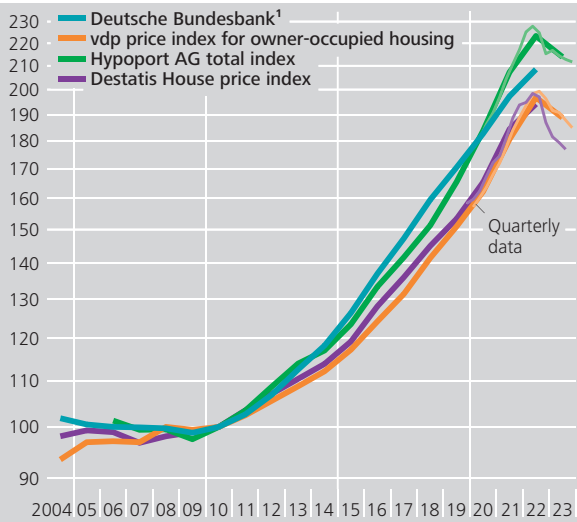


## System of indicators for residential property markets

### Price indicators

#### Residential property prices in Germany

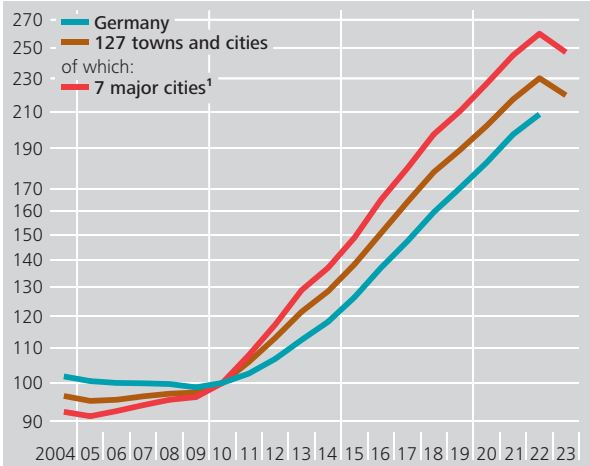
2010 = 100, log scale



**1** Transaction-weighted. Bundesbank calculations based on price data provided by bulwiengesa AG. Deutsche Bundesbank

#### Residential property prices in German towns and cities\*

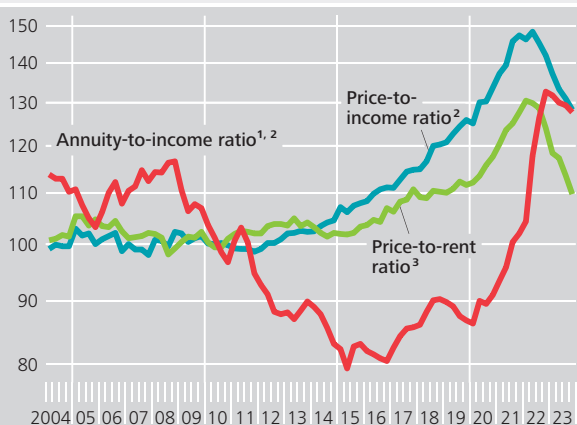
2010 = 100, log scale



\* Transaction-weighted. Bundesbank calculations based on price data provided by bulwiengesa AG. **1** Berlin, Dusseldorf, Frankfurt am Main, Hamburg, Cologne, Munich and Stuttgart. Deutsche Bundesbank

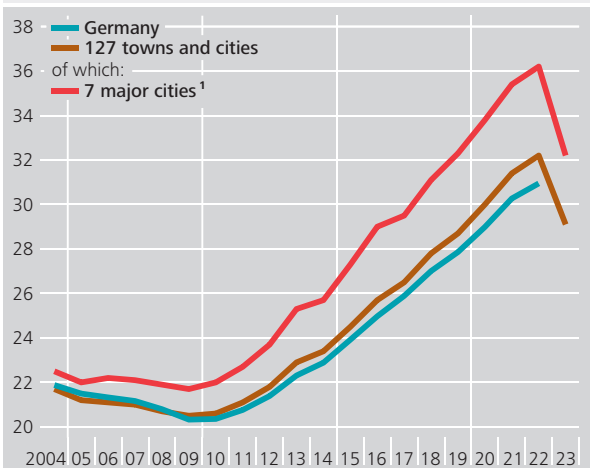
#### Standard indicators to evaluate residential property prices in Germany\*

2010 = 100, quarterly, log scale



\* Bundesbank calculations based on data provided by the Association of German Pfandbrief Banks (vdp). **1** Annuity of a mortgage loan with a fixed interest rate (between five and ten years) and a hypothetical term of 30 years in relation to household income. **2** Disposable income per household in Germany, nominal. **3** Prices and rents of apartments. Deutsche Bundesbank

#### Price-to-rent ratio for apartments in Germany\*



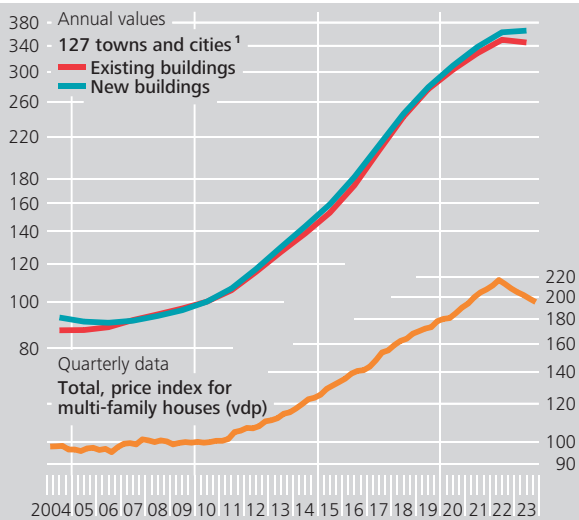
\* Transaction-weighted. Bundesbank calculations for prices and new lettings of apartments based on data provided by bulwiengesa AG. **1** Berlin, Dusseldorf, Frankfurt am Main, Hamburg, Cologne, Munich and Stuttgart. Deutsche Bundesbank

## System of indicators for residential property markets

### Price indicators

#### Prices for rental housing in Germany

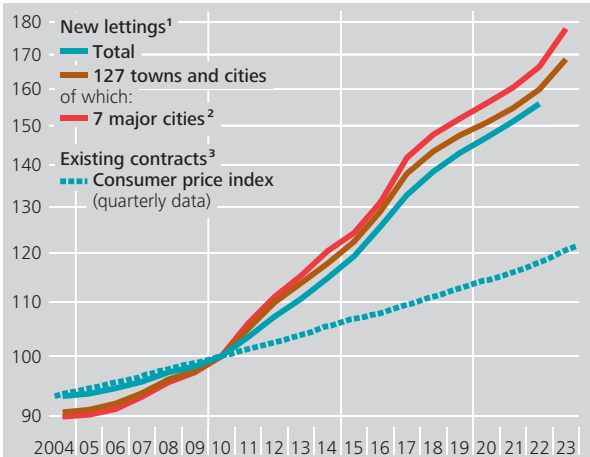
2010 = 100, log scale



<sup>1</sup> Bundesbank calculations based on data provided by bulwiengesa AG for multi-family houses.  
Deutsche Bundesbank

#### Rents for apartments in Germany

2010 = 100, annual averages, log scale



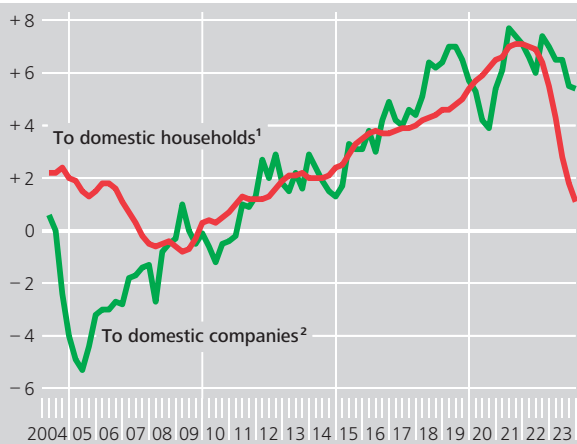
<sup>1</sup> Transaction-weighted. Bundesbank calculations based on data provided by bulwiengesa AG. <sup>2</sup> Berlin, Dusseldorf, Frankfurt am Main, Hamburg, Cologne, Munich and Stuttgart. <sup>3</sup> Source: Bundesbank calculations based on data provided by Federal Statistical Office (Destatis), to some extent including new lettings.  
Deutsche Bundesbank

## System of indicators for residential property markets

### Financial indicators

#### Dynamics in domestic banks' loans for house purchase\*

Year-on-year rate of change as a percentage, end-of-quarter data, seasonally and calendar adjusted

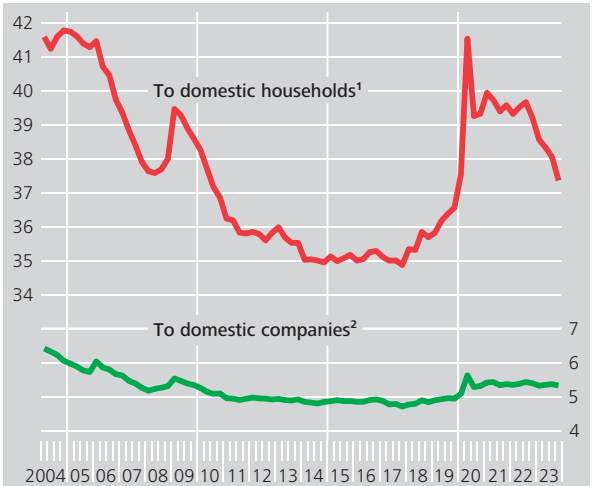


\* Data adjusted for statistical changes. **1** Including self-employed persons and sole traders. **2** Excluding self-employed persons and sole traders.

Deutsche Bundesbank

#### Stock of domestic banks' loans for house purchase

As a percentage of GDP, seasonally and calendar adjusted

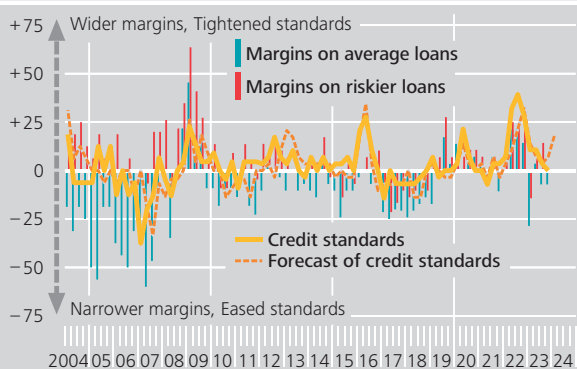


**1** Including self-employed persons and sole traders. **2** Excluding self-employed persons and sole traders.

Deutsche Bundesbank

#### Changes in credit standards and interest margins\* on loans to households for house purchase in Germany

Net percentage

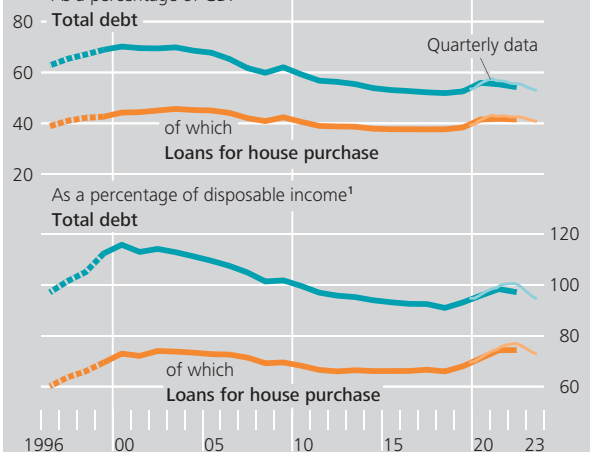


Source: Bank Lending Survey of the Eurosystem. \* For credit standards (margins): difference between the number of respondents reporting "tightened considerably" and "tightened somewhat" ("widened considerably" and "widened somewhat") and the number of respondents reporting "eased somewhat" and "eased considerably" ("narrowed somewhat" and "narrowed considerably") as a percentage of the responses given.

Deutsche Bundesbank

#### Debt of households in Germany\*

As a percentage of GDP<sup>1</sup>



Source: Deutsche Bundesbank's financial accounts (unconsolidated). Until 1998 according to ESA 1995; from 1999 according to ESA 2010. \* Loans to private households and private non-profit institutions, annual average. **1** Four-quarter moving sum.

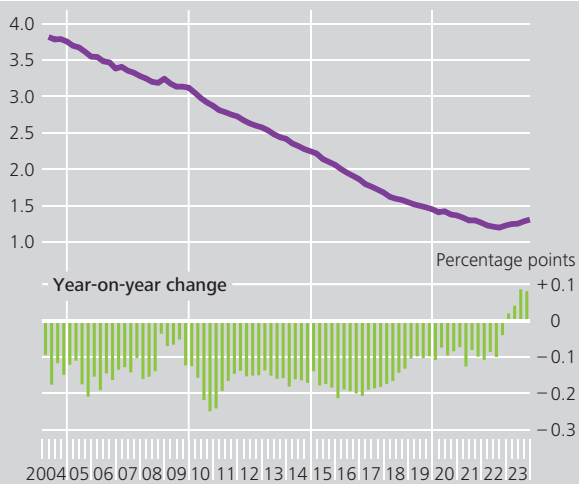
Deutsche Bundesbank

## System of indicators for residential property markets

### Financial indicators

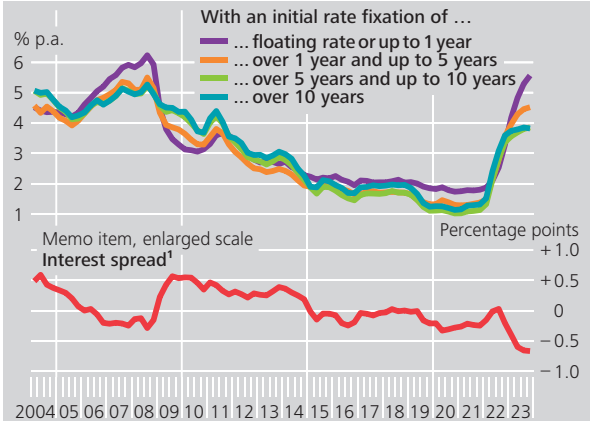
#### Interest payments on loans to households in Germany for house purchase\*

As a percentage of disposable income



\* Data based on time-related stocks of MFI interest rate statistics for secured and unsecured loans, including overdraft loans.  
Deutsche Bundesbank

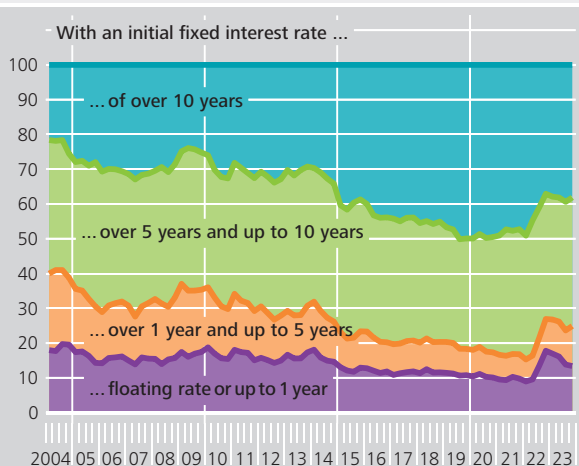
#### Interest rates on loans to households in Germany for house purchase\*



\* Data based on the monthly new business of the MFI interest rate statistics for secured and unsecured loans, excluding overdraft loans. <sup>1</sup> Calculated as the difference between the interest rate with an initial rate fixation of over 5 years and up to 10 years and the interest rate with an initial rate fixation of over 1 year and up to 5 years.  
Deutsche Bundesbank

#### Fixed interest periods for loans to households in Germany for house purchase\*

As a percentage



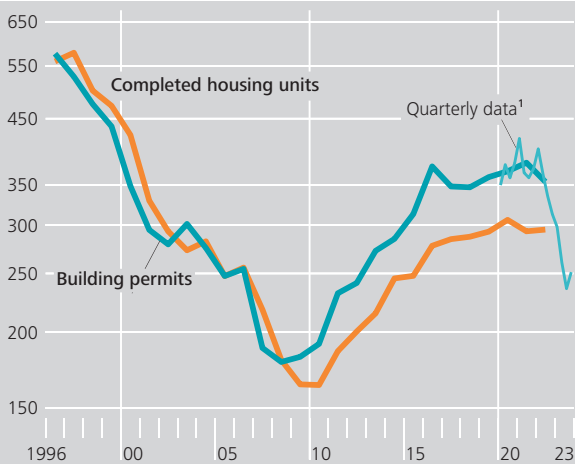
\* Calculated as domestic banks' volume of new business with respective rate fixation periods as a share of total new business (also including extensions).  
Deutsche Bundesbank

## System of indicators for residential property markets

### Real economic indicators

#### Building permits and completed housing units in Germany\*

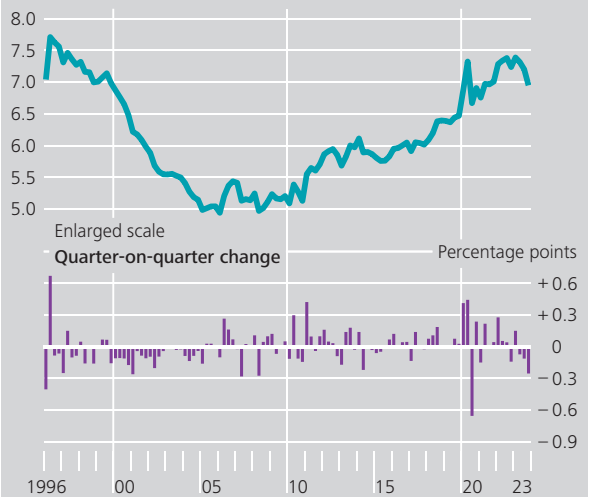
Thousand apartments, yearly data, log scale



Source of unadjusted figures: Federal Statistical Office. \* In residential and non-residential buildings. Including construction work on existing buildings. 1 Seasonally and calendar adjusted, annualised.  
Deutsche Bundesbank

#### Housing investment in Germany\*

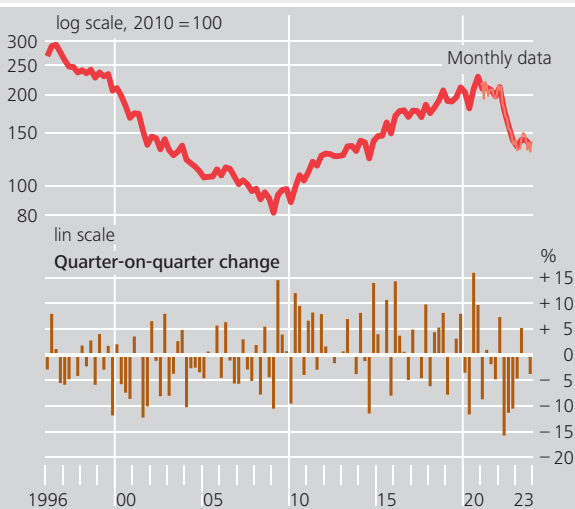
As a percentage of GDP, seasonally and calendar adjusted



Source of unadjusted figures: Federal Statistical Office. \* Quarterly calculations of gross investment at current prices according to national accounts.  
Deutsche Bundesbank

#### New orders for housing construction in the main construction sector in Germany

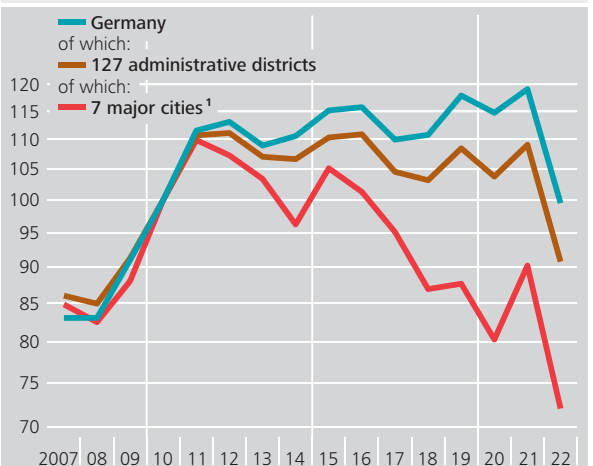
Quarterly data, seasonally and calendar adjusted, at constant prices



Source of unadjusted figures: Federal Statistical Office.  
Deutsche Bundesbank

#### Number of transactions for apartments in Germany

2010 = 100, log scale



Source: Extrapolation provided by vdpResearch GmbH on the basis of data from surveyor committees. 1 Berlin, Dusseldorf, Frankfurt am Main, Hamburg, Cologne, Munich and Stuttgart.  
Deutsche Bundesbank