



Real Estate
INDEX
Q1.2020

Property price growth not
yet affected by COVID-19
pandemic



Market as a whole

No effects of the COVID-19 pandemic were as yet discernible in the first quarter of 2020. Compared with the first quarter of 2019, the vdp property price index rose by 6.3 % to again reach a new all-time high since measurements began.

Market as a whole:

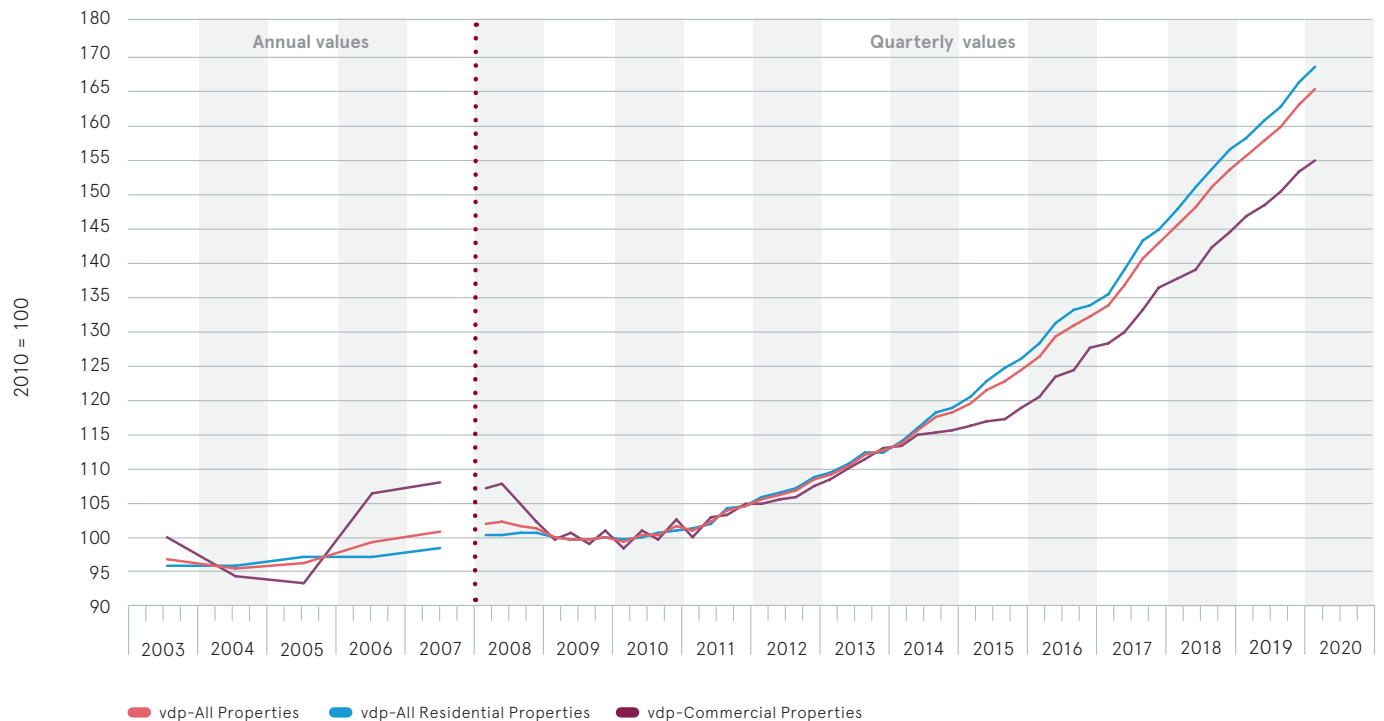
+6.3 %

The current measuring period overlaps by one week the German-wide lockdown restrictions imposed in response to the COVID-19 pandemic. This means that the data underlying the calculation of the index for the first quarter of 2020 do not yet capture possible effects.

A further aspect of relevance here is that reactions occur considerably more slowly on the property market than, for instance, on stock markets. Generally speaking, the viewing of a property, the negotiating process and the eventual purchase take a period of several weeks.

Nevertheless, the pandemic is very much with us and is sure to have a measurable impact on the property market, too, from the beginning of the second quarter onwards. The facts and trends presented here can therefore only be seen as a momentary snapshot.

Property market as a whole: As yet unaffected by COVID-19



Year	All properties		All residential properties		All commercial properties	
	Index	y-o-y change in %	Index	y-o-y change in %	Index	y-o-y change in %
2010	100.0	0.5	100.0	0.6	100.0	0.4
2011	102.7	2.6	102.7	2.7	102.4	2.4
2012	106.4	3.7	106.7	3.8	105.5	3.0
2013	110.7	4.1	110.9	3.9	110.4	4.6
2014	115.9	4.7	116.4	5.0	114.6	3.8
2015	121.7	5.0	123.3	5.9	117.0	2.1
2016	129.5	6.4	131.4	6.5	123.7	5.8
2017	138.3	6.8	140.5	6.9	131.8	6.5
2018	149.4	8.0	152.2	8.3	140.7	6.8
2019	159.0	6.4	162.0	6.5	149.7	6.4

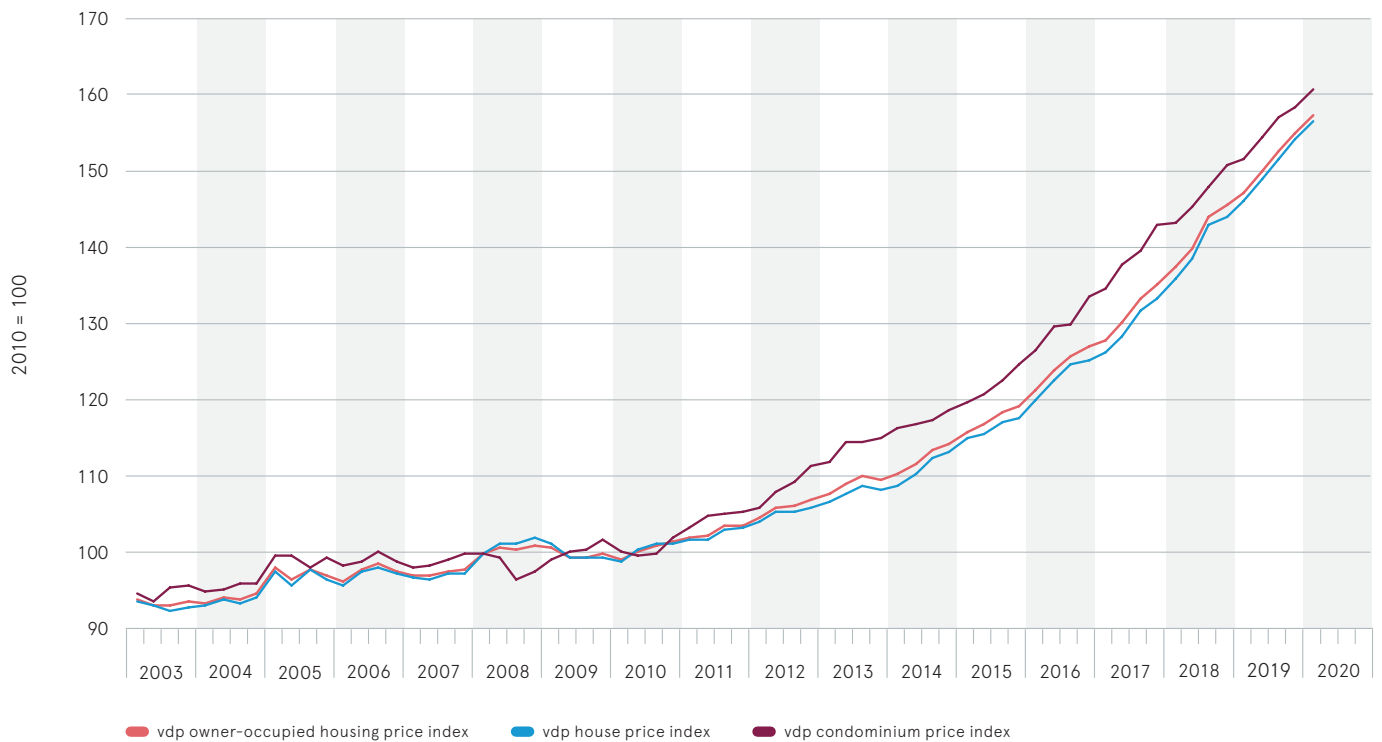
Quarter	All properties		All residential properties		All commercial properties	
	Index	y-o-y change in %	Index	y-o-y change in %	Index	y-o-y change in %
Q2 2018	147.9	8.3	150.8	8.7	139.0	7.1
Q3 2018	150.8	7.3	153.7	7.4	142.0	6.8
Q4 2018	153.5	7.6	156.4	8.0	144.5	6.0
Q1 2019	155.4	7.0	158.2	7.0	146.7	6.7
Q2 2019	157.7	6.7	160.7	6.6	148.4	6.8
Q3 2019	159.7	5.9	162.6	5.8	150.4	5.9
Q4 2019	163.1	6.3	166.4	6.4	153.1	6.0
Q1 2020	165.1	6.3	168.5	6.5	154.7	5.4

Housing market

Prices on the **housing market** rose by **6.5 %** compared with the first quarter of 2019. Real estate continued to experience very strong demand on the back of low interest rates paired with a difficult environment for other asset classes. This led to a **6.1 %** increase in prices on the market for **multi-family houses** year on year. Demand for housing likewise rose unabated, with **new lease rentals** up by **3.9 %**. Although price momentum appears to be flattening somewhat in this segment, the level of growth remains high.

Prices for **owner-occupied housing** advanced by **7.0 %** year on year. Once again, prices for **single-family houses** rose more strongly (**+7.3 %**) than for **condominiums** (**+6.0 %**). The very strong price growth seen in metropolitan regions in the past years appears to be fueling a shift in demand to surrounding areas. Whereas the price increases observed in these areas, with emphasis primarily on single-family houses, had been comparatively moderate, there was a measurable increase in demand of late.

Owner-occupied housing: No let-up in demand

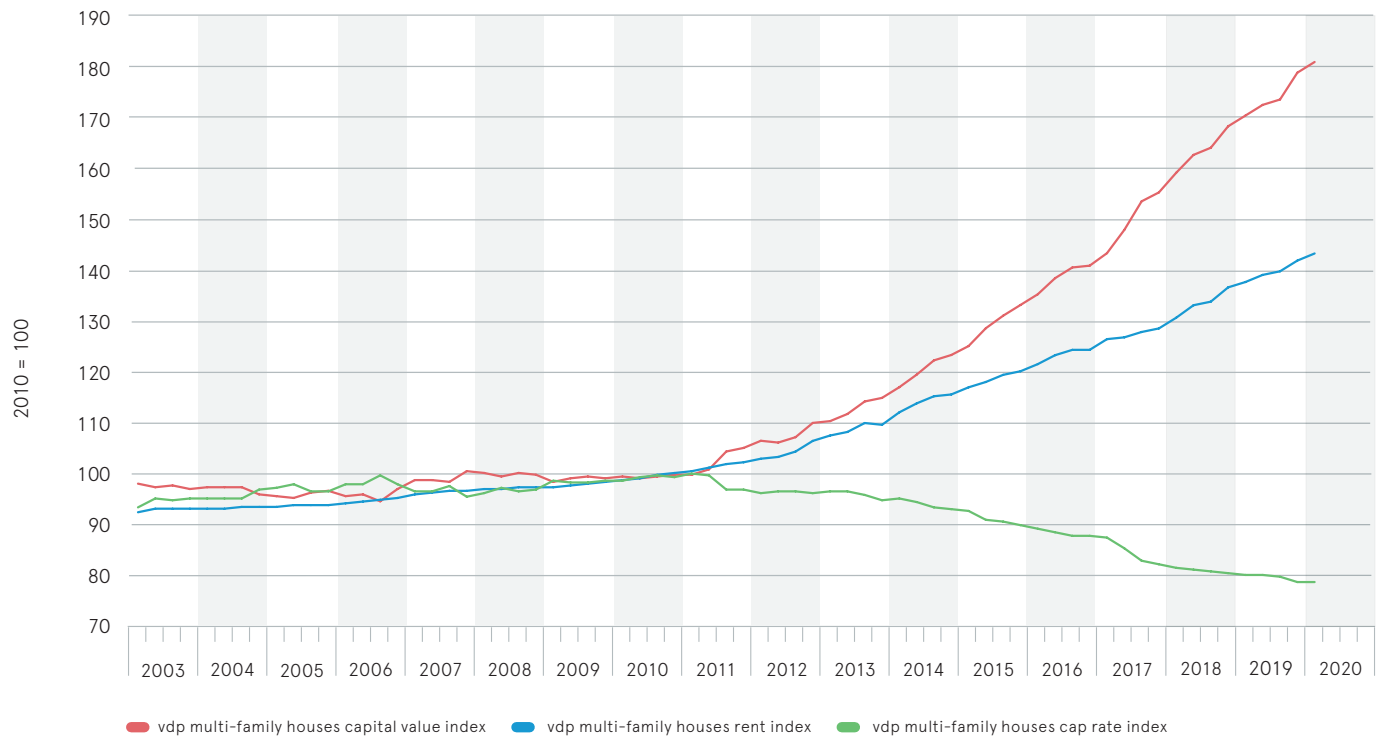


Index: 2010 = 100		Owner occupied housing		Single family houses		Condominiums	
	Year	Index	y-o-y change in %	Index	y-o-y change in %	Index	y-o-y change in %
	2010	100.0	0.6	100.0	0.7	100.0	0.2
	2011	102.4	2.4	101.9	1.9	104.3	4.3
	2012	105.5	3.0	104.7	2.7	108.3	3.9
	2013	108.7	3.1	107.5	2.6	113.6	4.9
	2014	112.1	3.1	110.8	3.1	117.0	3.0
	2015	117.2	4.6	116.0	4.7	121.7	4.0
	2016	124.2	6.0	122.8	5.8	129.6	6.5
	2017	131.4	5.8	129.6	5.5	138.5	6.8
2018	141.5	7.7	140.2	8.2	146.6	5.8	
2019	151.0	6.8	150.0	7.0	155.2	5.9	

Index: 2010 = 100

	Owner occupied housing			Single family houses			Condominiums	
Quarter	Index	y-o-y change in %		Index	y-o-y change in %		Index	y-o-y change in %
Q2 2018	139.7	7.5		138.4	8.1		145.0	5.3
Q3 2018	143.8	8.1		142.8	8.7		147.8	6.1
Q4 2018	145.3	7.7		143.9	8.2		150.6	5.6
Q1 2019	146.9	7.2		145.8	7.4		151.5	6.0
Q2 2019	149.9	7.3		148.8	7.6		154.3	6.4
Q3 2019	152.5	6.0		151.4	6.0		156.9	6.1
Q4 2019	154.8	6.6		153.9	6.9		158.3	5.1
Q1 2020	157.2	7.0		156.4	7.3		160.5	6.0

Multi-family houses: Steady growth



Index: 2010 = 100

Year	Capital value		Residential rents		Cap rate	
	Index	y-o-y change in %	Index	y-o-y change in %	Index	y-o-y change in %
2010	100.0	0.6	100.0	1.5	100.0	0.9
2011	103.0	3.0	102.1	2.1	99.1	-0.9
2012	107.9	4.8	104.8	2.7	97.1	-1.9
2013	113.1	4.8	109.3	4.2	96.6	-0.5
2014	120.8	6.8	114.5	4.8	94.8	-1.9
2015	129.5	7.3	118.9	3.9	91.8	-3.2
2016	138.7	7.1	123.7	4.0	89.1	-2.9
2017	149.7	7.9	127.7	3.2	85.3	-4.3
2018	163.2	9.0	133.6	4.6	81.9	-4.0
2019	173.2	6.2	139.6	4.5	80.6	-1.6

Index: 2010 = 100

Quarter	Capital value		Residential rents		Cap rate	
	Index	y-o-y change in %	Index	y-o-y change in %	Index	y-o-y change in %
Q2 2018	162.1	9.7	133.1	4.6	82.1	-4.7
Q3 2018	163.8	6.8	133.8	4.4	81.7	-2.3
Q4 2018	167.8	8.4	136.6	6.0	81.4	-2.2
Q1 2019	169.8	6.9	137.7	5.2	81.1	-1.6
Q2 2019	171.9	6.0	139.2	4.6	81.0	-1.3
Q3 2019	173.1	5.6	139.7	4.4	80.7	-1.2
Q4 2019	178.2	6.2	141.8	3.8	79.6	-2.2
Q1 2020	180.1	6.1	143.2	3.9	79.5	-2.0

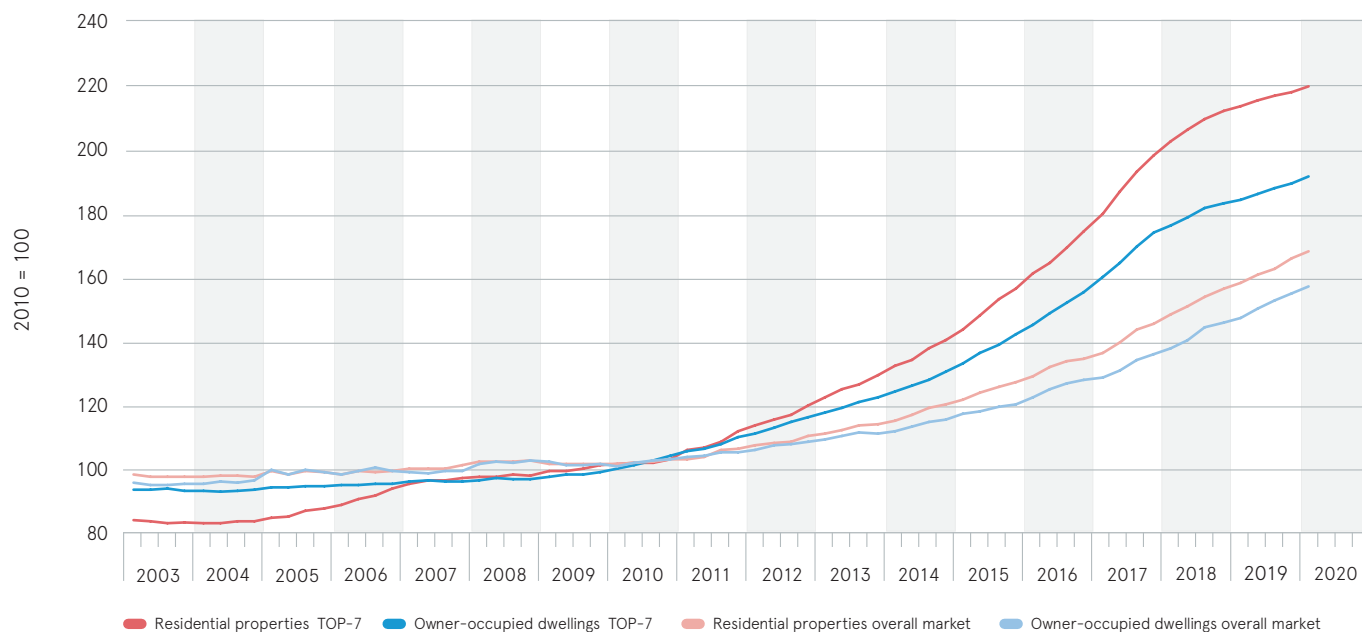
Top 7 housing market

Compared with the corresponding quarter one year earlier, prices on the **top 7 housing markets*** went up by **2.9 %**. With that, the flattening momentum of prices already observed in the previous year continued. Prices for **owner-occupied housing** recorded a year-on-year increase of **4.1 %**. In this context, the difference between the growth paths for condominiums in Berlin and Munich is striking. In Munich, where prices had already climbed to very high levels, price growth came to only 2.6 %. In Berlin, by contrast, where growth had begun at a very much lower level, year-on-year price increases of 5.5 % were still observed – the highest growth rate of all top 7 cities. Overall, prices for **single- and two-family houses** in the top 7 cities rose by **4.4 %**.

The rent cap adopted in Berlin is impacting on the data in the meantime. Although the steep rise in **rents** that was characteristic of recent years has not yet been reversed, the increase in prices has almost been brought to a complete halt (increase of 0.2 % compared with the previous quarter, **1.5 %** year on year). The long-term effects of this measure remain to be seen. Given that prices for condominiums continued to rise, a growing divergence between prices and rents is to be expected. The **cap rate index for multi-family houses** in the top 7 cities **fell by 0.8 %** overall, whereas prices for **multi-family houses** increased by **2.3 %**.

*Berlin, Cologne, Dusseldorf, Frankfurt am Main, Hamburg, Munich, Stuttgart

Owner-occupied housing – top 7 markets: Demand still high



For all the individual
figures of the
TOP 7
cities, go to
www.vdpresearch.de

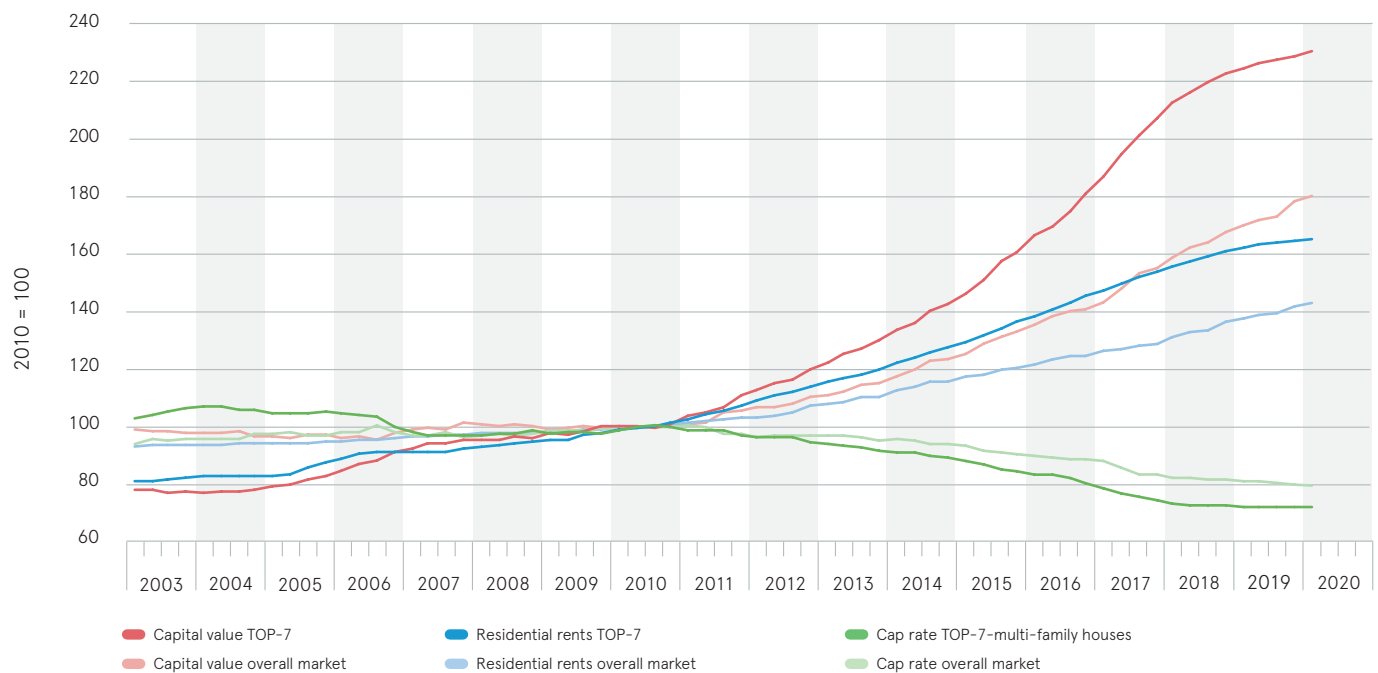
Index: 2010 = 100

Residential properties TOP 7			Owner occupied housing TOP 7		
Year	Index	y-o-y change in %	Index	y-o-y change in %	
2010	100.0	2.2	100.0	4.1	
2011	106.3	6.3	105.4	5.4	
2012	114.9	8.1	112.0	6.3	
2013	124.4	8.3	118.4	5.8	
2014	135.3	8.7	125.9	6.3	
2015	150.0	10.9	136.7	8.6	
2016	167.6	11.7	150.0	9.7	
2017	190.5	13.7	167.3	11.5	
2018	209.3	9.9	180.7	8.0	
2019	218.0	4.2	187.8	3.9	

Index: 2010 = 100

Residential properties TOP 7			Owner occupied housing TOP 7		
Quarter	Index	y-o-y change in %	Index	y-o-y change in %	
Q2 2018	207.8	10.7	179.5	9.0	
Q3 2018	211.2	8.8	182.5	7.5	
Q4 2018	214.0	7.2	184.1	5.5	
Q1 2019	215.6	5.6	185.0	4.7	
Q2 2019	217.4	4.6	186.9	4.1	
Q3 2019	218.8	3.6	188.8	3.4	
Q4 2019	220.2	2.9	190.6	3.6	
Q1 2020	221.9	2.9	192.6	4.1	

Multi-family houses – top 7 markets: Growth slows down



Index: 2010 = 100

Capital value TOP 7			Residential rents TOP 7			Cap rate TOP 7		
Year	Index	y-o-y change in %	Index	y-o-y change in %		Index	y-o-y change in %	
2010	100.0	1.6	100.0	3.7		100.0	2.0	
2011	106.6	6.6	104.9	4.9		98.4	-1.6	
2012	115.8	8.6	111.4	6.2		96.2	-2.2	
2013	126.2	9.0	117.6	5.6		93.2	-3.1	
2014	130.8	9.4	125.0	6.2		90.5	-2.9	
2015	153.8	11.4	132.8	6.3		86.4	-4.6	
2016	172.6	12.3	142.0	6.9		82.3	-4.8	
2017	197.1	14.2	150.7	6.1		76.5	-7.1	
2018	217.6	10.4	158.4	5.1		72.8	-4.8	
2019	226.8	4.2	163.4	3.1		72.1	-1.0	

Index: 2010 = 100

Capital value TOP 7			Residential rents TOP 7			Cap rate TOP-7		
Quarter	Index	y-o-y change in %	Index	y-o-y change in %		Index	y-o-y change in %	
Q2 2018	216.0	11.2	157.5	5.2		72.9	-5.3	
Q3 2018	219.5	9.1	159.5	4.8		72.6	-3.9	
Q4 2018	222.7	7.6	161.2	4.7		72.4	-2.7	
Q1 2019	224.5	5.8	162.3	4.3		72.3	-1.4	
Q2 2019	226.3	4.7	163.2	3.6		72.1	-1.1	
Q3 2019	227.6	3.7	163.8	2.7		72.0	-0.9	
Q4 2019	228.8	2.7	164.4	2.0		71.9	-0.7	
Q1 2020	230.5	2.6	165.4	1.9		71.8	-0.7	

Commercial property market

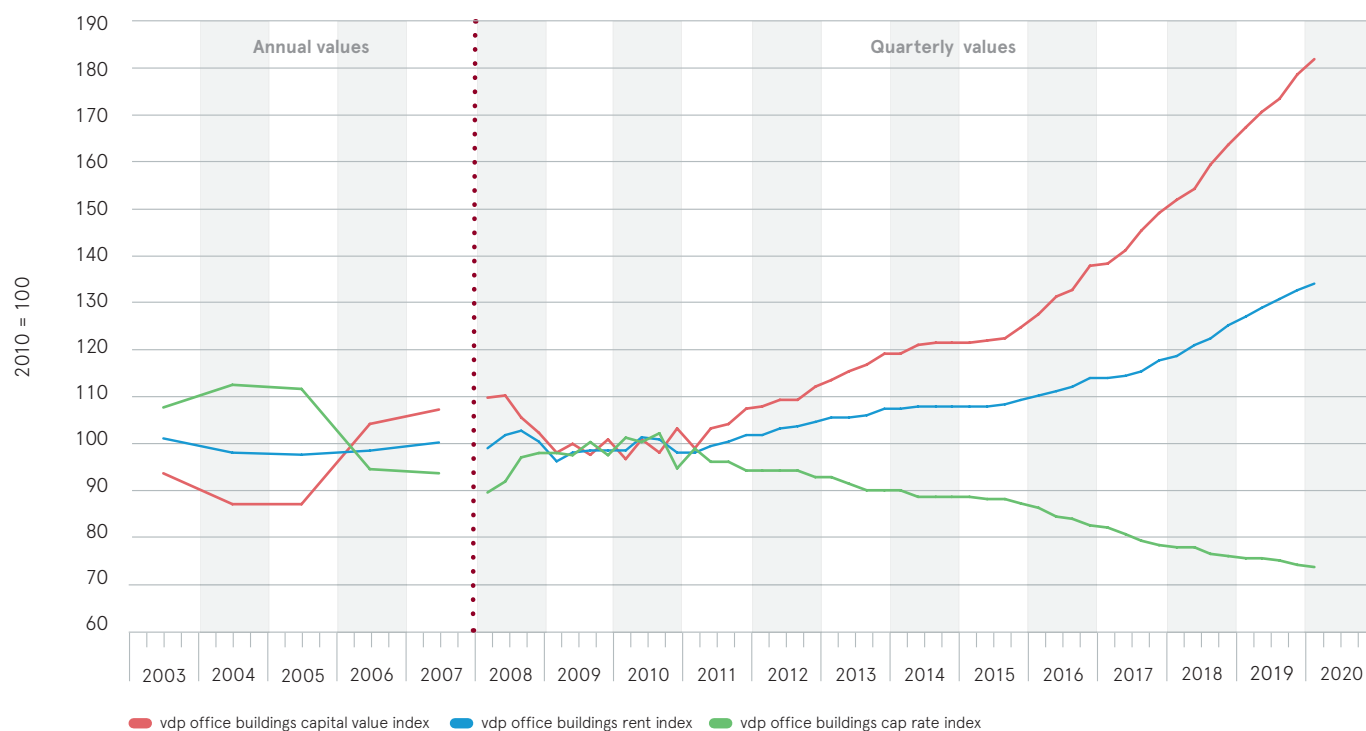
The commercial property market situation still presents a mixed picture. Overall, prices for commercial properties were **5.4 %** up on the first quarter of 2019, with the office and retail submarkets continuing to move in opposite directions, however.

Compared with the corresponding quarter one year before, prices for office premises rose considerably (**+8.4 %**). On the one hand, the leasing market contributed to this result with a **5.5 %** rise in **new lease rentals**. The leasing market continues to be marked by low vacancy rates at many locations, so that the demand for space faces a tight supply situation. As construction activity picks up, and given the, in some cases, high level of rents, rent growth momentum is gradually slowing down here, too.

The favorable office leasing situation combined with the persistently low level of interest rates kept investor interest high. The **cap rate index declined by 2.7 %** year on year.

Developments on the **retail property market**, by contrast, were considerably weaker. Prices **fell by 1.1 %** year on year. This was due to the ongoing shift in demand away from bricks and mortar stores to online retailers. Demand for retail space, particularly away from prime locations, is falling as a result. Consequently, **retail property rents** were **down by 1.8 %**.

Office and administration buildings: High investor demand



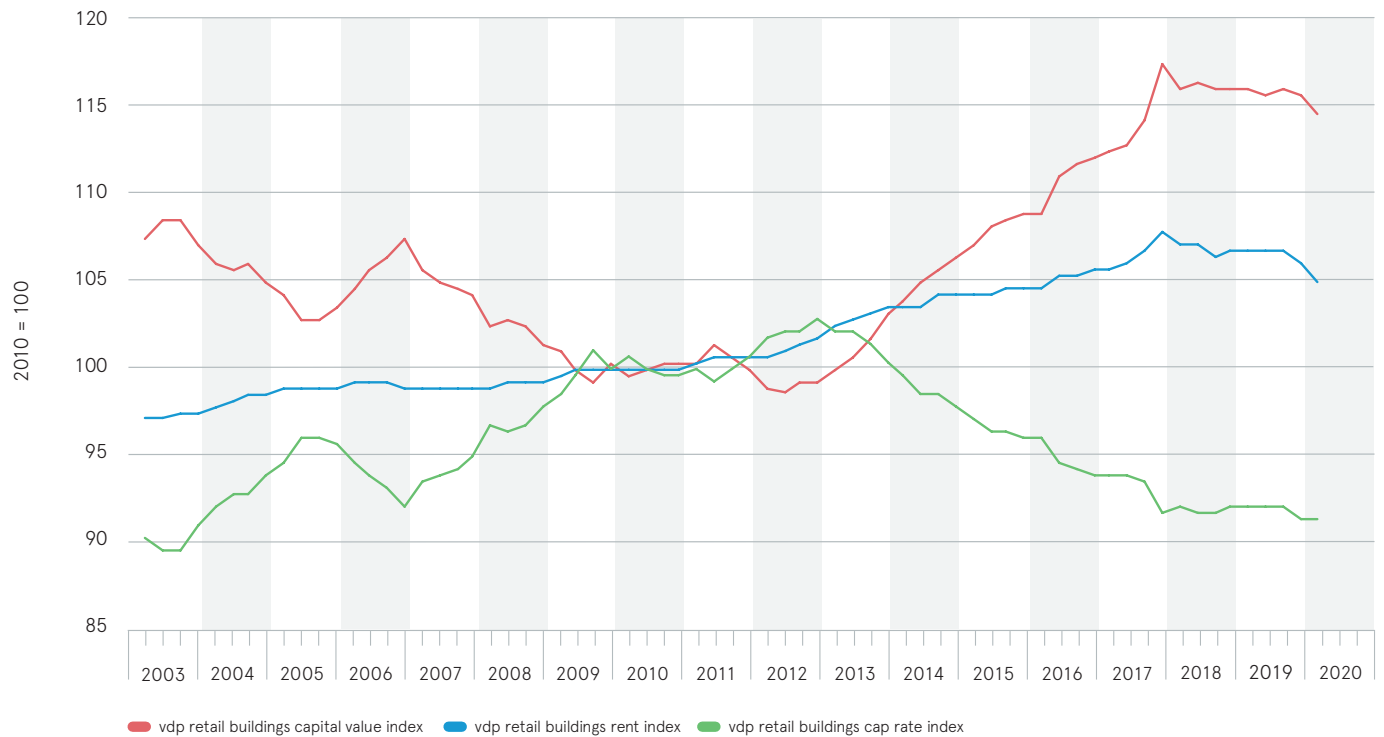
Index: 2010 = 100

Year	Capital value		Office rents		Cap rate	
	Index	y-o-y change in %	Index	y-o-y change in %	Index	y-o-y change in %
2010	100.0	0.7	100.0	1.9	100.0	1.2
2011	103.6	3.6	100.2	0.2	96.7	-3.3
2012	109.9	6.0	103.6	3.4	94.3	-2.5
2013	116.4	5.9	106.4	2.7	91.5	-3.0
2014	120.9	3.9	108.0	1.5	89.3	-2.3
2015	122.9	1.7	108.7	0.6	88.4	-1.1
2016	132.4	7.7	112.1	3.2	84.7	-4.2
2017	143.6	8.4	115.7	3.2	80.6	-4.9
2018	157.4	9.6	122.1	5.5	77.6	-3.7
2019	172.5	9.6	130.2	6.7	75.5	-2.7

Index: 2010 = 100

Quarter	Capital value		Office rents		Cap rate	
	Index	y-o-y change in %	Index	y-o-y change in %	Index	y-o-y change in %
Q2 2018	154.2	9.2	121.1	5.6	78.5	-3.3
Q3 2018	159.5	9.6	122.8	6.1	77.0	-3.1
Q4 2018	163.7	9.7	125.4	6.4	76.6	-3.0
Q1 2019	167.6	10.2	127.4	7.0	76.0	-2.9
Q2 2019	170.5	10.5	129.2	6.7	75.8	-3.4
Q3 2019	173.5	8.8	131.2	6.8	75.6	-1.8
Q4 2019	178.3	8.9	133.1	6.2	74.6	-2.5
Q1 2020	181.7	8.4	134.4	5.5	74.0	-2.7

Retail: Increase in online shopping depresses demand for retail space



Year	Capital value		Office rents		Cap rate	
	Index	y-o-y change in %	Index	Veränderung in % change in %	Index	y-o-y change in %
2010	100.0	-0.1	100.0	0.1	100.0	0.3
2011	100.6	0.6	100.5	0.5	100.0	0.0
2012	99.0	-1.5	101.2	0.7	102.2	2.3
2013	101.3	2.3	102.8	1.6	101.4	-0.8
2014	105.2	3.8	103.7	0.9	98.6	-2.8
2015	108.0	2.7	104.3	0.5	96.6	-2.1
2016	110.6	2.5	105.0	0.7	94.9	-1.7
2017	113.9	2.9	106.4	1.3	93.4	-1.6
2018	115.8	1.7	106.7	0.3	92.1	-1.3
2019	115.5	-0.2	106.3	-0.3	92.1	-0.1

Quarter	Capital value		Office rents		Cap rate	
	Index	y-o-y change in %	Index	y-o-y change in %	Index	y-o-y change in %
Q2 2018	116.1	3.1	106.8	1.0	92.0	-2.1
Q3 2018	115.6	1.4	106.3	-0.4	91.9	-1.8
Q4 2018	115.6	-1.2	106.7	-0.8	92.3	0.4
Q1 2019	115.5	-0.2	106.6	-0.2	92.3	0.0
Q2 2019	115.4	-0.6	106.4	-0.4	92.2	0.2
Q3 2019	115.7	0.1	106.6	0.3	92.1	0.2
Q4 2019	115.3	-0.2	105.7	-0.9	91.7	-0.7
Q1 2020	114.2	-1.1	104.7	-1.8	91.7	-0.7

Methodology

Data basis

German financial institutions participating in the transaction database provide transaction details from their real estate financing business for input into the database. The database has been maintained since 2004 and provides statistically evaluable information on actual real estate transactions. Data are captured by the participating institutions in the form of appraisals of market and mortgage lending values that are prepared in the course of their mortgage lending activities. Property valuations are determined within each financial institution by certified property valuers or specially trained bank personnel. In addition to purchase price and date of purchase, the appraisal includes information about the property's macro and micro location, its age, layout and other price-influencing variables. In the case of certain types of property, information is also collected with regard to rental agreements and the date they were concluded. Information used to derive market and mortgage lending values is ascertained partly from submitted documentation and partly by valuers working in accordance with codified procedures. Table 1 provides an overview of the variables most frequently applied in the specification of individual indices for various market segments.

Table 1: Variables from the vdp's transaction database

Variable	Scaling	Characteristics
Makrolage	Nominal	Administration district or district-free town in Germany
Micro location	Ordinal	Very good – good – average – moderate – poor – catastrophic
Living /usable space	Metric	Living or usable space m ²
Plot size	Metric	Plot size of property in m ²
Year built	Metric	Year property built
Layout	Ordinal	Very good – good – average – moderate – poor – catastrophic
Condition	Ordinal	Very good – good – average – moderate – poor – catastrophic
Saleability	Ordinal	Very good – good – average – moderate – poor – catastrophic
Sub-property type	Nominal	Division of market segment into sub-segments
Purchase price	Metric	Purchase price of property in Euros
Rent	Metric	Contractual rent of property in Euros per m ²

Substantive definitions of individual variables are coordinated with financial institutions via the contractual relationship between them and the vdp. In addition, property valuation in Germany is subject to strict regulations, which ensure that the valuation processes of individual institutions are harmonised to the greatest extent possible, especially as a result of the Verordnung über die Grundsätze für die Ermittlung der Verkehrswerte von Grundstücken (Regulation on the Principles for Determining the Market Value of Property – abbreviated to ImmoWertV) and the Beleihungswertermittlungsverordnung (Regulation on the Determination of the Mortgage Lending Value – abbreviated to BelWertV). Because the purchase prices and significant price-influencing characteristics of individual properties are determined in a uniform manner and because they are input into a uniform database structure, it is possible to analyse the data with the help of complex statistical procedures.

Calculation

As a result of the distinct heterogeneity of real estate properties and in order to be able to measure pure price changes, it is necessary to take account of the varying quality of the properties concerned when measuring prices. Various procedures exist which take explicit account of the differences in the quality of individual properties in order to be able to measure pure price changes.

All vdp real estate indices are calculated by making use of so-called hedonic models. The hedonic model is based on the idea that heterogeneous commodities can be described by reference to their characteristics. In other words, a commodity can be represented as the sum of its characteristics. With regard to real estate, this means that this set of attributes might include, for example, details of physical characteristics such as plot size, living area, year built and details as to the property's location. Each of these named attributes has a specific influence on the price of the property, but there is no market for the attributes themselves; they cannot be sold separately and therefore cannot be viewed in isolation. It is possible, nonetheless, implicitly to determine the proportion of the overall price of the property which each individual attribute makes up by examining real estate supply and demand. Multivariate regression models are used for this purpose, helping to provide a statistical estimate of the marginal contribution of each attribute. It is assumed that the model incorporates all relevant attributes and that deviations occur simply by coincidence and are not indicative of any systematic structures.

Weighting

The overall index is the weighted arithmetical average of the various price indices for residential and commercial real estate. The weightings used correspond to the share of monetary turnover in the German real estate market constituted respectively by residential and commercial real estate. Based on details provided by valuer committees (Gutachterausschüsse), these averaged 75.6 % and 24.4 %, respectively, between 2007 and 2012.

The weights used correspond with the percentage share of households in Germany living in their own home. For the year 2011 this share stood at 50.7 %. Accordingly, 49.3 % lived in a rented dwelling. The weights were derived on the basis of the building and housing census conducted by the Federal Statistical Office in 2011. The price index for owner-occupied housing is calculated as a weighted arithmetic mean of the percentage of households living in their own single-family house or condominium. In 2011 these shares amounted to 79.7 % for single-family houses and 20.3 % for condominiums.

For the commercial property price index, the weightings attributable to the office property capital value index and the retail property capital value index correspond to the proportion of loans in the accounts of Pfandbrief Banks that were granted to these two categories. The figures for office property and retail property amount to 60 % and 40 %, respectively.

Top 7 residential properties

The top 7 residential property indices are calculated analogously to the calculation for the vdp's nationwide property price indices. The indices are estimated separately for each of the cities on the basis of the transaction database. Then, the seven individual indices of the relevant market segment are aggregated according to the respective shares to form a top 7 index. For more information, please visit the website of vdpResearch.

Base year

Starting from this edition, the base year for the indices is 2010.

Publication

All vdp real estate price indices are published on a quarterly basis. Each year's first quarter index figures are published on 10 May of the same year (six weeks after the end of the quarter under review). Other publication dates are as follows:

- 10 August, 2nd quarter
- 10 November, 3rd quarter
- 10 February of the following year, 4th quarter (including figures for the year as a whole)

The index figures are released at 8:30 a.m. on the respective publication dates. Where the publication date falls on a Saturday, Sunday or public holiday, the index figures are published on the next working day at 8:30 a.m.

The accompanying press releases are published in German and English on the websites of the Verband deutscher Pfandbriefbanken e.V. (vdp) www.pfandbrief.de and vdpResearch GmbH www.vdpresearch.de.

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The vdp's know-how is tailored towards the specific interests of the Pfandbrief issuers, namely, the Pfandbrief business and the underlying business fields property finance, public-sector lending, ship and aircraft finance. The vdp assists its member banks also in regulatory matters and represents them vis-à-vis national regulatory authorities. By means of group governance, member institutions exchange information and experiences in vdp committees, which are then summarized and developed into market standards. The vdp also assists its member banks in the efficient structuring of their specialized loan or issuance businesses.

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vdpResearch GmbH, a subsidiary of the Association of German Pfandbrief Banks (vdp), works intensively on compiling, analyzing and forecasting property prices in the context of real estate finance. Its remit includes measuring and forecasting trends in rents and prices in the residential and commercial property sectors at the regional and national level.

To measure the movements of rents and prices, vdpResearch makes use of a unique transaction database that is also used to provide property-related comparative prices, comparative rents and other valuation parameters. These parameters are central to specially developed software solutions for valuing standard and individual properties and are fully compliant with regulations governing market and property valuation.

Today, the products and services of vdpResearch are a key component for many credit institutions in the evaluation and assessment of property and market price risks. The nationwide property price indices that vdpResearch prepares for the Association of German Pfandbrief Banks are geared to an interested public and offer an overview of general price trends in Germany's real estate markets.

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