

INTEREST RATE OUTLOOK | EUROZONE, USA

# When will interest rates fall?

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

# Interest rate path remains difficult

The interest rate markets are facing an unusual challenge. A cycle of interest rate cuts is emerging in both the USA and the eurozone that was not triggered by a crisis. This has not been the case for decades. This makes it more difficult to determine the timing and extent of interest rate cuts. The data does not point clearly in one direction. Falling inflation in both economic areas was offset by a still robust labor market and a solid economy in the USA. In this environment, even relatively small changes in economic data led to sharp swings on the bond markets. Yields initially rose sharply from the summer onwards, only to fall from the end of October, often even below the starting level of the summer.

Assessing the situation has not become any easier in the new year. Last year, interest rate cuts were still relatively far away. Now things are becoming more concrete. The market is already pricing in the first interest rate cuts in the second quarter, both in the eurozone and the USA. Generally speaking, these expectations are based on an uncertain foundation. This is not just about the notoriously uncertain inflation rates, which are still some way off the targets of both central banks, but also about an uncertain economic trend. On the one hand, the delayed effects of the massive rise in interest rates since 2022 and a less expansive fiscal policy will weigh on the economies. On the other hand, households' purchasing power will improve due to rising real wages. Although the economy is not a target parameter for central banks, it does have an impact on inflation expectations and therefore on the interest rate path.

So far, the market has reacted to this environment with extremely strong fluctuations. Last year, the mantra "higher for longer" was quickly followed by expectations of massive interest rate cuts. The question is whether the markets have learned or not. As always, our Interest Rate Outlook contains our assessments for the interest rate markets in the eurozone and the USA. We have also estimated the additional interest rate burden in the eurozone by sector this year and analyzed debt levels.



### ECB - When will the ECB be convinced?

At its December meeting, the ECB Governing Council decided not to make any changes to its monetary policy. Both the key interest rates and the key formulation since September, according to which the key interest rates had very likely reached their peak, remained unchanged. The markets therefore waited in vain for indications of an interest rate cut. From the ECB's point of view, it is still too early for this. The Governing Council of the ECB is not yet sufficiently convinced that price pressure is easing. Although the economy is weak and the inflation rate is falling, the central bank is assuming an economic recovery this year, which should be driven mainly by rising real wages. In this environment, there is a risk that companies will pass on wage increases to consumers, resulting in a setback in the fight against inflation.

However, data to date shows that the ECB has little to worry about. Wage growth has already flattened out in the second and third quarters and monthly data (Indeed Wage Tracker) suggests that this trend has continued in the fourth quarter. At the same time, profit growth has been declining for several quarters, which is exactly the trend the ECB wants to see. At best, companies have only partially passed on the higher wage costs. Of course, this could change. So far, however, there are only slight indications at best for an economic recovery, which confirms our expectations of only slow recovery, which will continue to make it difficult for companies to pass on wage increases.

The ECB is therefore in a phase in which the scenario it desires is emerging, but it wants to play it safe due to an inflation rate that is still significantly above the target value and is therefore awaiting further data. We assume that both easing price pressure and a generally disinflationary environment will be confirmed. However, progress in reducing core inflation, in particular, service prices could be slow. The ECB Governing Council should therefore only open the door to interest rate cuts verbally at the March meeting for the time being and only decide on the first rate cut in June. We then expect the next rate cut in September. After that, the data situation should justify a faster approach, which would suggest two further interest rate cuts of 25 basis points (bp) each by the end of the year, making a total of 100 bp for this year.

The ECB announced the results of the discussions on the "Operational Framework" for the spring. Essentially, this is about how the ECB intends to manage the supply of liquidity in the medium term. At present, excess liquidity is still high. However, the ECB has started to reduce it by maturing TLTROs and reducing its securities holdings. This process will take years and will continue to provide excess liquidity for a long time to come. But how long is uncertain.

The ECB is essentially discussing two approaches. Liquidity could be kept high through high bond holdings by the central bank. The other approach envisages a lower general supply of liquidity, but flexible, frequent liquidity operations (open market operations). The decision on this will have no immediate impact. However, it is a directional decision by the ECB that will determine whether the money market will be based on the deposit rate or the ECB's main refinancing rate in future. The minimum reserve rate could also be



Source: Indeed Hiring Lab, ECB, Erste Group Research

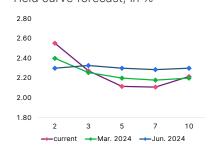
#### Inflation by sector, m/m, in %



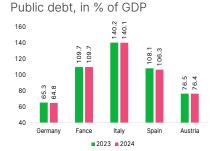
Source: ECB, Erste Group Research



Yield curve forecast, in %



Source: Market data provider, Erste Group Research



Source: National Finance Ministery, Erste Group Research

increased as part of the decisions on the operational framework. A small increase cannot be ruled out, but would be difficult to argue against the impending monetary easing.

Eurozone government bonds have largely followed the ups and downs of US Treasuries over the past six months. A sharp rise in yields until around the end of October was followed by an even sharper fall. At the same time, the yield gap between US bonds increased, which was probably due to the different economic conditions in the two economic areas. In our view, a slight economic recovery in the eurozone suggests that yields will rise again somewhat from the low levels already reached. This is also supported by the fact that the markets are already pricing in very aggressive interest rate cuts of 140 bp this year, which we do not expect to this extent. Inflation should continue to fall, but could prove stubborn in the "last mile", which argues against rapid interest rate cuts. Due to the inverted yield curve and the price potential, we prefer short maturities on the bond market in the eurozone. Spread markets are definitely worth considering. Of the four major countries, we prefer Spain due to its above-average growth and progress in budget consolidation. The yield on Austrian government bonds is also attractive in our view.

The new debt rules agreed by the EU finance ministers tend to be positive for the spread markets. The old rules had been suspended until 2023 in the wake of the pandemic. Essentially, the 3% deficit and 60% of GDP debt limits remain in force. However, the correction path will be significantly easier for countries that exceed these limits.

The targets are to be achieved through expenditure. To this end, the countries concerned are to agree on a 4-year plan with the European Commission, which will be converted into a 7-year plan if the country decides to make certain investments (digital, green) and reforms. Independently of this, countries with a debt ratio of more than 90% must achieve a minimum annual reduction of 1% of GDP, which is significantly milder than the previously required annual 5% of the amount exceeding 60% of GDP. For countries with a debt ratio between 60% and 90% of GDP, the annual reduction must be at least 0.5 percentage points. If the new rules are already applied for 2024, this will mean increased efforts for France, Italy of the four major countries and Austria based on the countries budget estimates. This is because stable debt as a percentage of GDP is expected here for 2024. The European Commission's forecasts are similar. In order to come into force, the new rules still have to pass through the EU Parliament, which should take several months. With these rules, the EU is at least showing the will to consolidate its budgets, a step that is not on the horizon in the USA.



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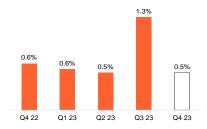
Source: Market data provider, Erste Group Research

# Consumer prices by sector, m/m in %



Source: Bureau of Labor Statistics, Erste Group Research

## US GDP growth, q/q in %



Source: Bureau of Economic Analysis, Erste Group Research

# Market and FOMC meeting participants' expectations for the key interest rate at the end of 2024, in %



Source: US-Fed, Erste Group Research

## USA - Interest rate cuts without recession?

The markets are struggling with the current environment. At the end of October, expectations for interest rate cuts in 2024 were still at 66 basis points (bp); by the end of 2023, this had already risen to 172 bp. At the same time, yields, which had previously risen sharply, fell across all maturities at a speed that had not been seen for a long time.

The challenges are unfamiliar for the markets. They have to deal with a central bank that is fighting against excessively high inflation, which was last the case in 2008, and with a data situation that does not provide a clear interest rate path. Falling inflation contrasts with a robust economy. The result is markets that have gone from the mantra of "higher for longer" to an expected fall in interest rates next year in the space of a few weeks.

The US economic data did not justify fluctuations in sentiment to this extent. There were already relatively clear signs of easing inflationary pressure in the summer. Since then, the weaker price pressure (excluding energy and food core inflation) has been confirmed, but has not eased further and is therefore not yet where the central bank would like it to be. There were also no significant changes in the structure of price pressure. The strongest contributions to the weakening of core inflation are coming from goods prices. The "breakthrough" in service prices has therefore yet to come.

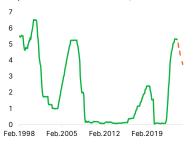
There was more movement in the economic data. The third quarter surprised with strong growth and the US economy once again remained unaffected by the sharp rise in interest rates and high inflation. Although initial data for the fourth quarter of 2023 suggests a weakening of the economy, this is only in comparison to the strong growth seen previously. Viewed in isolation, initial data for the quarter that has just ended still shows a solid economy that is not convincingly removing the basis for inflation. The picture on the labor market is similar. Although there are signs of a slowdown, the labor market remains solid.

This data situation was reflected at the most recent meeting of the FOMC, the Fed's interest rate-setting body. Although all meeting participants assume that interest rates have peaked, the possibility of a further rate hike remained in the statement and therefore on the table, as Fed Chairman Powell put it. However, the expectations of the meeting participants for the key interest rates changed compared to September, even as the range remained wide. The median of the current survey showed 50 bp lower expectations for the key interest rate at the end of 2024 than in September and thus expectations of interest rate cuts of 75 bp. The market is currently pricing in almost double that.

Interest rate cuts at the speed that the market is pricing in for next year would not be unusual. Interest rates fell even faster during the last interest rate cut cycles. However, these were triggered by crises (2000: bursting of the dotcom bubble, 2008: financial crisis and 2020: Covid pandemic) and thus clearly foreseeable economic slumps that ultimately ended in recessions. There is currently no sign of this. If it stays this way, we should therefore see

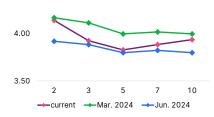


US Fed Funds rate and market expectations for 2024, in %



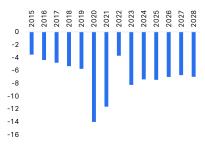
Source: US-Fed, Erste Group Research

Yield curve forecast, in % 4.50



Source: Market data provider, Erste Group Research

US budget deficits, in % of GDP



Source: IMF, Erste Group Research

a cautious process of interest rate adjustment. We expect four interest rate cuts of 25 bp each from July 2024 onwards.

The key to the extent of interest rate cuts will be the economy. We expect the slowdown to be relatively moderate. In contrast to last year, the government deficit will not increase further this year and the additional savings accumulated during the pandemic should be exhausted. The economy will therefore receive significantly less support from these sources. The effect of higher interest rates should also intensify. On the other side, however, are real incomes of private households, which have already turned around and should continue to grow this year. Private consumption, by far the most important component of GDP, should therefore receive support from this side. What all these factors, and others, will add up to is of course uncertain, but it does not look like a recession.

Overall, the economy should weaken somewhat and inflation should continue to fall moderately, which means a generally good environment for the bond market. However, the data should fluctuate and thus keep the market on the move. The bond market should remain volatile. Apart from the currency risk, we consider US Treasuries to be an attractive investment due to the yield level, whereby yield increases should be used for purchases. In terms of maturities, the decline in yields and duration should more or less balance each other out, so we expect maturities to perform similarly.

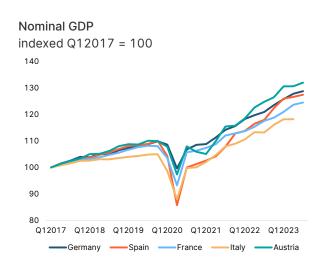
However, the issuer of US government bonds will provide little support for the bond market. Temporary budgets for various government departments expire on January 19 and February 2. If no agreement is reached in the US Congress, there is once again the threat of a government shutdown. This would mean that non-essential government spending would have to be stopped. Interest payments would not be affected, so markets should react calmly, as in the past. But it would once again highlight the plight of US public finances. The rating agency Fitch already withdrew its top rating in the summer. Moody's did not go that far in November, but the outlook was lowered from stable to negative. In fact, the budget course is on an unsustainable path with deficits of around 7% of GDP (source: IMF) over the coming years. In addition, there are regular difficulties in reaching political agreement on an increase in the debt limit, which means the risk of default, or even on a budget.

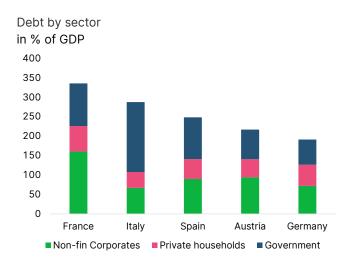
The upcoming presidential elections on November 5 will hardly change this. The likely candidates Joe Biden and Donald Trump have pursued an expansive fiscal policy during their terms in office, meaning that budget consolidation is unlikely regardless of the outcome of the elections. The House of Representatives and a third of the senators also have to face the election. Narrow or varying majorities would probably make budget consolidation impossible for good in the coming years. The most likely scenario is that the bond market will continue to be driven by economic data. However, the longer the consolidation of the US public budget fails to materialize, the more likely an eventual market reaction becomes.



# Focus - How much will the interest burden increase in 2024?

There is no precedent for the current situation. Interest rates have risen extremely fast since 2022, leading to key interest rates that were last seen before the financial crisis 2008. In the following, we have attempted to calculate the additional burden on debtor groups this year due to the rise in interest rates. We wanted to gain an impression of the extent to which the tightening of monetary policy will still have an impact. To do this, we put the debt service in relation. Debt and interest payments relative to income or GDP are the decisive variables for the assessment and reveal surprising facts. This is because high inflation has not only caused interest rates to rise, but also debtors' incomes in general. Governments are enjoying higher tax revenues, companies higher sales and employees higher wages. This not only alleviates the burden of higher interest rates but also lowers the debt level relative to income.





Source: European Commission, Erste Group Research

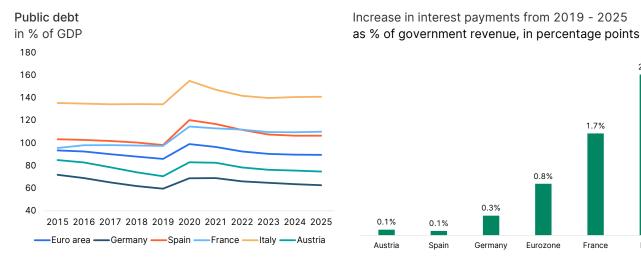
Source: European Commission, BIS, Erste Group Research

By far the largest single debtor in almost all countries is the state. The level of future interest charges is easy to estimate, as the debt is mainly in the form of bonds, which makes it very transparent in terms of interest rates and maturities. The interest burden has already risen and will continue to rise. This is obvious, as more and more bonds are maturing and have to be refinanced with higher coupons. If the interest rate level remains where it is, this rise in interest rates will continue for several years. The good news is that government revenues are also rising, as nominal GDP is also increasing, which also has a "positive" effect on debt levels. According to the European Commission's forecasts, the debt to GDP ratio for the four major countries (Germany, France, Italy, Spain) and Austria will at least not increase in 2024 and 2025. The interest burden relative to GDP and also to government spending as a whole will only increase significantly in France and Italy.

2.6%

Italy

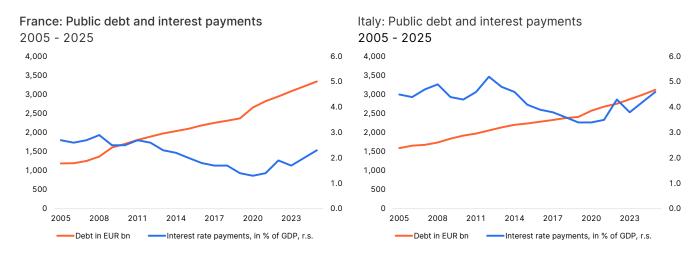




Source: European Commission, Erste Group Research

Source: European Commission, Erste Group Research

Interest and debt relative to GDP or revenue are the decisive factors, while absolute values are only of limited informative value. A comparison of nominal debt in euros and interest payments relative to GDP illustrates this. While debt will triple in France between 2005 and 2025 and double in Italy, the interest burden relative to GDP will not climb to levels seen in 2005 despite the rise in interest rates.



Source: European Commission, Erste Group Research

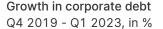
Source: European Commission, Erste Group Research

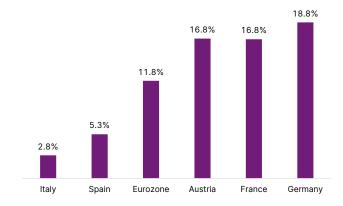
Ultimately, the development of interest rates over the coming years will play an important role in the actual extent of interest payments. The European Commission forecasts used here assume slightly higher average annual interest rates in 2024 than in 2023 and a fall in short-term interest rates in 2025. We consider these assumptions to be at the upper end of possible interest rate paths.

For the corporate sector, rising prices have led to significant sales growth, which was so strong that it not only cushioned rising interest rates but also higher debt in many countries. The chart below shows how corporate sector

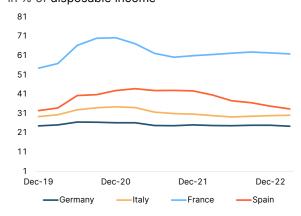


debt has developed from the fourth quarter of 2019 to the first quarter of 2023. Even in conjunction with higher interest rates, however, debt service relative to disposable income has changed little by then.





Debt service ratio of companies in % of disposable income



Source: BIS, Erste Group Research

Source: BIS, Erste Group Research

The question is by how much interest payments will still increases. Generally variable interest rates, new loans or maturing loans and bonds that need to be refinanced trigger changes in the cost of debt. Loans are the most important factor here, as they account for around 88% of companies' total financial debt in the eurozone.

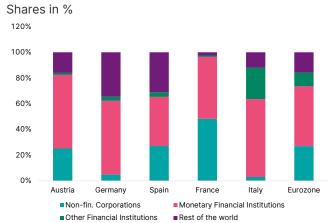
The extent of the burden of higher interest rates on the business sector as a whole is much more difficult to estimate than for governments. This is due to the lack of transparency, not least because companies also obtain a significant proportion of their loans from sources other than banks. The maturities of the loans are only roughly available and only for the part that is financed by banks (monetary financial institutions). In order to arrive at an order of magnitude of how much the interest burden will increase next year, we must therefore make some assumptions. The first assumption is that loans from non-banks have the same maturity structure as those from banks. Another assumption is that the outstanding volumes will not change next year and finally we also assume that interest rates will remain stable.

To calculate the interest burden in the coming year, we first want to find out the extent to which interest rates have already been adjusted. To do this, we add up the outstanding volumes of loans with a term of less than one year and with variable interest rates (original term of more than one year and an interest rate adjustment within the next 12 months). For the remainder, an interest rate adjustment should still be outstanding.





Distribution of financing sources for long-term loans to companies



Estimated share of corporate loans for which interest rates have already been adjusted

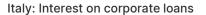
in %



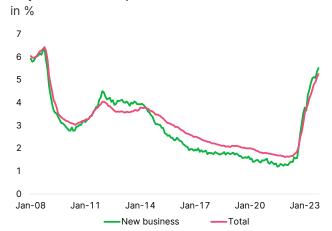
Source: ECB, Erste Group Research

Source: ECB, Erste Group Research

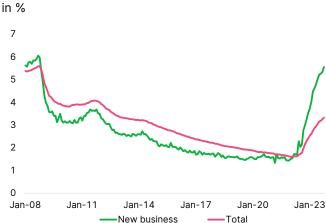
In order to get a second order of magnitude of the loan volumes whose interest rates have not yet been adjusted, we compare the interest rates of new loans with the average interest rates for the total outstanding loans. The latter are lower than the current interest rate due to the long phase of low interest rates and the loans taken out at that time. However, the more loans expire and are replaced by new ones, the more this interest rate will approach that of new business. The difference is therefore a measure of how many loans have had their interest rates adjusted.



Source: ECB, Erste Group Research



## Germany: Interest on corporate loans



Source: ECB, Erste Group Research

The greater the gap, the greater the need for adjustment should be. The values for the individual countries here are consistent with the previously determined share of loans whose interest rates have not yet been adjusted. Italy, for example, which has the highest proportion of variable or short-term loans, also has the smallest gap between the interest rate of existing loans and new loans. The interest rate adjustment should therefore already be well



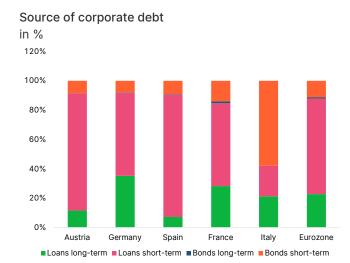


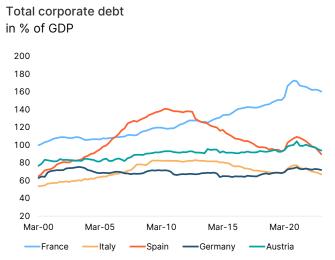


advanced, while German companies, for example, are likely to be facing major interest rate adjustments.

For the eurozone as a whole, corporate bonds account for just 12% of companies' external financing. Investment grade bonds, i.e. the higher credit ratings, are by far the largest segment. Of these, EUR 235 billion will mature in 2024 and will probably need to be refinanced. The largest share of this will fall to Germany. Overall, however, the additional burdens will be low. Based on the bonds issued, the average coupon and the spread to current yields, which we estimate at 2.2%, we arrive at an additional burden of just under EUR 5.2 bn for the eurozone, which corresponds to 0.03% of GDP. However, we would like to emphasize that this is a macroeconomic view. Problems for individual companies or sectors due to the higher interest rate environment are likely or have already occurred.

In order to determine the level of the additional interest burden, the different levels of debt in the countries must also be taken into account. The French corporate sector stands out with a very high level of debt of more than 160% of GDP, which is significantly more than twice as high as that of German or Italian companies.





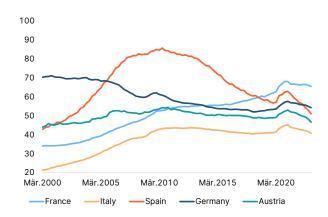
Source: ECB, Erste Group Research

Source: BIS, Erste Group Research

Finally - after the state and companies - the third group of debtors is private households. Their debt is significantly lower than that of companies. However, the proportion of variable interest rates and loans with short maturities shows a similar picture to that of corporate loans. Spain, Italy and Austria have the largest shares. Accordingly, interest rate adjustments are most advanced in these countries.

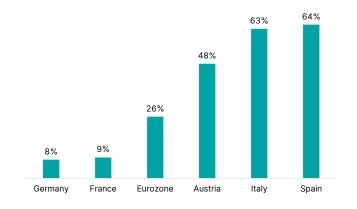


Household debt in % of GDP



Source: BIS, Erste Group Research

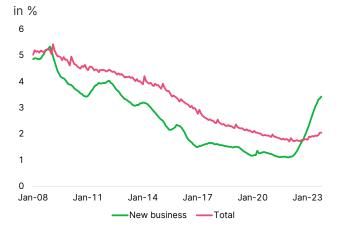
# Estimated proportion of loans to households whose interest rates have already been adjusted in %



Source: ECB, Erste Group Research

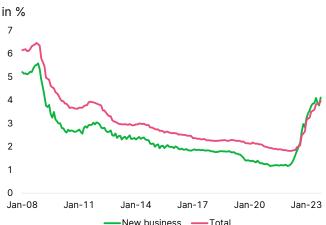
We again take the current interest rates at which new loans are concluded and compare them with the average interest rates for outstanding loans. Unsurprisingly, the countries with the highest proportion of variable-rate loans again show the smallest gaps and therefore the lowest need for further adjustment. In France and Germany, on the other hand, the rise in interest rates is unlikely to have reached households to a significant degree yet. Accordingly, these two countries will face a greater additional burden this year.

#### France: Interest on household loans



Source: ECB, Erste Group Research

#### Austria: Interest on household loans



Source: ECB, Erste Group Research

#### Conclusion

Our calculations give the following picture for all sectors together. For France, a number of factors come together that should lead to the strongest increase in the debt servicing costs this year. Corporate and household debt is the highest and the interest rate adjustment to date is low. In Italy, the high level of public debt is having an impact, while the interest rate adjustment for







private debtors is already well advanced and the level of debt here is relatively low. Spain and Austria are at the other end of the scale, mainly due to the relatively high proportion of variable-rate loans that have already been adjusted to the new interest rate level.

# Additional interest expense by sector for 2024 in % of GDP 0.70% 0.60% 0.50% 0.40% 0.30% 0.20% 0.10%

Germany

■ Non-fin. Corporate

Eurozone

Italy

■ Private Houaseholds

France

Source: ECB, Erste Group Research

Spain

■ Government

Austria

0.00%

-0.10%

What our calculations show is the amount and distribution of the additional interest expense. This enables a better assessment of the existing risks for both the sectors and the economy in the countries under review. The rise in interest rates will continue to place an additional burden on debtors next year, but the extent will vary greatly. It is important to consider not only the rise in interest rates, but also the increase in debtors' incomes, not least due to high inflation, which will mitigate the impact. It should be possible for governments to finance the higher burdens and for households it is primarily a question of new loans, as there is hardly any refinancing here. In the corporate sector, on the other hand, debt financing is a constant and must therefore be renewed time and again. This is probably where it will be most difficult to cope with the higher interest rates.





# Forecasts<sup>1</sup>

GDP	2022	2023	2024	2025
Eurozone	3.5	0.5	0.7	1.1
US	2.1	2.5	1.6	1.8

Inflation	2022	2023	2024	2025
Eurozone	8.4	5.5	2.7	2.1
US	8.0	4.1	2.3	2.0

Interest rates	current	Mar.24	Jun.24	Sep.24	Dec.24
ECB MRR	4.50	4.50	4.25	4.00	3.50
ECB Deposit Rate	4.00	4.00	3.75	3.50	3.00
3M Euribor	3.93	4.02	3.79	3.40	2.92
Germany Govt. 2Y	2.55	2.40	2.40	2.30	2.30
Germany Govt. 5Y	2.12	1.90	2.20	2.30	2.20
Germany Govt. 10Y	2.22	2.20	2.30	2.30	2.30
Swap 10Y	2.62	2.70	2.80	2.80	2.80

Interest rates	current	Mar.24	Jun.24	Sep.24	Dec.24
Fed Funds Target Rate*	5.33	5.38	5.38	4.88	4.38
3M Libor	5.58	5.63	5.46	4.96	4.46
US Govt. 2Y	4.14	4.25	4.17	3.92	3.69
US Govt. 5Y	3.83	3.80	4.00	3.80	3.70
US Govt. 10Y	3.94	4.00	3.80	3.80	3.80
EURUSD	1.10	1.12	1.14	1.14	1.12

<sup>\*</sup>Mid of target range

Prices as of Jan. 15, 2024

Source: Market data provider, Erste Group Research

 $<sup>^{\</sup>rm 1}$  By regulations we are obliged to issue the following statement: Forecasts are no reliable indicator of future performance.





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József Miró (Head) András Nagy Tamás Pletser, CFA® (Oil & Gas)		Tomasz Galanciak Wojciech Wysocki Przemyslaw Nowosad	+48 22 257 5715 +48 22 257 5714 +48 22 257 5712
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András Nagy Tamás Pletser, CFA® (Oil & Gas) Poland Cezary Bernatek (Head)	+361 235 5132 +361 235 5135 +48 22 257 5751	Tomasz Galanciak Wojciech Wysocki Przemyslaw Nowosad Maciej Senderek Croatia Matija Tkalicanac	+48 22 257 5715 +48 22 257 5714 +48 22 257 5712
András Nagy Tamás Pletser, CFA® (Oil & Gas)  Poland Cezary Bernatek (Head) Plotr Bogusz Łukasz Jańczak	+361 235 5132 +361 235 5135 +48 22 257 5751 +48 22 257 5755 +48 22 257 5754	Tomasz Galanciak Wojciech Wysocki Przemyslaw Nowosad Maciej Senderek Croatia Matija Tkalicanac Hungary Nandori Levente	+48 22 257 5715 +48 22 257 5714 +48 22 257 5712 +48 22 257 5713 +385 72 37 21 14 +36 1 23 55 141
András Nagy Tamás Pletser, CFA® (Oil & Gas)  Poland Cezary Bernatek (Head) Piotr Bogusz Łukasz Jańczak Krzysztof Kawa, CilA®	+361 235 5132 +361 235 5135 +48 22 257 5751 +48 22 257 5755 +48 22 257 5754 +48 22 257 5752	Tomasz Galanciak Wojciech Wysocki Przemysław Nowosad Maciej Senderek Croatta Matija Tkalicanac Hungary Nandori Levente Krisztian Kandik	+48 22 257 5715 +48 22 257 5714 +48 22 257 5712 +48 22 257 5713 +385 72 37 21 14 +36 1 23 55 141 +36 1 23 55 162
András Nagy Tamás Pletser, CFA® (Oil & Gas)  Poland Cezary Bernatek (Head) Piotr Bogusz Łukasz Jańczak Krzysztof Kawa, CilA® Jakub Szkopek	+361 235 5132 +361 235 5135 +48 22 257 5751 +48 22 257 5755 +48 22 257 5754	Tomasz Galanciak Wojciech Wysocki Przemyslaw Nowosad Maciej Senderek Croatia Matija Tkalicanac Hungary Nandori Levente Krisztian Kandik Balasz Zankay Romania	+48 22 257 5715 +48 22 257 5714 +48 22 257 5712 +48 22 257 5713 +385 72 37 21 14 +36 1 23 55 141 +36 1 23 55 162 +36 1 23 55 156
András Nagy Tamás Pletser, CFA® (Oil & Gas)  Poland Cezary Bernatek (Head) Piotr Bogusz Łukasz Jańczak Krzysztof Kawa, CilA®	+361 235 5132 +361 235 5135 +48 22 257 5751 +48 22 257 5755 +48 22 257 5754 +48 22 257 5752	Tomasz Galanciak Wojciech Wysocki Przemyslaw Nowosad Maciej Senderek Croatia Matija Tkalicanac Hungary Nandori Levente Krisztian Kandik Balasz Zankay	+48 22 257 5715 +48 22 257 5714 +48 22 257 5712 +48 22 257 5713 +385 72 37 21 14 +36 1 23 55 141 +36 1 23 55 162
András Nagy Tamás Pletser, CFA® (Oil & Gas)  Poland Cezary Bernatek (Head) Piotr Bogusz Łukasz Jańczak Krzysztof Kawa, CilA® Jakub Szkopek  Romania Caius Rapanu	+361 235 5132 +361 235 5135 +48 22 257 5751 +48 22 257 5755 +48 22 257 5752 +48 22 257 5752 +48 22 257 5753	Tomasz Galanciak Wojciech Wysocki Przemyslaw Nowosad Maciej Senderek Croatia Matija Tkalicanac Hungary Nandori Levente Krisztian Kandik Balasz Zankay Romania Liviu Avram Group Fixed Income Securities Markets	+48 22 257 5715 +48 22 257 5714 +48 22 257 5712 +48 22 257 5713 +385 72 37 21 14 +36 1 23 55 141 +36 1 23 55 162 +36 1 23 55 156 +40 3735 16569
András Nagy Tamás Pletser, CFA® (Oil & Gas)  Poland Cezary Bernatek (Head) Plotr Bogusz Łukssz Jańczak Krzysztof Kawa, CilA® Jakub Szkopek  Romania	+361 235 5132 +361 235 5135 +48 22 257 5751 +48 22 257 5755 +48 22 257 5752 +48 22 257 5752 +48 22 257 5753	Tomasz Galanciak Wojciech Wysocki Przemyslaw Nowosad Maciej Senderek Croatta Matija Tkalicanac Hungary Nandori Levente Krisztian Kandik Balasz Zankay Romania Liviu Avram  Group Fixed Income Securities Markets Head: Goran Hoblaj	+48 22 257 5715 +48 22 257 5714 +48 22 257 5712 +48 22 257 5713 +385 72 37 21 14 +36 1 23 55 141 +36 1 23 55 162 +36 1 23 55 156
András Nagy Tamás Pletser, CFA® (Oil & Gas)  Poland Cezary Bernatek (Head) Plotr Bogusz Łukasz Jańczak Krzysztof Kawa, CIIA® Jakub Szkopek  Romania Caius Rapanu  Group Markets  Head of Group Markets	+361 235 5132 +361 235 5135 +48 22 257 5751 +48 22 257 5755 +48 22 257 5754 +48 22 257 5752 +48 22 257 5753 +40 3735 10441	Tomasz Galanciak Wojciech Wysocki Przemyslaw Nowosad Maciej Senderek Croatia Matija Tkalicanac Hungary Nandori Levente Krisztian Kandik Balasz Zankay Romania Liviu Avram Group Fixed Income Securities Markets	+48 22 257 5715 +48 22 257 5714 +48 22 257 5712 +48 22 257 5713 +385 72 37 21 14 +36 1 23 55 141 +36 1 23 55 162 +36 1 23 55 156 +40 3735 16569
András Nagy Tamás Pletser, CFA® (Oil & Gas)  Poland Cezary Bernatek (Head) Plotr Bogusz Łuksaz Jańczak Krzysztof Kawa, CilA® Jakub Szkopek  Romania Caius Rapanu  Group Markets  Head of Group Markets Oswald Huber	+361 235 5132 +361 235 5135 +48 22 257 5751 +48 22 257 5755 +48 22 257 5752 +48 22 257 5752 +48 22 257 5753	Tomasz Galanciak Wojciech Wysocki Przemyslaw Nowosad Maciej Senderek Croatia Matija Tkalicanac Hungary Nandori Levente Krisztian Kandik Balasz Zankay Romania Liviu Avram Group Fixed Income Securities Markets Head: Goran Hoblaj Fixed Income Flow Sales Head: Gorjan Hoblaj Margit Hraschek	+48 22 257 5715 +48 22 257 5714 +48 22 257 5712 +48 22 257 5713 +385 72 37 21 14 + 36 1 23 55 141 + 36 1 23 55 162 + 36 1 23 55 165 +40 3735 16569 +43 (0)50100 84403 +43 (0)5 0100 84403 +43 (0)5 0100 84403 +43 (0)5 0100 84403
András Nagy Tamás Pletser, CFA® (Oil & Gas)  Poland Cezary Bernatek (Head) Plótr Bogusz Łukasz Jahczak Krzysztof Kawa, CIIA® Jakub Szkopek  Romania Caius Rapanu  Group Markets Gswald Huber  Group Markets Retail and Agency Business	+361 235 5132 +361 235 5135 +48 22 257 5751 +48 22 257 5755 +48 22 257 5754 +48 22 257 5752 +48 22 257 5753 +40 3735 10441 +43 (0)5 0100 84901	Tomasz Galanciak Wojciech Wysocki Przemyslaw Nowosad Maciej Senderek Croatia Matija Tkalicanac Hungary Nandori Levente Krisztian Kandik Balasz Zankay Romania Liviu Avram  Group Fixed Income Securities Markets Head: Goran Hoblaj Fixed Income Flow Sales Head: Gorjan Hoblaj Margit Hraschek Christian Kienesberger Ciprian Mitu	+48 22 257 5715 +48 22 257 5714 +48 22 257 5712 +48 22 257 5713 +385 72 37 21 14 + 36 1 23 55 141 + 36 1 23 55 162 + 36 1 23 55 156 +40 3735 16569 +43 (0)50100 84403 +43 (0)50100 84403 +43 (0)5 0100 84403 +43 (0)5 0100 8423 +43 (0)5 0100 8323 +43 (0)5 0100 83612
András Nagy Tamás Pletser, CFA® (Oil & Gas)  Poland Cezary Bernatek (Head) Plotr Bogusz Łukasz Jahczak Krzysztof Kawa, CIIA® Jakub Szkopek Romania Caius Rapanu  Group Markets  Head of Group Markets Oswald Huber  Group Markets Retail and Agency Business Head: Christian Reiss	+361 235 5132 +361 235 5135 +48 22 257 5751 +48 22 257 5755 +48 22 257 5754 +48 22 257 5752 +48 22 257 5753 +40 3735 10441	Tomasz Galanciak Wojciech Wysocki Przemyslaw Nowosad Maciej Senderek Croatia Matija Tkalicanac Hungary Nandori Levente Krisztian Kandik Balasz Zankay Romania Liviu Avram  Group Fixed Income Securities Markets Head: Goran Hoblaj Fixed Income Flow Sales Head: Gorjan Hoblaj Margit Hraschek Christian Kienesberger Ciprian Mitu Bernd Thaler	+48 22 257 5715 +48 22 257 5714 +48 22 257 5714 +48 22 257 5713 +385 72 37 21 14 +36 1 23 55 141 +36 1 23 55 162 +36 1 23 55 166 +40 3735 16569 +43 (0)50100 84403 +43 (0)5 0100 8417 +43 (0)5 0100 8417 +43 (0)5 0100 85612 +43 (0)5 0100 8512 +43 (0)5 0100 8512 +43 (0)5 0100 85119
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András Nagy Tamás Pletser, CFA® (Oil & Gas)  Poland Cezary Bernatek (Head) Plotr Bogusz Łukasz Jahczak Krzysztof Kawa, CilA® Jakub Szkopek  Romania Caius Rapanu  Group Markets Head of Group Markets Oswald Huber  Group Markets Retail and Agency Business Head: Christian Reiss  Markets Retail Sales AT Head: Markus Kaller	+361 235 5132 +361 235 5135 +48 22 257 5751 +48 22 257 5755 +48 22 257 5754 +48 22 257 5752 +48 22 257 5753 +40 3735 10441 +43 (0)5 0100 84901 +43 (0)5 0100 84012	Tomasz Galanciak Wojciech Wysocki Przemyslaw Nowosad Maciej Senderek Croatta Matija Tkalicanac Hungary Nandori Levente Krisztian Kandik Balasz Zankay Romania Liviu Avram  Group Fixed Income Securities Markets Head: Goran Hoblaj Fixed Income Flow Sales Heads: Gorjan Hoblaj Margit Hraschek Christian Klenesberger Ciprian Mitu Bernd Thaler Zsuzsanna Toth	+48 22 257 5715 +48 22 257 5714 +48 22 257 5714 +48 22 257 5713 +385 72 37 21 14 +36 1 23 55 141 +36 1 23 55 162 +36 1 23 55 166 +40 3735 16569 +43 (0)50100 84403 +43 (0)5 0100 8417 +43 (0)5 0100 8417 +43 (0)5 0100 85612 +43 (0)5 0100 8512 +43 (0)5 0100 8512 +43 (0)5 0100 85119
András Nagy Tamás Pletser, CFA® (Oil & Gas)  Poland Cezary Bernatek (Head) Piotr Bogusz Łukasz Jahczak Krzysztof Kawa, CilA® Jakub Szkopek  Romania Caius Rapanu  Group Markets  Head of Group Markets Oswald Huber  Group Markets Retail and Agency Business Head: Christian Reiss  Markets Retail Sales AT	+361 235 5132 +361 235 5135 +48 22 257 5751 +48 22 257 5755 +48 22 257 5754 +48 22 257 5752 +48 22 257 5753 +40 3735 10441 +43 (0)5 0100 84901 +43 (0)5 0100 84012	Tomasz Galanciak Wojciech Wysocki Przemysław Nowosad Maciej Senderek Croatia Matija Tkalicanac Hungary Nandori Levente Krisztian Kandik Balasz Zankay Romania Liviu Avram  Group Fixed Income Securities Markets Head: Goran Hoblaj Fixed Income Flow Sales Head: Gorjan Hoblaj Margit Hraschek Christian Kienesberger Ciprian Mitu Bernd Thaler Zsuzsanna Toth Poland Pawel Kielek Michal Jarmakowicz	+48 22 257 5715 +48 22 257 5714 +48 22 257 5712 +48 22 257 5712 +48 22 257 5713 +385 72 37 21 14 + 36 1 23 55 141 + 36 1 23 55 156 +40 3735 16569 +43 (0)50100 84403 +43 (0)5 0100 84403 +43 (0)5 0100 84117 +43 (0)5 0100 84117 +43 (0)5 0100 84119 +36 1 237 8209 +48 22 538 6223
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András Nagy Tamás Pletser, CFA® (Oil & Gas)  Poland Cezary Bernatek (Head) Plotr Bogusz Łukasz Jahczak Krzysztof Kawa, CIIA® Jakub Szkopek Romania Caius Rapanu  Group Markets Head of Group Markets Oswald Huber  Group Markets Retail and Agency Business Head: Christian Reiss  Markets Retail Sales AT Head: Markus Kaller  Group Markets Execution Head: Kurt Gerhold  Retail & Sparkassen Sales Head: Uwe Kolar	+361 235 5132 +361 235 5135 +48 22 257 5751 +48 22 257 5755 +48 22 257 5754 +48 22 257 5752 +48 22 257 5753 +40 3735 10441 +43 (0)5 0100 84901 +43 (0)5 0100 84012 +43 (0)5 0100 84239 +43 (0)5 0100 84239	Tomasz Galanciak Wojciech Wysocki Przemyslaw Nowosad Maciej Senderek Croatta Matija Tkalicanac Hungary Nandori Levente Krisztian Kandik Balasz Zankay Romania Liviu Avram  Group Fixed Income Securities Markets Head: Goran Hoblaj Fixed Income Flow Sales Head: Gorjan Hoblaj Margit Hraschek Christian Kienesberger Ciprian Mitu Bernd Thaler Zsuzsanna Toth Poland Pawel Kielek Michal Jarmakowicz Fixed Income Flow Trading Head: Gorjan Hoblaj Group Fixed Income Securities Trading Head: Gorjan Hoblaj	+48 22 257 5715 +48 22 257 5714 +48 22 257 5712 +48 22 257 5712 +48 22 257 5713 +385 72 37 21 14 + 36 1 23 55 141 + 36 1 23 55 156 +40 3735 16569 +43 (0)50100 84403 +43 (0)5 0100 84403 +43 (0)5 0100 84117 +43 (0)5 0100 84117 +43 (0)5 0100 84119 +36 1 237 8209 +48 22 538 6223 +43 (0)5 0100 85611 +43 (0)5 0100 85611 +43 (0)5 0100 85611
András Nagy Tamás Pletser, CFA® (Oil & Gas)  Poland Cezary Bernatek (Head) Plotr Bogusz Łukasz Jańczak Krzysztof Kawa, CIIA® Jakub Szkopek  Romania Caius Rapanu  Group Markets Head of Group Markets Oswald Huber  Group Markets Retail and Agency Business Head: Christian Reliss  Markets Retail Sales AT Head: Markus Kaller  Group Markets Execution Head: Kurt Gerhold  Retail & Sparkassen Sales Head: Uwe Kolar  Markets Retail Sales CZ Head: Roman Choc  Markets Retail Sales CZ Head: Roman Choc  Markets Retail Sales HUN	+361 235 5132 +361 235 5135 +48 22 257 5755 +48 22 257 5755 +48 22 257 5754 +48 22 257 5752 +48 22 257 5753 +40 3735 10441 +43 (0)5 0100 84901 +43 (0)5 0100 84012 +43 (0)5 0100 84239 +43 (0)5 0100 84232 +43 (0)5 0100 83214 +420 956 765 374	Tomasz Galanciak Wojciech Wysocki Przemyslaw Nowosad Maciej Senderek Croatta Matija Tkalicanac Hungary Nandori Levente Krisztian Kandik Balasz Zankay Romania Liviu Avram  Group Fixed Income Securities Markets Head: Goran Hoblaj Fixed Income Flow Sales Head: Gorjan Hoblaj Margit Hraschek Christian Kinensberger Ciprian Mitu Bernd Thaler Zsuzsanna Toth Poland Pawel Kielek Michal Jarmakowicz Fixed Income Flow Trading Head: Gorjan Hoblaj Group Fixed Income Securities Trading Head: Gorjan Hoblaj	+48 22 257 5715 +48 22 257 5714 +48 22 257 5713 +48 22 257 5713 +385 72 37 21 14 +36 1 23 55 141 +36 1 23 55 156 +40 3735 16569 +43 (0)50100 84403 +43 (0)5 0100 84403 +43 (0)5 0100 8417 +43 (0)5 0100 8417 +43 (0)5 0100 85612 +43 (0)5 0100 85612 +43 (0)5 0100 85612 +43 (0)5 0100 85611 +43 (0)5 0100 85611
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