INTEREST RATE OUTLOOK | EUROZONE, USA

When will inflation fall?

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Note: Information on past performance is not a reliable indicator of future performance.

Interest rate development remains uncertain

Both the ECB and the US Fed have reduced the pace of interest rate hikes since the beginning of the year. This was only partly due to progress in the fight against inflation. Although the rate of inflation has fallen significantly, this was largely due to energy prices, which hardly react to interest rates. In contrast, there has been little (USA) or at best initial (EZ) progress in core inflation so far.

However, the environment speaks for easing inflationary pressure. Energy prices, which had risen sharply especially in the Eurozone, have already fallen significantly, which should also have a positive effect on inflation in other areas. Globally weak industrial production argues for only moderate price increases for goods. Where price dynamics are still strong is in services. Here, catch-up effects after the pandemic are still likely to have an impact, but these should subside.

However, things are not quite that simple. Inflation and, at least in the USA, the economy have been more robust than had been expected in an environment that has been difficult for some time. At the same time, previous interest rate hikes have not yet taken full effect. The effect is delayed and thus there is considerable uncertainty about how strong it will ultimately turn out to be. Thus, interest rate developments remain uncertain in the second half of the year. As always, you can see our assessment of key interest rates and the bond markets for the Eurozone and the USA in two chapters.

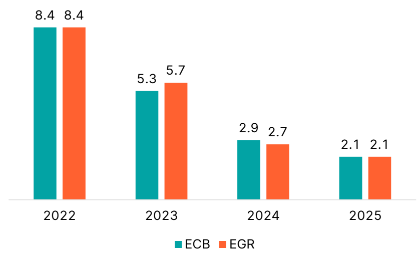
Things are not quite that simple would have been a good headline for the special topic in which we look at the energy transition and its impact on electricity prices. Instead, the chapter is entitled *Many goals are not yet a plan,* which fits even better.

ECB - How far will the ECB lift?

The data situation does not make it easy for the ECB. Inflation adjusted for food and energy (core inflation) is sticky. Monthly price dynamics show only initial signs of abating. Companies have been able to expand their margins in the wake of the various crises and are now facing much stronger wage growth. At the same time, the economy is stagnating and gas prices are falling. Finally, borrowing is weak and this should not change. The interest rate hikes since July 2022, and the rise in bond market yields much earlier, are thus already having an impact.

The ECB has decided to make interest rate decisions dependent on three criteria. These are the inflation outlook, which essentially means the quarterly inflation forecasts of the ECB economists, the dynamics of underlying inflation, for which the above-mentioned core inflation is the best indicator, and the strength of the transmission of monetary policy, for which lending is decisive.

Inflation forecasts, in %

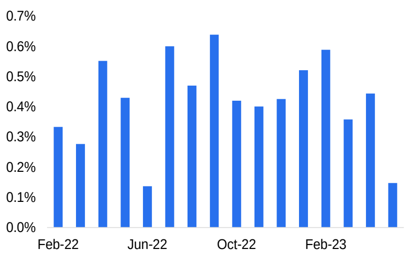


Source: ECB, Erste Group Research

As far as the inflation outlook is concerned, we do not expect any major changes. The EC economists' new forecasts, which will be published at the upcoming Governing Council meeting in mid-June, should not show any significant changes. At most, we expect a slight downward revision. It is foreseeable that assumed gas prices will be lower than in March. It is difficult to assess what the new forecasts for core inflation will look like. However, we do not see any reasons for significant changes. Thus, the new inflation forecasts will probably confirm the ECB's assessment of "too high, too long", even if inflation rates are expected to fall significantly in the coming years.

The decisive variable for future interest rate decisions, however, will be the current development of core inflation. What the ECB is waiting for is a visible easing, for which there are currently only initial signs. However, the environment suggests that price dynamics should weaken further . The economy should remain weak and energy prices have fallen sharply. The latter at least suggests that the part of inflation that was due to the pass-through of higher energy prices is disappearing. At the same time, however, significantly higher wage costs pose an upside risk. This is because companies were already able to increase their margins in last year's difficult environment and thus raise their prices more than their costs had risen.

Core inflation s.a., m/m in %



Source: ECB, Erste Group Research

The question now is to what extent companies will be able to pass on higher labour costs. The weak economy argues against this. Falling energy prices are in the same vein, as they make it more difficult to raise prices. On the other hand, the labour-intensive service sector is currently the strength of the economy. Due to the (still) strong demand, further price increases could therefore be accepted by consumers. This could be helped by the fact that the fall in energy prices is easing the burden on consumers, even if the real income losses will remain significant.

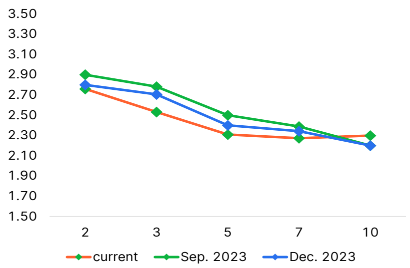
The Governing Council's third criterion, the strength of monetary policy transmission, increasingly justifies a more cautious approach. Lending has already weakened significantly. The latest Bank Lending Survey (BLS) of Eurozone banks, published in early May, generally shows a further tightening of lending conditions and a further weakening of demand for credit. These are

Source: ECB, Erste Group Research

clear effects of higher interest rates and, as the impact of higher rates is delayed, further deterioration seems likely. This is another factor arguing for a weakening of core inflation.

Overall, the inflation outlook is uncertain and thus also where key interest rates will ultimately find their end point. For us, the arguments in favour of a decline in core inflation in the coming months are stronger. We therefore expect two further rate hikes of 25 basis points (bp) each in June and July, Governing Council. This is also what is currently being priced into the markets. The risks to this forecast are not evenly distributed but tilted upwards. The problem is that so far only the May inflation data show an easing of the situation, which is not enough to assume a trend reversal.

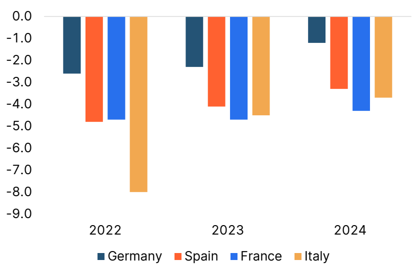
Yield forecasts for German Bunds by maturity, in %



Source: Market data providers, Erste Group Research

German Bunds have been moving sideways for months, closely following the US bond market. Here, in turn, the rise in interest rate expectations in February and the countermovement in March, triggered by the banking crisis, were decisive. The slope of the German yield curve (10y - 2y) moved around -40bp, also sideways. Currently, we do not see any significant change in the environment that should give the bond markets a new direction. Thus, we expect a volatile sideways movement. The US market will continue to play a role. However, in our view, yields on 10-year German Bunds are already close to a long-term equilibrium rate, which argues against significant further declines. For short maturities, we do not expect yields to fall until next year. The above-mentioned risks of more persistent inflation and thus higher key interest rates also apply to the bond market. Short maturities are more exposed to the risk of higher yields than long ones.

Public deficits, in % of GDP



Source: European Commission, Erste Group Research

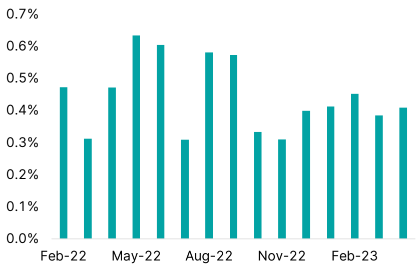
The yield premiums of eurozone government bonds against Germany have changed little since the beginning of the year. Slight increases can be seen in France and Spain, which were triggered by bank turbulence in the first half of March. Afterwards, yield spreads did not quite return to their initial level. The instrumental in the small fluctuations. Even if the markets are currently calm, Italy, Spain and France should use the time to initiate the restructuring of their national budgets. The European Commission's forecasts assume only a slow reduction of budget deficits, which will still be well above 3% of GDP in 2025. With these deficits, these countries have little potential to respond to shocks, which are thus a risk factor.

US Fed - Pause or end of rate hikes?

At the meeting of the US Federal Reserve's interest rate-setting committee (FOMC) in early May, the door was opened for at least a pause in monetary tightening. For the first time in more than a year, there were no clear indications of further interest rate hikes in the future. Instead, there was talk of further monetary tightening that "may" be appropriate. We assume that key interest rates should be left unchanged in mid-June. However, the data situation makes the interest rate path in the US anything but certain.

Uncertainty about the further course of inflation is certainly contributed to by the solid economy and the strong labour market. Overall, the US economy has held up better than generally expected over the past few quarters. As recently as March, FOMC meeting participants had estimated a median annual growth rate of 0.4% for the fourth quarter of 2023. In the first quarter of 2023 alone, the economy already grew by 0.3% quarter-on-quarter, according to an initial estimate. The labour market is also still robust. The unemployment rate is stable near historic lows. New jobs are being created at an increasingly slower pace, but still at a rate that exceeds the increase in the labour force. The situation is similar for wages. Growth is falling, but is still too high, in the FOMC's view, to be in accordance with the 2% inflation target.

Core inflation, s.a. m/m in %



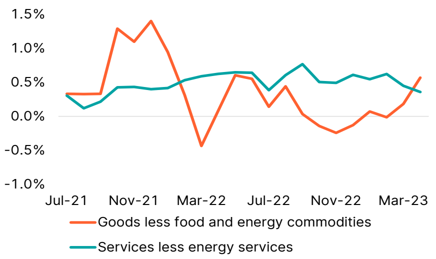
Source: Bureau of Labor Statistics, Erste Group Research

Inflation has already come down in the US, but as in the Eurozone, the monthly increases in core inflation are still too high. In the US, however, there are at least signs that this could change relatively soon. Rental price dynamics have weakened over the last two months, after significant contributions to inflation from this side before. Thus, a weakening in the price dynamics of prices of goods, most recently especially of used cars, rose more strongly. All in all, this resulted in monthly inflation data that remained too high.

The data thus show that it is certainly too early to sound the all-clear from the FOMC's perspective. However, the turmoil in the banking sector, which lasted through March and April, has left its mark on the members of the committee. Effects on lending are expected, but the extent is still unknown. The negative impact is in addition to the effects of higher interest rates and makes it difficult to assess the cumulative impact on lending, economic activity and ultimately inflation. In any case, caution is warranted. At the beginning of May, the latest Senior Loan Officer Opinion Survey on Bank Lending Practices showed that both the availability of credit and the demand for it deteriorated again in March/April. Weak borrowing is a key reason why Fed economists, who do not set monetary policy, expect a mild recession in the second half of 2023.

The data mix makes the outcome of the FOMC meeting in mid-June uncertain. All the more so as the inflation data for May will be published on the first day of the meeting and will carry weight. The weighting of risks suggests to us that there will be at least one pause in June and that interest rates will remain unchanged. Although progress on inflation has certainly been unsatisfactory from the FOMC's perspective over the past few months, the arguments for unchanged rates should prevail due to the uncertain development of credit. Interest rates are already deep in the restrictive range and the rate hikes have not yet ignited their full effect. This should allow the FOMC to take a wait-and-see approach.

Inflation goods and services, m/m in %

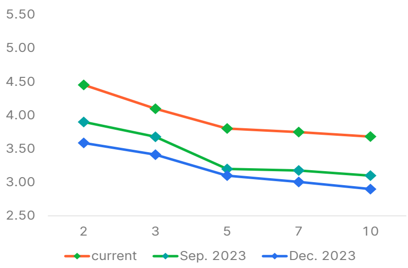


Source: Bureau of Labor Statistics, Erste Group Research

For the period after the June FOMC meeting, unchanged interest rates are the most likely scenario for us. Crucially, real income losses, falling savings and weak borrowing should lead to a slowdown in economic growth, which in the inflationary pressures. Moreover, we see a good chance that the momentum of core inflation will slow soon. The recent stronger momentum in goods prices lacks a basis. In the US and globally, the manufacturing sector is in a weak phase. Stronger increases in goods prices seem unlikely to be persistent. By the end of the year, economic growth and inflation should have fallen to an extent that justifies an interest rate cut.

The US bond market has been very volatile so far this year. In February, a series of economic data surprised the markets and led to a sharp rise in yields. From March onwards, the focus was on the banking sector and the fear in the markets led to a significant decline in yields. As interest rate expectations rose again in May, so did yields. 10-year maturities came close to the levels reached in February. Short maturities, on the other hand, did not. The market is following the lead of the FOMC, where the banking crisis has triggered a accordingly. Due to short maturities, the banking crisis has thus led to a somewhat less inverted yield curve.

Yield forecast for US Treasuries by maturity, in %



Source: Market data providers, Erste Group Research

In line with our expectations for inflation and growth, we expect US yields to fall in the second half of the year. However, the turnaround in the key macroeconomic variables is not yet clearly visible, so the potential for bond perform well in US dollar terms. We therefore expect US Treasuries to perform well in dollar terms. Medium and longer maturities should outperform short maturities.

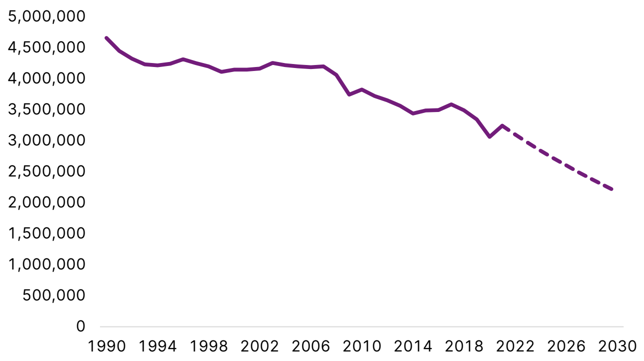
While our interest rate expectations are positive for the bond market, the consequence for the dollar should be a weakening. We expect faster progress in fighting inflation in the US than in the euro area, which should lead to earlier rate cuts. This will reduce the interest rate advantage of the dollar over the euro, which should lead to a considerably weaker dollar.

Energy transition: Many goals are not yet a plan

The EU has set ambitious targets for 2030 (and beyond). By then, among other things, energy consumption is to be reduced, the share of renewable energies is to be doubled and CO2 emissions are to be reduced by 62% compared to 2005. To achieve these goals, CO2 taxes will rise and high investments will be necessary. This means a potential for higher electricity prices for consumers. However, the actual development of prices will depend on many factors, including how quickly the share of renewable energies increases. The energy transition is a complex process and will depend on a wealth of decisions that still have to be made. The whole process is embedded in an economic environment, so security of supply, the labour market and social aspects have to be taken into account. In this article, we want to focus on the determinants and evaluation of price formation and the resulting risks.

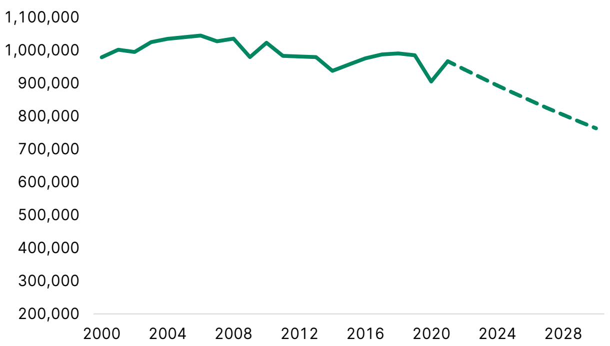
The EU's targets in many cases mean massive changes in a relatively short time. The Fit for 55 programme takes its name from the goal of reducing net greenhouse gas emissions by 55% by 2030, compared to 1990 levels. Based on 2021 values (the latest available), this translates into an annual reduction of 4.4%, a significant acceleration from the pace so far. To achieve this, the EU has set itself a number of sub-targets, including reducing energy consumption. Final energy consumption is to be reduced by 2.6% annually, starting in 2022. There has never been such a rapid reduction for either value and accordingly there are no empirical values.

EU greenhouse gas emissions
in CO2 equivalent kilo tonnes



Source: Eurostat, Erste Group Research

EU final energy consumption
in oil equivalent kilo tonnes



Source: Eurostat, Erste Group Research

By far the largest part of the reductions in greenhouse gas emissions is to be achieved by almost doubling the share of renewable energy in total energy consumption from just over 22.1% to 42.5% by 2030, although the exact extent is still being negotiated.

There is no lack of goals, the problem will be implementation. Where will the additional sustainable energy come from, how will distribution and storage work? Even if we assume that the EU will achieve its energy savings targets by 2030, the defined target means that almost 70% of electricity production will have to come from renewables by 2030, up from the current 40%. This means that production from renewables will have to more than double. When estimating the necessary investments, studies arrive at widely differing results, which also depend on the corresponding assumptions. Based on a study by the Vienna University of Technology[1], we assume a value of EUR 80 billion per year. In addition, there are costs for network expansion, which the EU estimates at EUR 580 bn[2] by 2030, so another EUR 72 bn per year. Finally, there are the costs of storing energy generated from renewable sources. This is particularly difficult to estimate as battery prices are in flux due to technological advances. The EU assumes a storage demand of 200 GW[3] in 2030, an increase of 140 GW compared to the 60 GW in 2022. Calculated at EUR 300 per KWH[4] , this results in an investment requirement of EUR 42 bn, which is another more than EUR 5 bn per year. According to this rough estimate, additional expenditure of around EUR 157 bn per year is to be expected, which corresponds to about 1% of the current GDP.

In terms of the overall economy, it will probably be a relevant but feasible figure. In any case, these investments are lower than the EU's imports of fossil fuels (coal, oil, gas), which amounted to EUR 368 bn in 2021 and EUR 735 bn in 2022. In a hypothetical complete shift away from fossil fuels, these costs would be eliminated. This puts the amount to be invested in the energy transition into perspective.

In our view, however, the question is not so much the funds themselves, but who should bear the risks associated with these investments. After all, the higher share of renewables means higher risks, as future electricity prices and the extent of the volume produced, and thus the revenues achieved, are uncertain. In addition, renewables are much more dependent on an energy system that - due to the high volatility caused by weather conditions - includes transport and storage in addition to production. This new infrastructure must first be created.

The EU's regulatory framework attempts to compensate for the aforementioned risks by putting a price on CO2 emissions. This is supposed to increase the price of thermal power generation, which increases the profits from the production of renewable energies and thus creates incentives to invest. In fact, however, it is a bit more complicated.

Energy from fossil fuels will be burdened by higher CO2 levies in the future. Until 2030, the number of available CO2 allowances will be reduced by 4.3 or 4.4% per year. This is ambitious, but must be seen in the context of a reduction in emissions from industries covered by the ETS (EU Emissions Trading System) that has already taken place, by just under 3% annually since 2005. From 2026, the free allowances will be reduced, but only slowly at first, falling to zero by 2034. Finally, the available allowances will be reduced by 90 megatonnes in 2024 and 27 megatonnes in 2026. However, additional

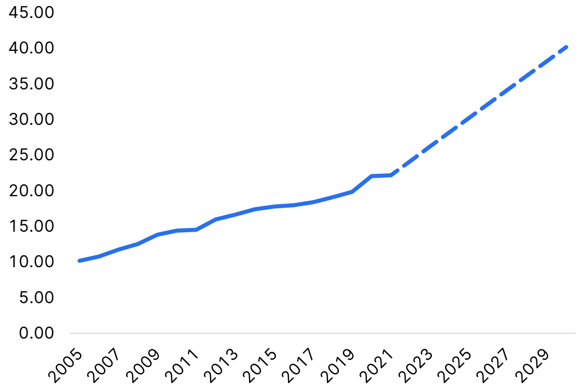
[1] Study on 2030 Renewable Energy and Energy Efficiency Targets in the EU, TU-Wien, European Renewable Energies Federation, Energy Economics Group, August 2022
[2] EU's green shift depends on mammoth investment in energy grid, document says | Reuters
[3] Recommendations on energy storage (europa.eu)
[4] Top 10 Energy Storage Trends in 2023 | BloombergNEF (bnef.com)

allowances can be made available from a "strategic reserve" (Market Stability Reserve) in case of "shocks".

We expect that CO_2 prices should start slowly and have only a moderate impact on electricity prices for the time being. The recent introduction of the CO_2 tax in Austria of EUR 35/tonne CO_2 will raise the gas price by a mere 0.77 euro cents / KWH[5] and increase to EUR 55/tonne by 2025. The price of CO_2 allowances has recently fluctuated between EUR 80 and 100, but it should not be forgotten that more than 40% of the allowances are still given away free of charge (mainly to industries at risk of leaving, but not to energy producers). For the time being, fluctuations in the gas price should thus play a greater role for the electricity price.

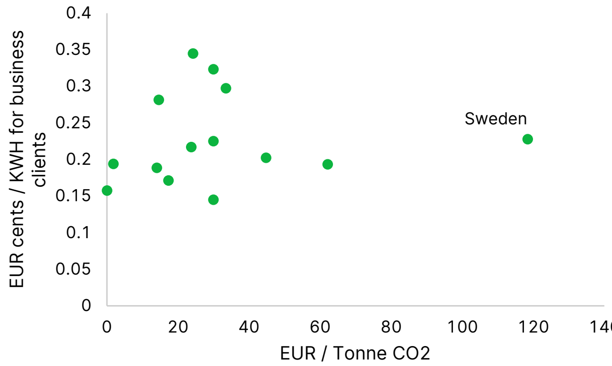
Ultimately, however, the impact of the CO_2 price on the electricity price will depend on the energy mix. Sweden, for example, has by far the highest CO_2 tax, while at the same time electricity prices are around the European average. The reason is a high share of renewable energies in combination with nuclear power. Thus the CO_2 price has almost no effect on the electricity price. The example of Sweden shows that the different energy mix in the countries of the EU will mean that higher CO_2 prices will have different effects on electricity prices in the countries. In the graph below we have deliberately used data from 2021, before the upheavals caused by the war in Ukraine.

Share of renewable energy
in % of energy consumption



Source: European Environment Agency, Erste Group Research

Electricity price and CO2 tax 2021
EU countries



Source: Eurostat, ISTA, Erste Group Research

Besides a rising CO_2 price, the question is how the high investments will affect electricity prices. This is not only relevant for future inflation rates, but also determines the willingness to take the risk of these investments. Looking at the production costs (incl. investments but excl. storage and transport), renewable energies in the EU were already competitive with fossil energies in 2020[6] , i.e. even before gas prices rose massively due to the war in Ukraine.

Pricing on the European electricity market is currently based on the merit order principle. The different power plants are ranked in ascending order

[5] Source: Austrian Energy Agency
[6] Projected Costs of Generating Electricity, IEA 2020

according to their marginal costs. The price of the most expensive energy source needed to satisfy demand is the one that all producers participating in the auction receive. The price of electricity production from thermal energy (gas. coal) should thus continue to represent the upper limit. Rising CO2 taxes should ensure that this upper limit moves upwards. However, investments cannot not be passed on indefinitely and prices cannot be raised indefinitely. Individual electricity producers will have no price-setting power, but will (have to) sell the available quantities at the market price.

A higher share of renewable energies is therefore not a one-way street, for which producers can expect ever higher prices and revenues. This is because renewable energies are not only renewable, but also produce electricity irregularly. The greater the share of electricity from photovoltaics (PV) and wind, the more often phases can be expected in which thermal electricity production is not used. Due to the merit order, this means relatively low prices for all affected renewable energy producers. If production conditions are favourable (a lot of sun and wind), low prices can thus be assumed. Already now, negative electricity prices occur in phases when production exceeds demand. Very poor production conditions are also a risk for renewable energy producers, as they will not be able to deliver despite demand.

Both low prices due to high electricity production from renewable sources and uncertainty about sun and wind hours are risks for renewable energy revenues. "The solution" is storage in sufficient capacity that allows renewable energy to be matched to demand. The availability of storage facilities with sufficient capacity - preferably in local proximity to (large) consumers in order to have as few transmission losses as possible during transport and distribution - is thus a key to future attractive prices. However, these capacities must first be created. Complementary to storage is the question of sufficient networks, i.e. the distribution of electricity. The creation of this necessary infrastructure for a new energy system is still open and requires coordinated planning and control. This uncertainty is certainly also an obstacle to investment in renewable energy.

The final electricity price will also depend on the extent to which consumption will adapt to the new production conditions. The incentives for this should grow due to more fluctuating electricity prices. The digitalisation on the side of recipients is necessary for the optimal adjustment of demand; how quickly this will be implemented is another open question.

Summary

The energy transition has only just begun and many decisions on the path to climate neutrality have yet to be made. Accordingly, long-term forecasts for electricity prices are conceivably difficult. The EU has set itself the goal of making energy from fossil sources more expensive through CO2 taxes. However, many factors will affect the future price of electricity. Due to a higher share of renewable energies, thermal power plants will be needed less, which in itself will lead to lower prices. High investments in renewable energies are another cost factor. However, it must be taken into account that for the time being electricity production with gas and coal will represent a price cap. In addition to the CO2 price, the wholesale prices for these raw materials will thus remain an important factor for the electricity price. When estimating the costs of investments in renewable energy, one must also take into account the concurrent elimination of the high running costs of electricity production with fossil fuels. Gas, oil and coal cost money, whereas solar and wind do not.

How electricity prices will develop will thus depend on the CO_2 price, commodity prices, the speed of the switch to renewable energies and the energy mix, and will differ among the countries of the EU. The speed of the switch will in turn depend on how quickly the necessary infrastructure of electricity grids and storage can be built.

Forecasts[7]

GDP	2021	2022	2023	2024
Eurozone	5.3	3.5	0.6	1.2
US	5.7	2.0	1.4	1.1

Inflation	2021	2022	2023	2024
Eurozone	2.6	8.4	5.6	2.7
US	4.7	8.0	4.0	1.9

Interest rates	current	Sep.23	Dec.23	Mar.24	Jun.24
ECB MRR	3.75	4.25	4.25	4.25	4.00
ECB Deposit Rate	3.25	3.75	3.75	3.75	3.50
3M Euribor	3.46	3.72	3.74	3.77	3.54
Germany Govt. 2Y	2.72	2.90	2.80	2.70	2.60
Germany Govt. 5Y	2.26	2.50	2.40	2.40	2.30
Germany Govt. 10Y	2.26	2.20	2.20	2.20	2.30
Swap 10Y	2.92	2.70	2.70	2.70	2.80

Interest rates	current	Sep.23	Dec.23	Mar.24	Jun.24
Fed Funds Target Rate*	5.08	5.13	4.88	4.63	4.38
3M Libor	5.50	5.21	4.96	4.71	4.21
US Govt. 2Y	4.36	3.90	3.59	3.31	3.06
US Govt. 5Y	3.71	3.20	3.10	3.00	2.90
US Govt. 10Y	3.61	3.10	2.90	2.90	2.80
EURUSD	1.07	1.14	1.16	1.18	1.19

*Mid of target range

Prices as of 01. Jun 2023
Source: Market data provider, Erste Group Research

[7] By regulations we are obliged to issue the following statement: Forecasts are no reliable indicator of future performance.

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