

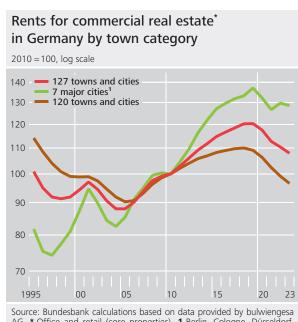
System of indicators for the German commercial real estate market Price indicators





Source: Bundesbank calculations based on data provided by bulwiengesa AG. * Office and retail (core properties). **1** Berlin, Cologne, Düsseldorf, Frankfurt am Main, Hamburg, Munich and Stuttgart. Deutsche Bundesbank

Rents for commercial real estate in Germany by type of property 2010 = 100, log scale Office and retail 150 Office 145 Retail 140 135 130 125 120 115 110 Quarterly data 105 100 95 2004 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 Source: vdpResearch. Deutsche Bundesbank



Source: Bundesbank calculations based on data provided by bulwiengesa AG. * Office and retail (core properties). 1 Berlin, Cologne, Düsseldorf, Frankfurt am Main, Hamburg, Munich and Stuttgart.

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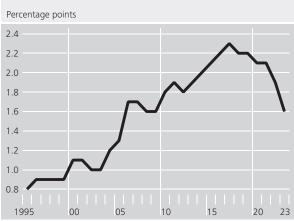
System of indicators for the German commercial real estate market Price indicators

Net initial yield for commercial real estate* by town category % 127 towns and cities 7 major cities1 7.0 120 towns and cities 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 1995 10

Source: Bundesbank calculations based on data provided by bulwiengesa AG. * Office and retail (core properties). 1 Berlin, Cologne, Düsseldorf, Frankfurt am Main, Hamburg, Munich and Stuttgart.

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Yield differential between commercial real estate in 120 towns and cities and 7 major cities*



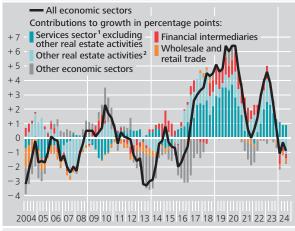
Source: Bundesbank calculations based on information provided by bulwiengesa AG. * Office and retail (core properties), net initial yield of commercial real estate in 120 towns and cities minus net initial yield of commercial real estate in 7 major cities (Berlin, Cologne, Düsseldorf, Frankfurt am Main, Hamburg, Munich and Stuttgart).



System of indicators for the German commercial real estate market Financial Indicators

Mortgage loans on property for commercial use in Germany*

Year-on-year percentage changes, quarter-end data



* Total mortgage loans minus mortgage loans on residential real estate according to the borrowers statistics. 1 Including self-employment. 2 Purchase, sale, rental and management of commercial real estate, facility management enterprises.

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Mortgage loans on property for commercial use in selected economic sectors*

Year-on-year percentage change

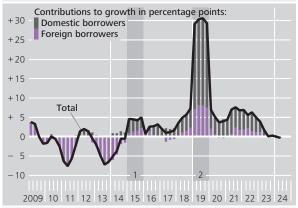


* Total mortgage loans minus mortgage loans on residential real estate according to the borrowers statistics. 1 Including self-employment. 2 Purchase, sale, rental and management of commercial real estate, facility management enterprises.

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Loans by domestic credit institutions entailing commercial property risk*

Year-on-year percentage change, quarter-end data

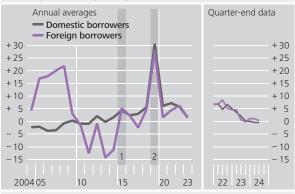


* Source: Bundesbank calculations consisting of balance sheet items, off-balance-sheet items and derivatives, based on data from the Deutsche Bundesbank's central credit register. Approximate implementation of the classification put forward by the European Systemic Risk Board ((ESRB), 2016/14). 1 Reporting threshold lowered from 2015. 2 Definition of "credit" expanded from 2019.

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Loans by domestic credit institutions entailing commercial property risk to domestic and foreign borrowers*

Year-on-year percentage change



*Source: Bundesbank calculations consisting of balance sheet items, off-balance-sheet items and derivatives, based on data from the Deutsche Bundesbank's central credit register. Approximate implementation of the classification put forward by the European Systemic Risk Board ((ESRB), 2016/14). 1 Reporting threshold lowered from 2015. 2 Definition of "credit" expanded from 2019.

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System of indicators for the German commercial real estate market Financial Indicators

Loans to domestic borrowers entailing commercial property risk*

Year-on-year percentage change, quarter-end data

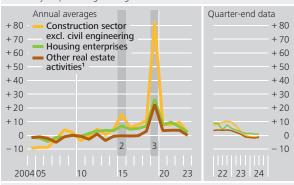


* Source: Bundesbank calculations consisting of balance sheet items, off-balance-sheet items and derivatives, based on data from the Deutsche Bundesbank's central credit register. Approximate implementation of the classification put forward by the European Systemic Risk Board ((ESRB), 2016/14). 1 Purchase, sale, rental and management of commercial real estate. 2 Reporting threshold lowered from 2015. 3 Definition of "credit" expanded from 2019.

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Loans to domestic borrowers entailing commercial property risk by economic sector*

Year-on-year percentage change

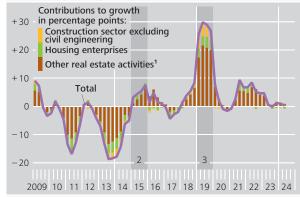


*Source: Bundesbank calculations consisting of balance sheet items, off-balance-sheet items and derivatives, based on data from the Deutsche Bundesbank's central credit register. Approximate implementation of the classification put forward by the European Systemic Risk Board ((ESRB), 2016/14). 1 Purchase, sale, rental and management of commercial real estate. 2 Reporting threshold lowered from 2015. 3 Definition of "credit" expanded from 2019.

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Loans to foreign borrowers entailing commercial property risk*

Year-on-year percentage change, quarter-end data

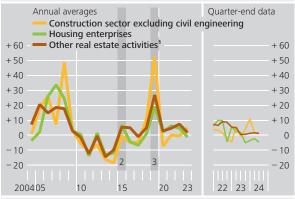


* Source: Bundesbank calculations consisting of balance sheet items, off-balance-sheet items and derivatives, based on data from the Deutsche Bundesbank's central credit register. Approximate implementation of the classification put forward by the European Systemic Risk Board ((ESRB), 2016/14). 1 Purchase, sale, rental and management of commercial real estate. 2 Reporting threshold lowered from 2015. 3 Definition of "credit" expanded from 2019.

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Loans to foreign borrowers entailing commercial property risk by economic sector*

Year-on-year percentage change



* Source: Bundesbank calculations consisting of balance sheet items, off-balance-sheet items and derivatives, based on data from the Deutsche Bundesbank's central credit register. Approximate implementation of the classification put forward by the European Systemic Risk Board ((ESRB), 2016/14). 1 Purchase, sale, rental and management of commercial real estate. 2 Reporting threshold lowered from 2015. 3 Definition of "credit" expanded from 2019.

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System of indicators for the German commercial real estate market Real economic indicators

Building permits for commercial real estate in Germany by type of property* 2010 = 100, log scale 350 Office and administrative buildings 300 250 200 150 Wholesale 100 and retail 03^{1} buildings and warehouses 80 1995 00 05 10 Source: Federal Statistical Office. * Floor space of new buildings and ex-

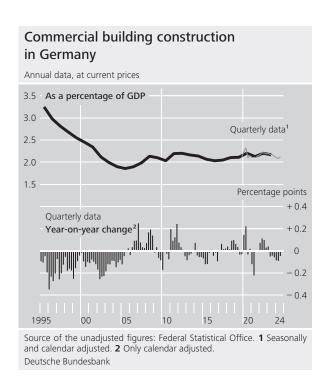
isting buildings undergoing construction work. 1 Seasonally and calen-

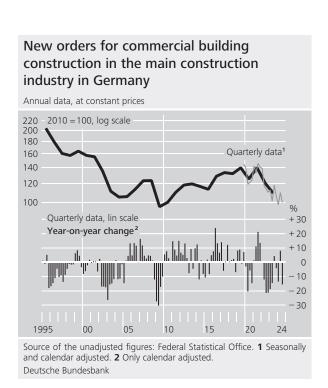
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construction work on existing buildings.

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System of indicators for the German commercial real estate market Real economic indicators

Source: Extrapolation by vdpResearch GmbH based on purchase price data provided by surveyor committees. Excluding Share-Deals. **1** Berlin, Dusseldorf, Frankfurt am Main, Hamburg, Cologne, Munich and Stuttgart. Deutsche Bundesbank



Source: Bundesbank calculations based on data provided by bulwiengesa AG. **1** Berlin, Cologne, Düsseldorf, Frankfurt am Main, Hamburg, Munich and Stuttgart. Deutsche Bundesbank