System of indicators for residential property markets

Price indicators

Residential property prices in Germany

2010 = 100, log scale

- Deutsche Bundesbank
- vdp price index for owner-occupied housing
- Hypoport AG total index
- Destatis House price index

Residential property prices in German towns and cities

2010 = 100, log scale

- Germany
- 127 towns and cities
- 7 major cities

Standard indicators to evaluate residential property prices in Germany

2010 = 100, quarterly, log scale

- Annuity-to-income ratio
- Price-to-income ratio
- Price-to-rent ratio

Price-to-rent ratio for apartments

2010 = 100, log scale

- Germany
- 127 towns and cities
- 7 major cities

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

* 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.

2004 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22

- 90
- 100
- 110
- 120
- 130
- 140
- 150
- 160
- 170
- 180
- 190
- 200
- 210
- 220
- 230

2004 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22

- 80
- 90
- 100
- 110
- 120
- 130
- 140
- 150
- 160
- 170
- 180
- 190
- 200
- 210
- 220
- 230

2004 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21

- 20
- 22
- 24
- 26
- 28
- 30
- 32
- 34
- 36

2 December 2022
System of indicators for residential property markets

Price indicators

**Prices for rental housing in Germany**

2010 = 100, log scale

- 127 towns and cities
- Existing buildings
- New buildings

Quarterly data
Total price index for multi-family houses (vdp)

- 2004 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22

2010 = 100, log scale

1 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

- New lettings
- Total
- 127 towns and cities of which
- 7 major cities
- Existing contracts
- Consumer price index (quarterly data)

- 2004 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22

1 Transaction-weighted. Bundesbank calculations based on data provided by bulwiengesa AG. 2 Berlin, Dusseldorf, Frankfurt am Main, Hamburg, Cologne, Munich and Stuttgart. 3 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

<table>
<thead>
<tr>
<th>Year</th>
<th>To domestic households</th>
<th>To domestic companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>+8</td>
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</tr>
<tr>
<td>2005</td>
<td>+6</td>
<td>0</td>
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<td>+4</td>
<td>-2</td>
</tr>
<tr>
<td>2007</td>
<td>+2</td>
<td>0</td>
</tr>
<tr>
<td>2008</td>
<td>0</td>
<td>-2</td>
</tr>
<tr>
<td>2009</td>
<td>-4</td>
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<tr>
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<td>-6</td>
<td>+4</td>
</tr>
<tr>
<td>2011</td>
<td>+6</td>
<td>+2</td>
</tr>
<tr>
<td>2012</td>
<td>+4</td>
<td>0</td>
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<tr>
<td>2013</td>
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<td>2014</td>
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<td>0</td>
<td>+2</td>
</tr>
<tr>
<td>2022</td>
<td>-2</td>
<td>+4</td>
</tr>
</tbody>
</table>

* 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

<table>
<thead>
<tr>
<th>Year</th>
<th>To domestic households</th>
<th>To domestic companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>42</td>
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<tr>
<td>2005</td>
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<tr>
<td>2022</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

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

- Wider margins, Tightened standards
- Narrower margins, Eased standards

Margins on average loans
Margins on riskier loans

Credit standards
Forecast of credit standards

Deutsche Bundesbank

Debt of households in Germany

As a percentage of GDP

<table>
<thead>
<tr>
<th>Year</th>
<th>Total debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>80</td>
</tr>
<tr>
<td>2000</td>
<td>60</td>
</tr>
<tr>
<td>2005</td>
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<td>2010</td>
<td>20</td>
</tr>
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<td>2015</td>
<td>10</td>
</tr>
<tr>
<td>2020</td>
<td>0</td>
</tr>
<tr>
<td>2025</td>
<td>0</td>
</tr>
<tr>
<td>2030</td>
<td>0</td>
</tr>
</tbody>
</table>

As a percentage of disposable income

<table>
<thead>
<tr>
<th>Year</th>
<th>Total debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>120</td>
</tr>
<tr>
<td>2000</td>
<td>80</td>
</tr>
<tr>
<td>2005</td>
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<td>2015</td>
<td>20</td>
</tr>
<tr>
<td>2020</td>
<td>10</td>
</tr>
<tr>
<td>2025</td>
<td>0</td>
</tr>
<tr>
<td>2030</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: Deutsche Bundesbank’s financial accounts (unconsolidated). Until 1998 according to ESA 1995; from 1999 according to ESA 2010.

1 Loans to private households and private non-profit institutions, annual average.
4 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**

With an initial rate fixation of

* Data based on the monthly new business of the MFI interest rate statistics for secured and unsecured loans, excluding overdraft loans. 1 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**

- **Building permits**
- **Completed housing units**


*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**


*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**

- **Log scale, 2010 = 100**
- **In scale**

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