

CIO Special

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Bottoming out in the German housing market

Key messages

- The German real estate market remains a challenging environment. High
 construction costs and sentiment indicators in the industry continue to bear the
 hallmarks of recession.
- The rest of the year is likely to remain challenging. However, the chances are likely to
 increase in 2025. There are already signs of a bottoming out in real estate valuations.
 We also assume that the ECB will cut key interest rates for the first time, which,
 combined with a slight economic recovery in Europe, could provide the first positive
 impulses for the real estate market.
- There are opportunities for investors in the rental market. Supply is likely to remain limited over the coming years, while demand, particularly in metropolitan areas, is likely to remain high.

Introduction

There is currently no good news to report about the German housing market. Virtually no other developed country has seen new construction plummet as sharply as in Germany. While the purchasing managers' overall index for the Eurozone was 46.1 points in March, the weakness of the construction sector removed it even further from the expansion threshold of 50 points at 42.4 points. The situation for construction firms in Germany has recently been particularly weak with an index reading of 38.3 points.

According to the Federal Statistical Office, only 260,100 apartments were approved for construction in Germany in 2023. This means that building permits granted last year were at their lowest level since 2012 and far below the federal government's goal of building 400,000 apartments per year. The majority of analysts are also quite pessimistic for this year. For example, the ifo Institute assumes that only 225,000 apartments will be completed in 2024.

A widely cited reason for this weak development is the rise in interest rates. The deterioration in financing conditions caused by the central banks' increase in key interest rates has put a strain on the affordability and valuation of real estate. But in addition to the interest rate, there are other reasons why the situation in Germany has developed differently than in other Euro countries (which, as is well known, are influenced by the same interest rate policy). The existing regulation of the housing market has an impact on the propensity to invest. In addition, political projects such as the Building Energy Act caused uncertainty among investors. At the same time, however, living space is scarce, with ongoing immigration increasing demand and further exacerbating the shortage of supply. Due to the low stock of social housing, the state also acts as a competitor for the scarce private living space and thus exacerbates the housing shortage.

However, there seems to be an improvement in sight. The high inflation rates of 2022 and 2023 appear to be a thing of the past. According to our forecasts, consumer price inflation in Germany is likely to fall to around 2.5% this year. This opens up room for interest rate cuts by the ECB in the medium term, which should also have a positive impact on the situation on the housing market.



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Interest rate shock and other factors

In July 2022, the European Central Bank (ECB) executed its interest rate pivot and raised key interest rates for the first time since 2013. The reason was the sharp increase in inflation in the Eurozone following the Covid-19 pandemic and the energy crisis.

Since then, the main refinancing rate has risen to 4.5%, which has made the financing conditions for economic actors significantly more expensive, including in the real estate market. Average mortgage interest rates with a term of 10 years then rose significantly in Germany: While the interest rate was still less than 1% at the end of 2021, it rose to around 3.8% by the end of 2023.

On the real estate market, such a restrictive monetary policy usually has the effect of reducing demand (including for real estate) and dampening price pressure. Rising interest rates also offered investors lower-risk investment opportunities. During the period of zero or negative interest rates that lasted for several years, many risk-averse investors turned to the real estate market in search of investments with the potential for positive returns. As interest rates rose, a reversal began, with investors withdrawing their funds from the real estate sector and shifting them into fixed-interest securities, which also weighed on prices in the real estate sector.

According to a study by analysts at Deutsche Bank based on data from 33 OECD countries, real estate prices in Germany fell relatively significantly by around -10% in the period from 2021 to the end of 2023. The upward trend on the German real estate market that had existed since 2011 came to an end. Prices on the real estate market also fell significantly in Canada, Denmark and Sweden.

However, the overall price decline in the OECD countries observed was manageable. In some countries, such as the USA or Great Britain, prices have already recovered after a temporary decline due to interest rates also rising. House prices have already reached new highs again.

In addition to the obviously negative price effect caused by the increased interest rates, other factors also play an important role in the price movement. One of these factors may have been the temporarily unusually high inflation. Home ownership is widely seen as protection against the devaluation of money. This connection seems to be confirmed in the academic literature, especially in the long term. The effect on real estate valuation and prices is said to be greater the longer the inflation rate remains at an elevated level.

This linking is based on rents and construction costs, whose inflation rates also tend to accelerate in times of rising prices. While higher construction costs tend to make new construction more expensive, rising rents support the broad development of real estate prices. According to analysts, an average rent increase of 10.6% caused property prices to rise by around 4.2%. However, country-specific circumstances must also be taken into account, which can significantly influence the strength of the effect. Since we do not expect the inflation rate in the Eurozone to return to the low level of the 2010s in the coming years, rents could grow more dynamically than in the past. This is also supported by

demographic change, which is exacerbating the shortage of skilled workers and could lead to an increase in the price of labour in the long term. Increasing expenses for the energy transition, for example, through the introduction of a $\rm CO_2$ tax and higher levies on electricity prices to finance the extensive necessary power grid expansion, are also likely to contribute to inflation. In addition, the price reduction effect of globalization over the last few decades could diminish in the coming years or, in the worst case, even be partially reversed due to increasing protectionism.

Another topic is the regulation of the housing market. There are differences between the OECD countries here. While the residential real estate market in the Anglo-American region and in Eastern Europe is little regulated, there is greater regulation in Western and Northern European countries. In order to make this effect measurable, analysts at Deutsche Bank use the so-called Kholodilin index. This index ranges from 0 to 1, with 1 representing very strong regulation. The country-specific index value is determined using 18 questions. For example, if all of these questions are answered with "yes," the market in question is highly regulated and receives an index value of 1.

While France and the Netherlands have a highly regulated market at 0.66, Germany has a value of 0.5. Across the entire sample, there is a negative correlation between house prices and regulation. During the period under review, prices in countries with strong regulation fell by an average of 6.3 percentage points more. However, as mentioned, there are major differences between the countries. For example, if Germany had had the much more liberal regulation level of the USA (0.2), the estimate suggests a price decline of 6.7% instead of 10% between 2021 and 2023, which would be 3.3 percentage points lower.

A very interesting point arises from this context: countries with a more regulated housing market would tend to require fewer interest rate increases from monetary policy in order to achieve a price-dampening effect on the real estate market. This could, to a certain extent, explain the different nominal interest rates, which are higher in the USA than in the Eurozone.

The transmission mechanism of monetary policy requires a certain amount of time for a change in interest rates to take effect in the economy. As a rule, one speaks of 12 to 18 months.

The change in interest rates is likely to have been largely digested by the real estate market. Since we expect the first interest rate cuts from the ECB and the Fed in mid-2024, a recovery could become apparent in the course of 2025.



Situation and outlook for the residential real estate market

If you look at four well-known price indices in Germany (Europace, CBRE, vdp and Scout 24), they have so far shown a price decline of around 7% to 13% from their highs at the end of 2021. It is important to note that price indices in the real estate market use different data sources, which can explain the sometimes significant differences. These differences could be clearly seen using the example of the discussion about the heating law in Germany in 2023. The law, which was supposed to oblige property owners with a certain transition period to replace their older heating systems with new, lower-emission systems, led to significant valuation adjustments, especially for older properties. Price indices that do not record the condition of the buildings could therefore give an inaccurate picture of price developments. Our analysts believe that detailed mortgage data should provide a relatively reliable picture of the situation. The vdp price index, for example, uses this data source.

Regardless of the quality of the measurement of individual indices, further significant price declines appear unlikely due to the improving economic situation and the upcoming reduction in key interest rates.

Stabilizing house prices could attract buyers back to the market and revive transaction volumes, which have collapsed over the past two years. Although challenges could continue, further price declines should remain limited. A boom like in the years before 2022, however, seems rather unlikely. From our analysts' point of view, such a dynamic development would require, among other things, a mortgage interest rate of less than two percent. We do not expect interest rates to return to this low level in the foreseeable future, as inflationary pressures are likely to remain elevated in the longer term due to the structural changes described above.

The mortgage volume for private households fell by around 4% to EUR 39.4 billion in the fourth quarter. This corresponds to around half of the level in the first quarter of 2022. The last time such a volume was seen was in 2005. However, the comparison with the immediately previous quarter's value only shows one slight decline, which supports the thesis that the real estate market is gradually bottoming out. Our analysts estimate that the loan volume increased again in the first quarter of 2024, as the current yield on the ten-year federal bond has since fallen from around 3% to 2.5% recently.

This is the first fall in interest rates since the ECB began its restrictive monetary policy. Accordingly, ten-year mortgage interest rates are also weaker: while the interest rate was around 4.2% at the end of 2023, it has since fallen to around 3.5%. According to Deutsche Bank estimates, this could stimulate construction demand and increase mortgage volumes to EUR 42 – 48 billion.

In the second quarter, yields on the bond markets rose slightly again as interest rate expectations in the USA adjusted. In this context, long-term interest rates also rose slightly in Europe. The recovery process in the real estate market could therefore be a lengthy development due to occasional setbacks.

But rental prices continued their strong momentum in the fourth quarter of 2023 compared to the previous year. Rental prices for new rentals rose between 5.1% and 5.8% across Germany. In the top 7 cities (Berlin, Düsseldorf, Frankfurt am Main, Hamburg, Cologne, Munich and Stuttgart) rental growth was again 5.4% compared to the previous year – and thus remained at a record level. Rents for first-time occupiers of new buildings rose by up to 6.5%, which was also a record high.

The Federal Statistical Office recorded an increase of 2% for existing rents for the entire year 2023. In previous years, according to the Federal Statistical Office, the increase was only in the range of 1-1.5%. For 2023, rents rose by around 3% overall. The residential real estate groups are forecasting rent increases of around 3.2 to 5.0% for 2024, although the former is considered a rather conservative estimate. The increase in index and new contract rents is likely to increasingly be transferred to existing rents. According to industry analysts, the (gross) rental yield, i.e. the ratio of the annual gross rent to the purchase price, is likely to continue its positive upward trend since mid-2023. Between June 2023 and January 2024, it increased by 30 basis points in the 30 largest German cities and averaged almost 4 percent.

Challenges and opportunities

If you compare the situation in Germany with other European countries, country-specific differences become apparent. While in Germany young people leave home at the age of 23.8, the average age in Italy (30.1) or Spain (29.8) is significantly higher. Young people in Germany tend to start their own household earlier, partly due to the comparatively favorable employment situation.

Basically, Germany is facing robust demand, which is also reflected in the increasing number of single households. However, the lack of living space is shown by the percentage that a household in Germany has to spend on housing from its available income. Germany is at the top in Europe here. The share of income required for rent in metropolitan areas is significantly higher. According to data from the Federal Statistical Office, the rent burden rate for tenants, i.e. the gross rent in relation to net household income, was 27.9% in Germany in 2022. It is important to take into account that the majority of people in Germany live in rent, with an ownership rate of 41.8%. In the EU plus Great Britain, however, around 69% live in their own four walls. Germany therefore occupies last place in the EU. The rental housing market and the development of rental prices therefore plays a comparatively important role in the residential real estate market.

The housing market is therefore also a central social issue. The availability of attractive employment opportunities in metropolitan areas plays a major role, as it promotes immigration from other, usually more rural areas and promotes rental relationships. But as rents rise, there are increasing calls for greater regulation of price developments. Another driver for the development of the real estate market is the demand for social housing. Since the state has restricted social housing, state and private demand is competing for housing. This further increases the upward



pressure on rents. Studies on this topic show that there are over 900,000 social housing units that are currently missing.

In the 1950s, which was still heavily influenced by the consequences of the World War, the federal government spent an average of around 2% of gross domestic product per year on the construction of social housing. Today this would correspond to investments of around 80 billion euros. According to a further analysis, the stock of social housing will fall below the million threshold (981,000) by the end of the year for the first time in many decades. In 1990 there were around three million residential units. There were initial attempts at federal level last year to promote housing construction for trainees and students and to provide financial support to the responsible states. However, it remains to be seen how politicians will react to the generally tight housing supply – especially since the need for public funds is currently high due to other challenges (pensions, defense, energy transition, infrastructure investments). Tightening regulation is therefore a risk for investors to consider.

Other factors for investors in this context include geopolitical developments – in particular the war in Ukraine. If the situation there worsens, the number of war refugees could increase significantly and worsen the tense housing situation.

In any case, the scarce supply of living space is counteracted by a continuing growing population. According to our estimates, immigration is likely to increase Germany's population from around 84.5 million today to 86 million by 2030. The additional demand is likely to develop primarily in the metropolitan regions, focusing on rental apartments and thus possibly further driving rental growth in the top 7 cities.

Opportunities for the investor

The upcoming interest rate turnaround offers investors opportunities to participate in a recovery in the residential real estate market. The ongoing shortage of supply with a slightly falling interest rate level should lead to a medium-term recovery in property prices towards 2025, especially since increased rent increases are to be expected in the longer term.

The stock market is showing the first cautious signs of recovery. Although financing conditions remain tight, residential real estate groups are already reporting increasing new business.

Although companies reported high losses last year, these were largely due to revaluations of the real estate portfolio and high depreciation, which are unlikely to be incurred again this year. The analyst community is much more likely to expect slightly improved profit growth due to the low vacancy rates, which have again fallen by a few basis points and were 2.4% below the 2022 mark, as well as the rising rents.

Another important issue for residential real estate groups is the high level of debt, which has increased significantly in relation to real estate assets due to the declining real estate prices. But here too, most companies have reduced risks. This was mostly done through the sale of real estate units.

Since the level of debt has not yet been returned to the level before the price correction or the respective target level for all companies, further sales could follow. In view of the upcoming key interest rate cuts, medium-term stabilization followed by a slight recovery in real estate prices is likely to dampen sales pressure, especially since corporate profits should also increase again as rents rise.

With a correction of more than 30% from their high in November 2021, European real estate groups (STOXX 600 Real Estate Index) appear to be largely pricing in the remaining risks. Although we do not expect the sector to outperform in the short term due to the elevated interest rate environment, there could be interesting entry opportunities in the coming quarters to benefit from a longer-term recovery. Ultimately, the housing shortage is likely to persist for the foreseeable future due to structural factors. The Ifo Institute estimates the German housing gap at around 2 million housing units and the slowdown in new construction is likely to exacerbate the supply shortage.

Conclusion

The increased interest rates and the economic downturn in Germany have placed a heavy burden on real estate prices and construction activity.

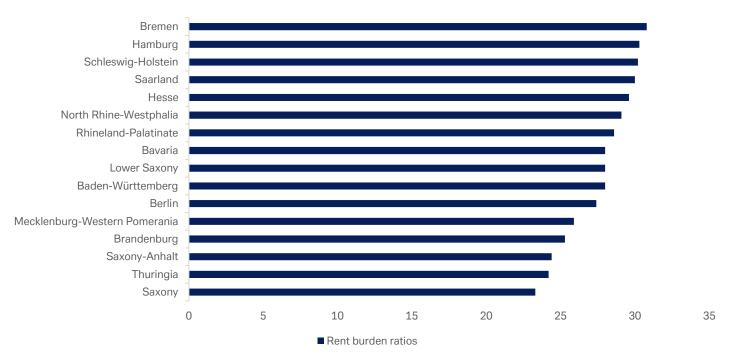
High construction costs also make new construction more expensive and, in addition to the higher interest rates, make it more difficult for those interested in owning their own home to afford it. A larger part of the demand is therefore concentrated in the rental market and, in addition to the expected higher inflation rates in the longer term, promotes more robust rental growth rates, especially in metropolitan areas. The existing shortage of supply is exacerbated by influx

Construction completions are likely to continue to decline in the coming years and will not keep up with the persistently high demand. In view of imminent key interest rate cuts, an improving economic situation in the Eurozone and the underlying excess demand, real estate prices should experience setbacks as a result of a difficult and volatile bottoming out phase, which offer interim entry opportunities.

This also means there is potential for recovery for the residential real estate groups, which had to report losses last year due to high value adjustments, and their shares, which suffered severe price declines in some cases. However, it is important to keep an eye on companies' debt, as this poses risks for investors. Regulatory intervention could also have a negative impact on investors. However, regulatory changes also offer opportunities, as the restructuring of depreciation options for new buildings recently demonstrated.

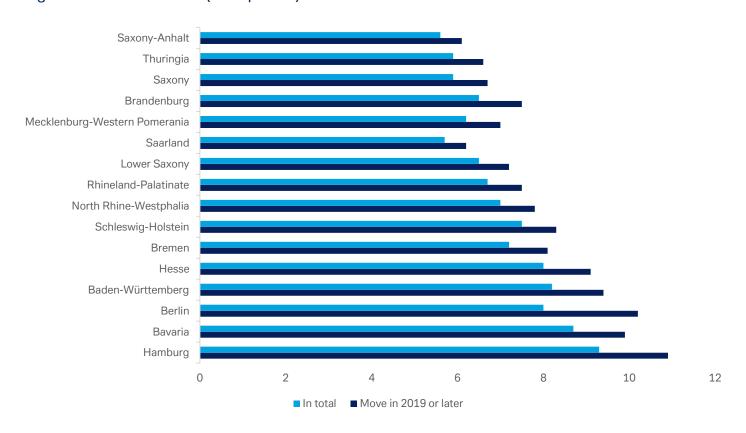


Figure 1: Average rent burden of main tenant households in 2022 (in buildings with living space (excluding dormitories), as% of net household income)



Source: Federal Office of Statistics, Deutsche Bank AG, Data as of 2024.

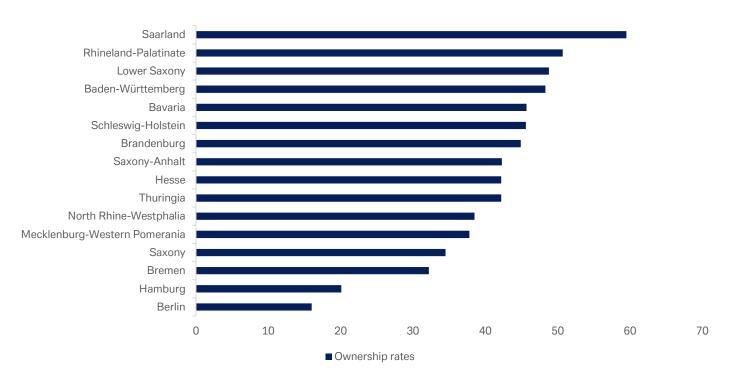
Figure 2: Net rents 2022 (EUR per m²)



Source: Federal Office of Statistics, Deutsche Bank AG, Data as of 2024.

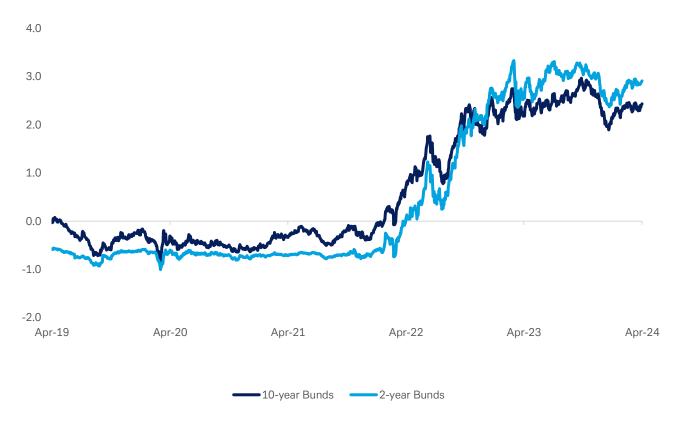
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Figure 3: Ownership rate - households in owner-occupied apartments in 2022 (%)



Source: Federal Office of Statistics, Deutsche Bank AG, Data as of 2024.

Figure 4: Development of 2-year and 10-year federal bonds over time (%)



Source: Bloomberg Finance L.P., Deutsche Bank AG, Data as of April 29, 2024.

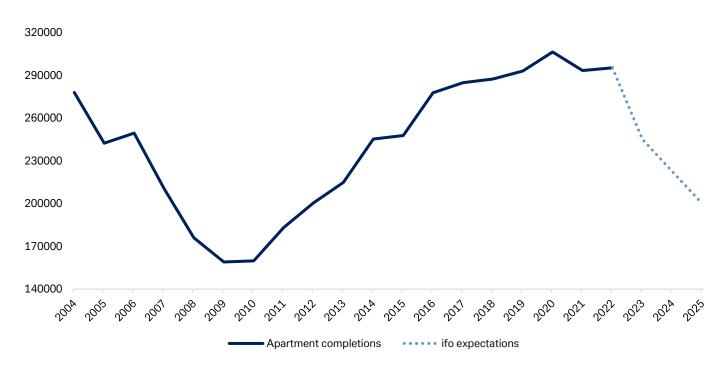


Figure 5: Development of construction costs for residential buildings, in % compared to the previous year



Source: Bloomberg Finance L.P., Deutsche Bank AG, Data as of April 29, 2024.

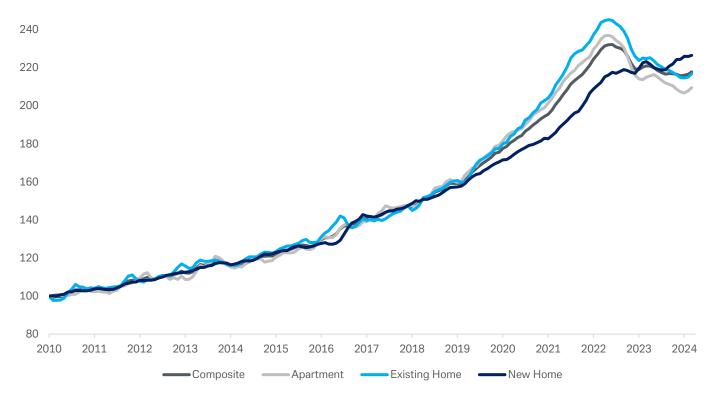
Figure 6: Completion of apartments in Germany, number of residential units



Source: ifo-Institute, Deutsche Bank AG, Data as of April 2024.

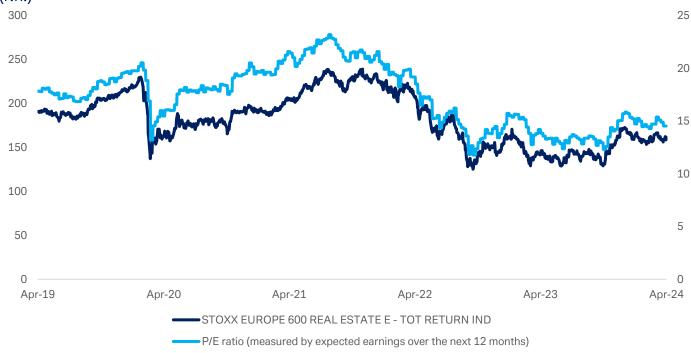


Figure 7: Price development on the German residential real estate market, indexed to January 15, 2010



Source: LSEG Datastream, Deutsche Bank AG. Data of April 29, 2024.

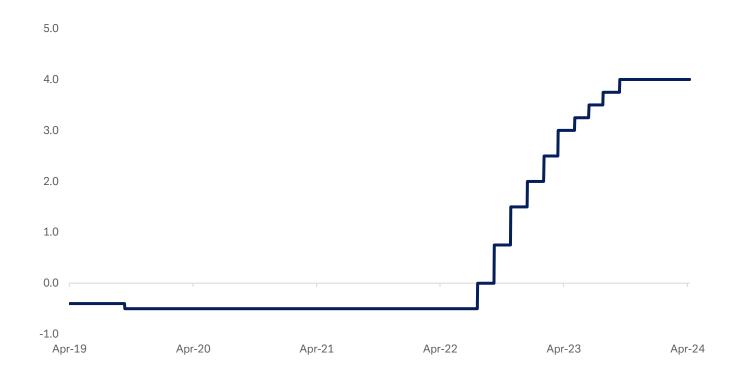
Figure 8: Performance of the Europe 600 Real Estate Index (I.h.) and the price earnings ratio (r.h.)



Source: LSEG Datastream, Deutsche Bank AG. Data of April 29, 2024.



Figure 9: Development of the key interest rates (deposit rate) of the ECB, in%



Source: Bloomberg Finance L.P., Deutsche Bank AG, Data as of April 29, 2024.

Performance	29.4.2019 - 29.4.2020	29.4.2020 - 29.4.2021	29.4.2021 - 29.4.2022	29.4.2022 - 29.4.2023	29.4.2023 - 29.4.2024
2-year Bunds	-0.5%	-0.9%	-1.9%	-2.0%	1.8%
10-year Bunds	5.1%	-2.4%	-9.5%	-9.4%	0.9%
STOXX 600 Real Estate	-2.4%	21.3%	0.6%	-28.9%	11.6%

Source: LSEG Datastream, Deutsche Bank AG. Data of April 29, 2024.



Glossary

The Consumer Price Index (CPI) measures the price of a basket of products and services based on the consumption of a typical private household.

Bunds is the name for federal bonds, i.e. German government bonds.

The European Central Bank (ECB) is the central bank of the Eurozone.

EUR is the currency code for the Euro, the common currency of the Eurozone countries.

The term EU (European Union) today describes the group of 27 member states of the European Union (EU) excluding the United Kingdom.

The Eurozone includes the 20 countries of the European Union in which the euro is the sole legal tender.

The Federal Reserve (Fed) is the central bank of the United States of America. The Federal Open Market Committee (FOMC) sets the Fed's monetary policy direction.

Government bonds are issued by states that use them to raise money on the capital market in order to refinance themselves. They are usually denominated in the currency of the country in question and are backed by investors' trust in the state's creditworthiness.

Gross domestic product (GDP) is the monetary value of all goods and services completed within the borders of a country or region within a certain period of time.

Median or central value is the value that lies exactly in the middle of a data series when the data is sorted by size.

Protectionism describes a trade policy characterized by limited trade between economies due to tariffs, quotas and other protectionist measures.

The OECD (Organization for Economic Co-operation and Development) comprises 38 member states. Its aim is to promote economic progress and trade worldwide.

Purchasing Manager Indices (PMIs) are considered important leading indicators of the economic activity of an economy. The survey of purchasing managers is based on five main topics: new orders, inventory, production, supplies and work environment. The composite EMIs look at both the manufacturing and service sectors.

Valuations attempt to quantify the attractiveness of a security, for example by looking at the share price in relation to the expected profits of the corresponding company.



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