 47% of items in the LIK (consumer price index) have increased by 2% or more within a year and about 20% increased by 5% or more.



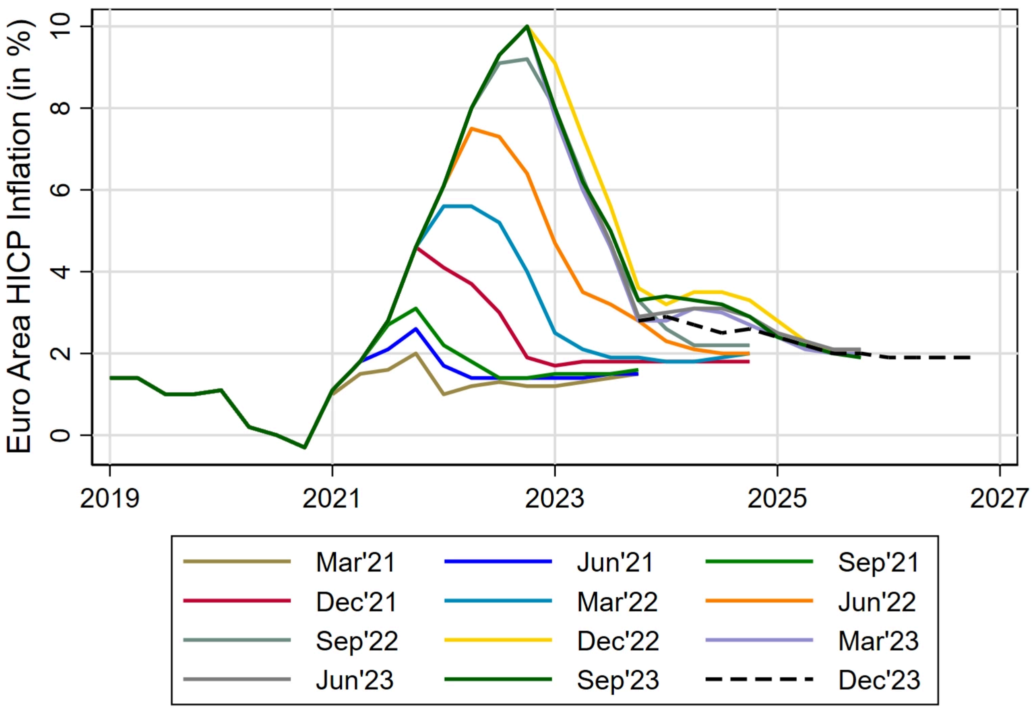
Source: Swiss Federal Statistical Office (su-d-05.02.67) accessed on Dec 4, 2023

Inflation Expectations

Both experts and the market provide forecasts

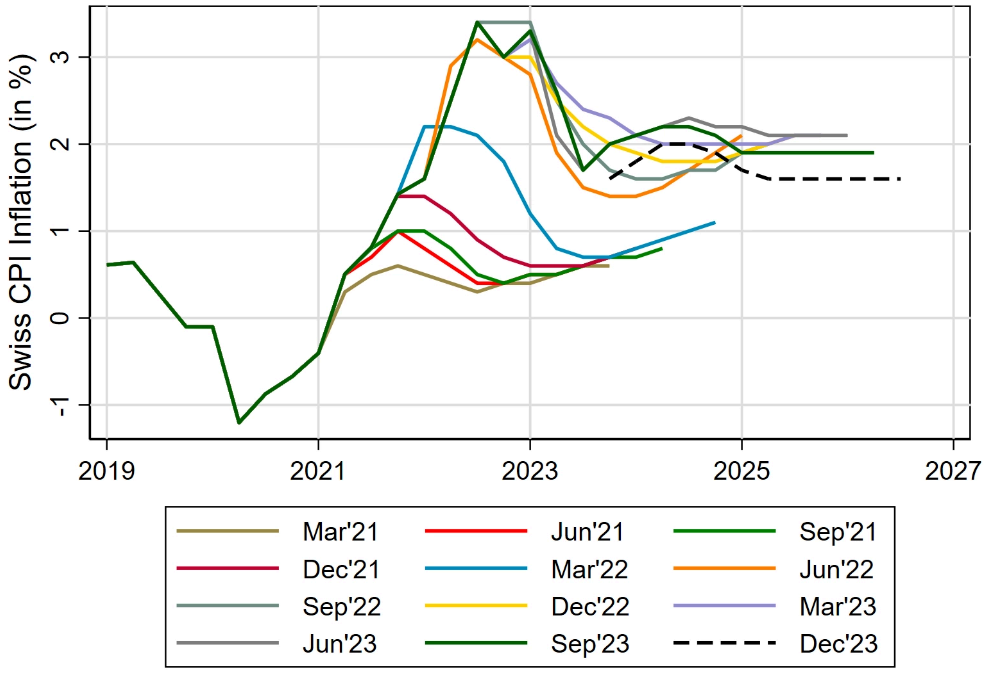
Where are inflation rates heading? No one knows. But there are basically two ways of thinking about this. One is the inflation expectations expressed by economists and central banks. The ECB (https://www.ecb.europa.eu/pub/projections/html/index.en.html) , for instance, publishes macroeconomic projections four times a year (in March, June, September and December). Currently, the ECB expects consumer price inflation in the Euro area to get near 2% in mid-2024. However, all four forecasts in 2021 as well as 2022 made upward revisions. And in September 2022, the predicted peak was 9.2% - lower than actual inflation which reached 10.0% in the same month.

The ECB's inability to accurately forecast inflation is nothing new (see the chart on slide 14 of this presentation (https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210913_annex~88f2b52b3e.en.pdf?3c2c8da973f8f516305eecc5a0c90dd6)) - it is simply impossible to predict how consumer prices evolve. The great demand for predictions, however, causes many people to make forecasts. Alas, this appears to be a mere pretense of knowledge - as Hayek would say (https://www.nobelprize.org/prizes/economic-sciences/1974/hayek/lecture/) .



Note: Data before forecast shows actual rate of inflation.
Source: ECB accessed on Dec 16, 2023

Similarly, in March 2022 the Swiss National Bank (SNB) did not forecast the surge of inflation to 3.5% (in August 2022) but instead expected inflation to peak at 2.2%. The September 2023 update says inflation peaked at 3.4% in Q3 of 2022:



Note: Data before forecast shows actual rate of inflation.
Source: SNB accessed on Dec 16, 2023

An alternative perspective on where inflation is heading is provided by the so-called break-even rate. We can, for example, compare the yield on French 10-year bonds (so-called OATs or *Obligations assimilables du Trésor*) with the yield on French 10-year inflation-protected bonds (OATi). This so-called ten-year, ten-year forward inflation swap is derived by subtracting one yield from the other. The same calculation can be performed using 5-year bonds.

Looking at data from the Agence France Trésor (https://www.aft.gouv.fr/en/oatis-key-figures) for ten-year bonds, we see that the expected rate of inflation increased from about 1.0 percent in mid-2020 to more than 3 percent - before then dropping slightly to a level between 2.5 and 3.0 percent. This is similar to what is expected for the United States based on the Treasury Inflation Protected Security (TIPS) Index (see FRED (https://fred.stlouisfed.org/series/T5YIE)).

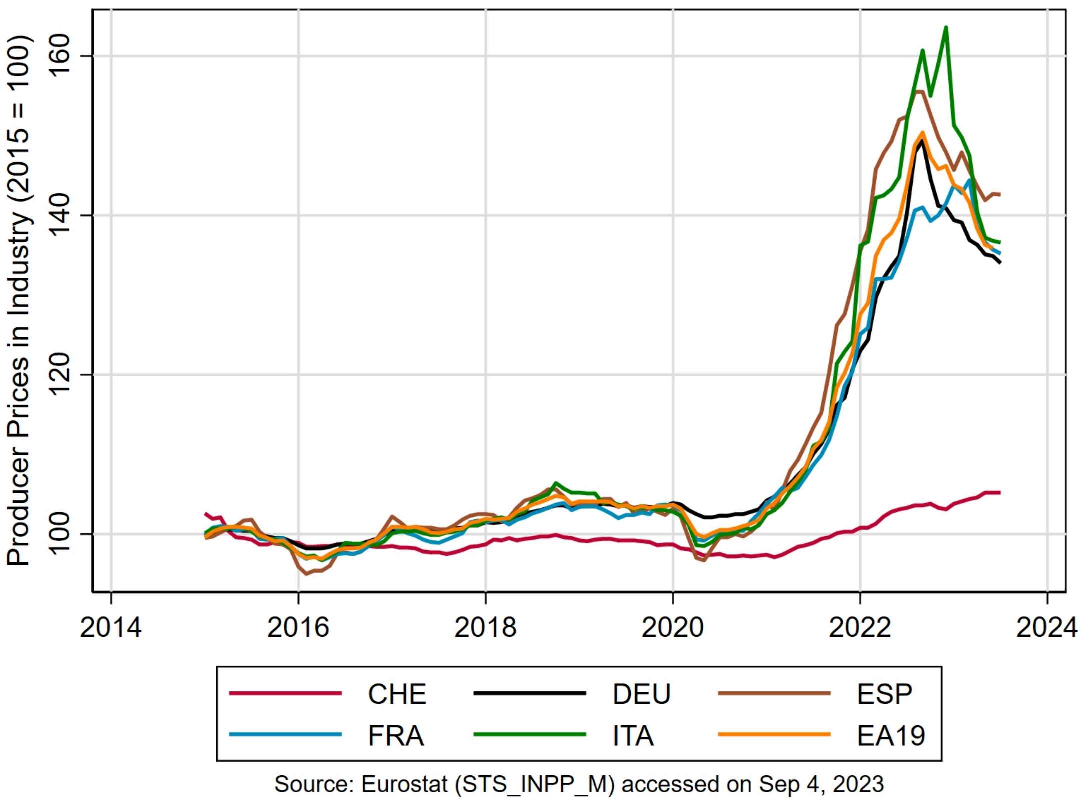
Source: Agence France Trésor accessed on May 9, 2023

Producer Price Inflation

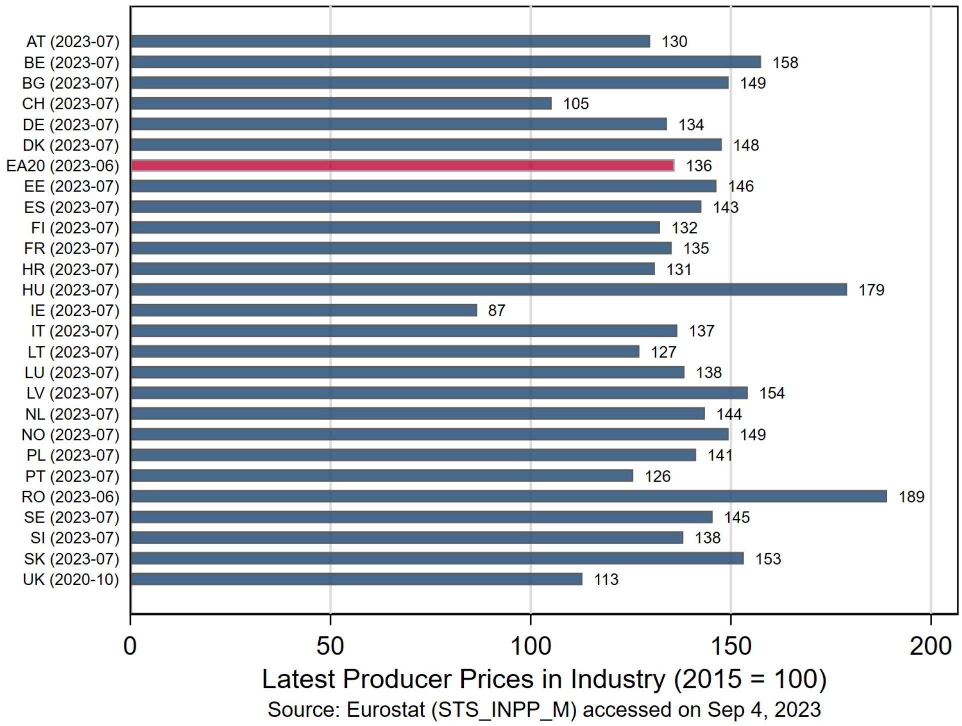
Price increases for intermediate goods

To gauge whether consumer prices will increase in the future, one can look at producer price inflation (or short PPI). What do the latest data show in this regard?

After years of stability, starting in 2021 producer prices grew rapidly in many countries. Despite the recent fall, they are about 40 percent higher than they used to be:



Switzerland stands out as a country that has witnessed a small overall increase compared to 2015. In contrast, the Euro area's producer prices are currently 36 percent higher:

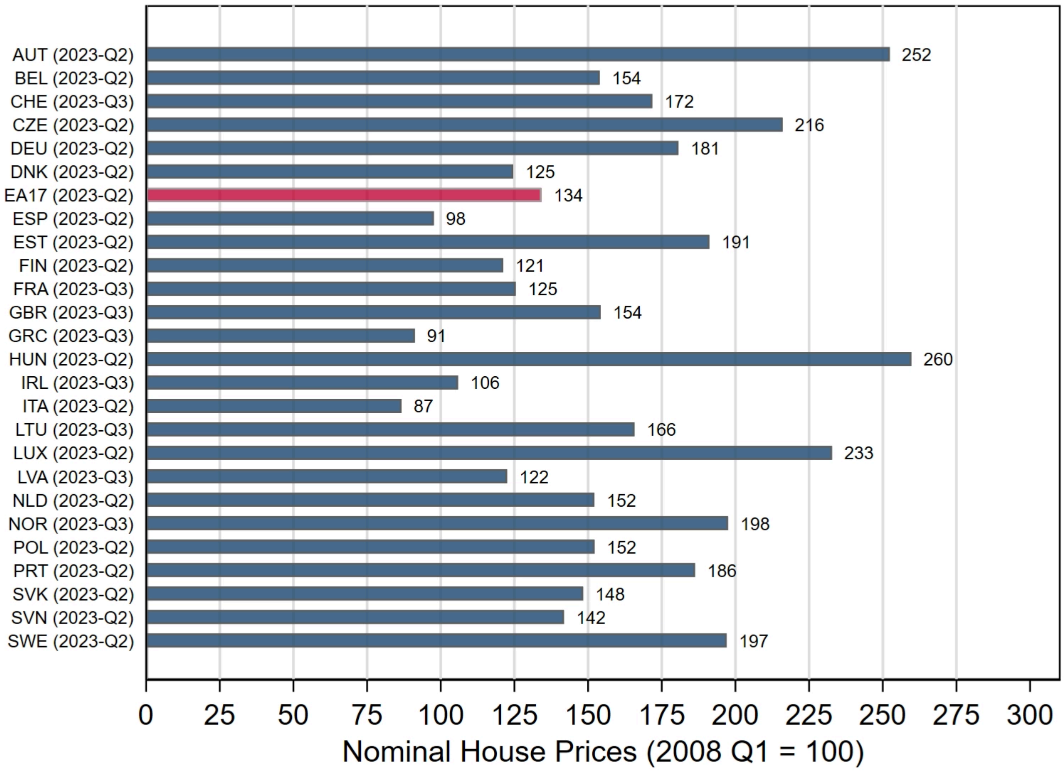


House Price Inflation

The cost of real estate

Houses and apartments serve both as consumption and investment objects. For many people, the purchase of real estate is their most expensive transaction in their lives. So, how expensive are houses and apartments now compared to earlier years?

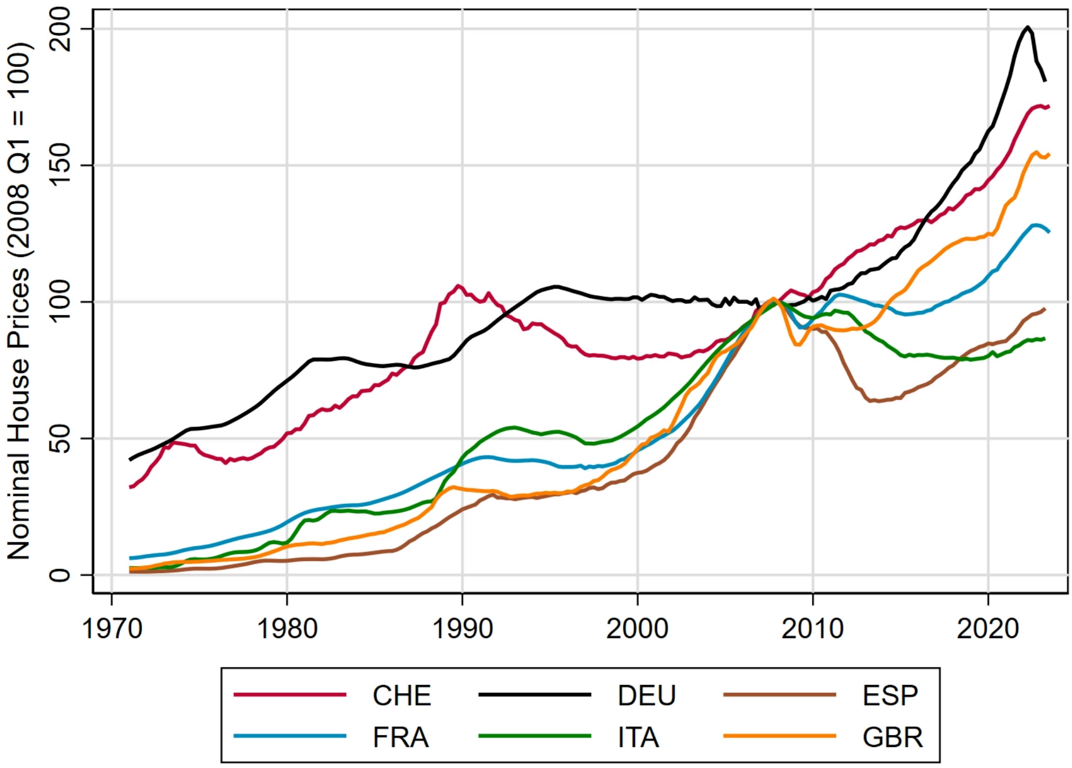
Nominal house prices in many countries are much higher than in 2008. In Germany, for instance, the price level almost doubled in just 15 years, before then starting to decline.



Source: OECD (doi: 10.1787/eee82e6e-en) accessed on Jan 7, 2024

We can track house prices since 1970 and observe several facts.
Germany's prices increased sharply between 2010 and 2022 - but have started to fall sharply. Other countries such as Italy or Spain experienced house price booms and busts (the 2008 financial crisis being the latest turning point). Switzerland also had falling house prices from 1990 to 2000.

Notice that in all three cases, the aftermath of the house price bust was poor economic performance.



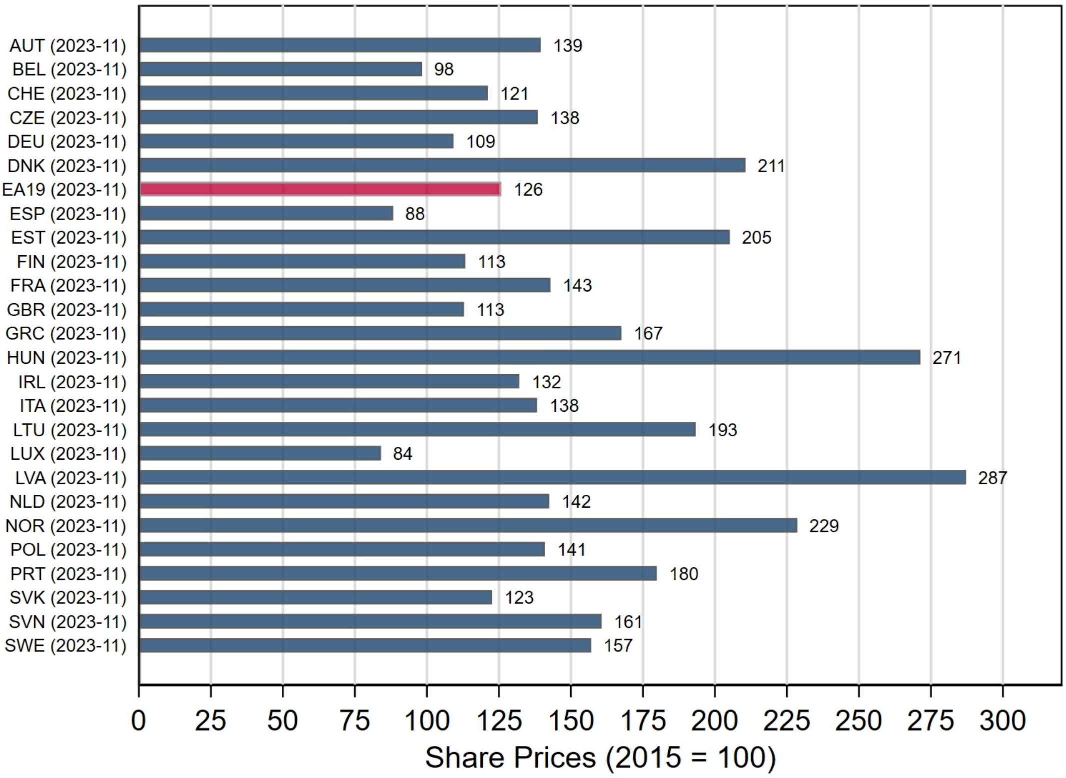
Source: OECD (doi: 10.1787/eee82e6e-en) accessed on Jan 7, 2024

Share Price Inflation

Stock markets are going up

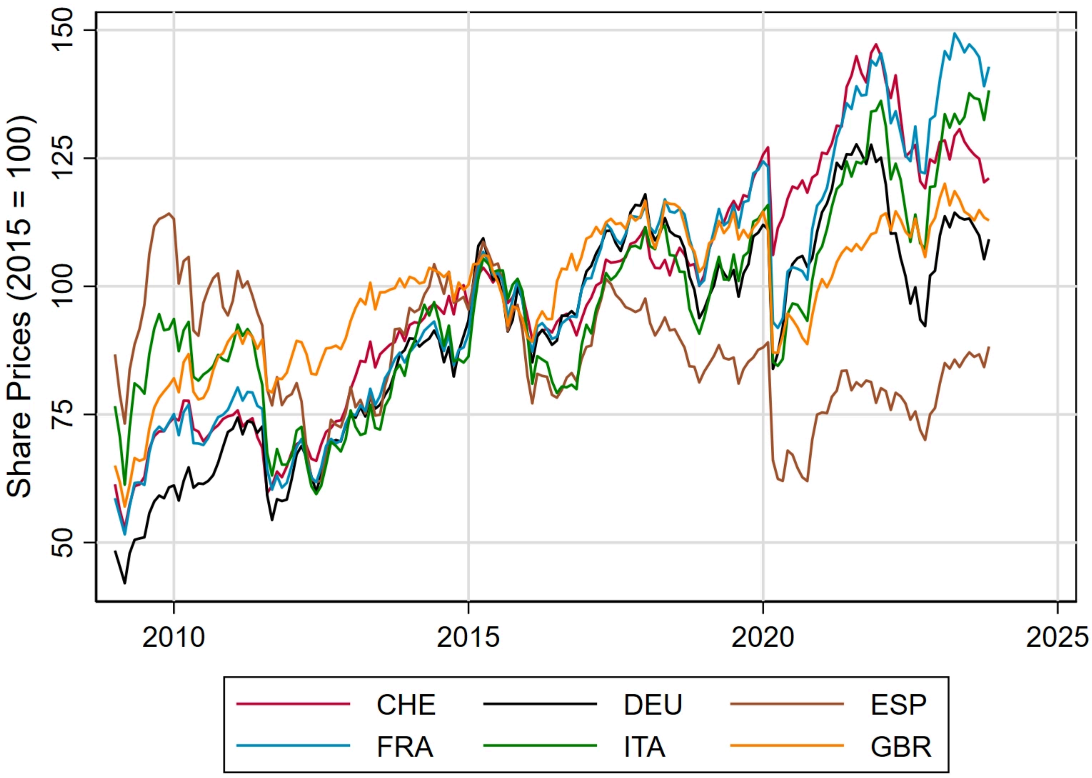
Money cannot only buy goods, services, and real estate but also companies. Due to low interest rates, many people seek to invest their savings in the stock market. But how high are share prices now?

There is a lot of variation across countries. Only five markets are down, all others are up. In the Euro area, share prices are up 26% compared to 2015.



Source: OECD (doi: 10.1787/eee82e6e-en) accessed on Jan 7, 2024

Stock markets tanked during the 2008 financial crisis and the spring 2020 COVID crisis. Looking at recent years, we saw that share prices were mostly higher than in 2015. In some countries, like Switzerland or France prices were about 40% higher.



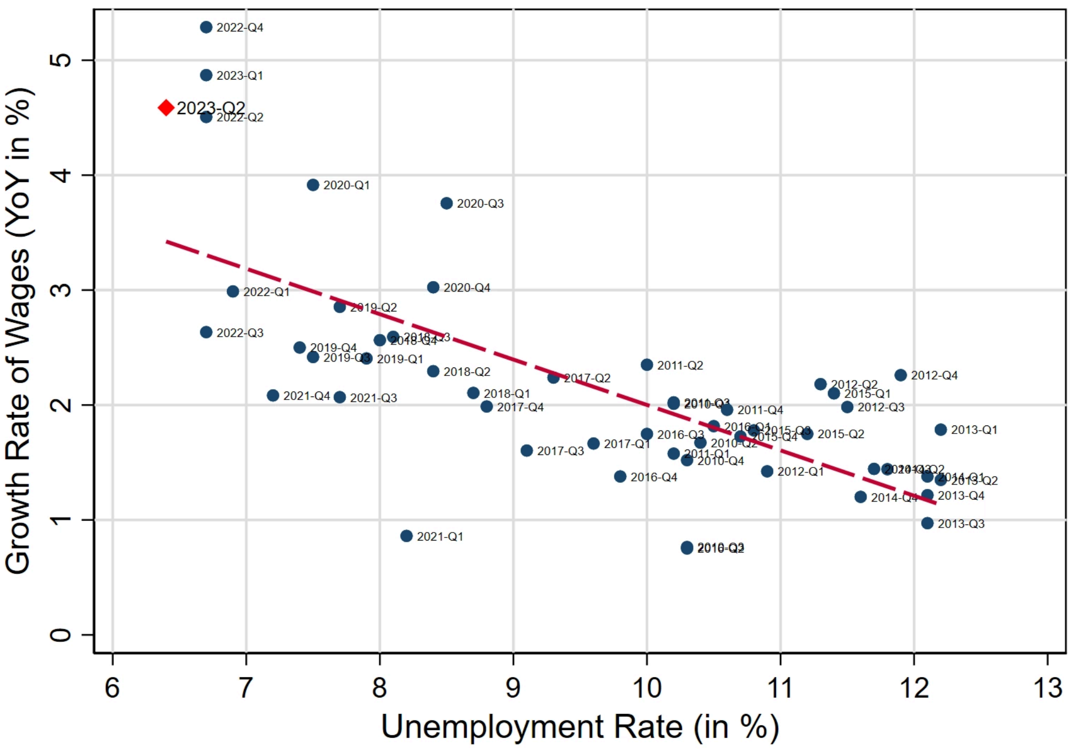
Source: OECD (doi: 10.1787/eee82e6e-en) accessed on Jan 7, 2024

Wage Growth

Rising wages can contribute to inflation

Countries with a booming economy are typically characterized by low unemployment rates and relatively high rates of inflation. This is known among economists as Phillips curve (see background).

For the Euro area since 2009, we observe this relationship between wage growth and unemployment. Moreover, we find that the latest data point is at the lowest end for unemployment. This can induce positive pressure on wages in the coming quarters.



Source: Eurostat (LC_LCI_R2_Q, UNE_RT_M) accessed on Oct 5, 2023
Note: Q2 of 2020 and 2021 omitted due to COVID distortion.

Looking at the more frequently published monthly data, we see that currently in the Euro area the unemployment rate is at a historically low level while the CPI rate of inflation is much high than in previous years.