

Structures of Residential Property Finance 2021

Results of a survey conducted among the member institutions of the Association of German Pfandbrief Banks (vdp)

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In 2021, the Association of German Pfandbrief Banks (vdp) conducted a survey on the structure of financing for owner-occupied houses and flats among vdp member banks operating in that business field. On the basis of current data the vdp obtained consistent information on purchase prices, use of borrowed funds and the debt burden with regard to the financing of home ownership in Germany. The 2021 study is the latest in a series of surveys carried out among Pfandbrief banks on this topic, the previous one being in 2019.

Driven by high demand for housing, prices for owner-occupied homes have been experiencing very strong growth for a number of years. The outbreak of the Covid-19 pandemic seems to be fuelling this upward momentum even further, giving rise to more and more warnings about this development. The study therefore focused on the following questions:

- How has residential property finance in Germany developed?
- What are the dynamics behind the purchase prices of homes and the incomes of households?
- Are residential properties increasingly being financed through loans given the continuous rises in prices?
- What proportion of their incomes do homebuyers have to spend in order to service their loans?
- How high is the initial amortization and what fixed-interest periods are borrowers households choosing?
- What regional or income bracket-specific differences are there in residential property finance?

Residential property financing in Germany since 2009

Disbursements of new loans for the construction or purchase of residential properties have risen continuously since 2009 and totalled around EUR 270 billion in 2021. Lending has increased by an average of 7.4% p.a. over the same period (cf. Figure 1).

Overall debt levels as a result of property loans have risen less significantly. Total loans increased from around EUR 1.1 trillion in 2009 to around EUR 1.7 trillion at the end of 2021. This is equivalent to a 3.5% annual growth rate. The slower growth in the loan portfolio stems primarily from the fact that the greater part of the portfolio dates from further back, and the change in the loan portfolio is therefore determined not only by high disbursements from a long-term perspective but also by substantial amortization amounts.

The growth in the residential property financing business reflects the consistently high demand for owner-occupied houses and flats. The overall conditions for this have been favourable in recent years, not least thanks to consistently positive macroeconomic developments up until 2020. The labour market situation improved considerably, which in turn had a positive impact on households' income expectations. Demand for residential properties was high again in 2020 despite the difficult economic setting as a result of the Covid-19 pandemic. This is because, on the one hand, households' incomes largely remained stable. On the other hand, the growing importance of having one's "own four walls" – also as a workplace – has lent additional impetus to demand.

Figure 1:
Residential property financing in Germany
1990 - 2021

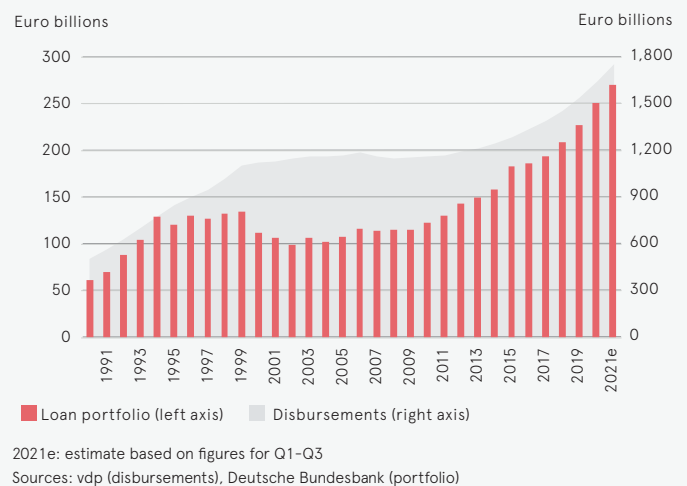
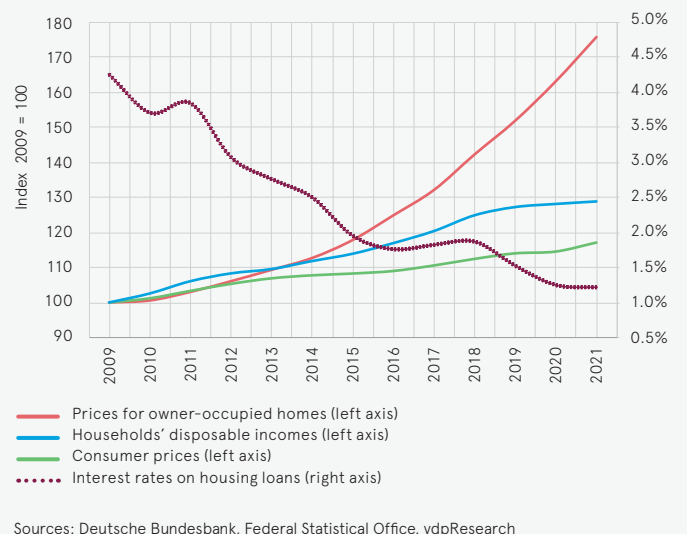


Figure 2:
Prices for owner-occupied homes, income
and interest rates, 2009 - 2021



In addition, financing conditions continuously became more favourable. The interest rate (effective interest rate, average across all fixed-interest periods) on housing loans fell from 4.5% to 1.8% between 2009 and 2015. Subsequently, interest rates on housing loans moved sideways for several years before dropping further to 1.2% p.a. during the course of 2020. They remained at this low level until mid-2021 (cf. Figure 2).

Prices for owner-occupied homes have risen continuously in Germany since 2009, the year of the financial market crisis. Up until 2014, this trend was accompanied by almost equally strong growth in households' disposable incomes. Both variables recorded a similar average annual growth rate of 2.4% and 2.3% respectively over this period. Since then, however, residential property prices have increased significantly faster than before. Prices for owner-occupied homes advanced by 6.6% p.a. between mid-2014 and mid-2021, and thus much more strongly than households' incomes (2.1% p.a.). In this context, it needs to be borne in mind that, from 2020, incomes grew markedly more slowly due to the Covid-19 pandemic than they would have without this special effect.

The housing supply is slow to respond to changes in demand. While the number of buildings completed has been on the rise again over the last few years, the level of completions has so far not sufficed to make a noticeable dent in demand pressure and curb prices.

The surveys in 2015, 2017 and 2019 had already shown stronger growth in prices for owner-occupied homes than in incomes. This had little effect on the affordability of home ownership at first, as financing conditions became increasingly favourable at the same. Thus, although the charges in servicing loans rose slightly, the amount of own funds used was largely constant. The situation has been different of late, however, with the gap between the growth in residential property prices and in incomes widening even further in recent years. Interest rates on housing loans are at historically low levels, but this also means they cannot fall much further.

This year's survey, the main findings of which are described below, focuses on the impact of this development on home ownership financing structures.

Home ownership financing structures in 2021

The results of this survey among vdp member banks reflect the above general development of prices for owner-occupied homes, incomes of borrower households and loan conditions.¹⁾ Average purchase prices were almost twice as high as in 2009 and stood at EUR 422,000 in the first half of 2021. The disposable monthly income of buyer households included in the survey averaged EUR 4,800. Although one third higher than in 2009, growth in incomes therefore lagged far behind growth in property prices (cf. Table 1).

Growth in disposable monthly household incomes ceased to keep up with property price increases several years ago. Previous surveys involving vdp member banks have already shown that this also affected the financing structure. The share of borrowed funds rose between 2012 and 2019, and the debt burden ratio – expenses for servicing the loan in relation to disposable household income – likewise increased after sinking to an all-time low in 2015, although this ratio returned, in 2019, to a moderate level from a long-

¹⁾ All the results as well as a brief description of the survey concept are to be found in the Annex.

term perspective. Because interest rates on housing loans had fallen over a long period of time, the acquisition of home ownership remained affordable for broad sections of the population.

The situation has changed somewhat in the meantime. Between 2019 and 2021, too, property prices rose at a considerably faster pace than incomes. However, the continued drop in interest rates on housing loans is clearly no longer able to compensate for this where all buyer groups are concerned. Thus, the amount of own funds used went up on average from EUR 62,000 to EUR 84,000 between 2019 and 2021. The survey findings also show that the development in the disposable income of buyer households was markedly more positive of late than of households as a whole. On the one hand, this indicates that less wealthy households are exercising caution given the high

level of residential property prices. On the other hand, it also shows that banks and their customers continue to put safety first by adopting a prudent approach. Most recently, the borrowed funds ratio and the debt burden ratio fell slightly (from, on average, 82% to 80% and 26% to 25% respectively).

In addition, initial amortization remains at around just over 3% on average, and the calculated total term has increased by a mere one and a half years as a result. What is more, the large share of long-term fixed-interest periods found by earlier studies still applies. Buyer households are locking in the favourable financing conditions for as long as possible. Whereas the average fixed-interest period was around ten years in 2009, it has settled down at 14 to 15 years since 2017.

Table 1: Financing of owner-occupied homes, 2009 - 2021*

		2009	2012	2015	2017	2019	2021
Purchase price (excluding ancillary purchase costs)	(Euro)	219,000	242,000	274,000	305,000	339,000	422,000
Disposable monthly household income	(Euro)	3,600	3,900	3,900	4,100	4,300	4,800
Borrowed funds	(Euro)	168,000	182,000	209,000	240,000	277,000	338,000
<i>Borrowed funds ratio**</i>	(%)	77	75	76	79	82	80
Interest rate	(%)	4.70	3.47	1.80	1.86	1.82	1.21
Initial amortization	(%)	1.85	2.32	3.12	3.23	3.01	3.04
Monthly burden	(Euro)	900	900	900	1,000	1,100	1,200
<i>Debt burden ratio ***</i>	(%)	25	23	22	25	26	25
Fixed-interest period	(Years)	10	12	13	14	15	14

* Owner-occupied houses and owner-occupied flats

** Borrowed funds/purchase price

*** Monthly burden/disposable monthly household income

Source: vdp, based on information provided by its member institutions

Property prices and incomes

Since property prices have seen significantly sharper increases than disposable incomes, the ratio of property price to income has risen by somewhat more than two annual net incomes in the last decade. In 2009, the ratio of purchase price to annual income stood at 5.1:1, whereas buyers of owner-occupied homes had to spend, on average, 7.3 times their annual income in 2021 (cf. Figure 3a).

These data on all owner-occupied homes have only been available since 2009. Only data for owner-occupied houses are available for longer-term comparisons over several property price cycles. The property price to income ratio with regard to owner-occupied house purchases decreased substantially (from 6.8:1 to 5.4:1) over a long period (1999 to 2012) at the end of the boom sparked by German reunification. It has risen markedly since then, and reached a new all time high of 7.6:1 in 2021.

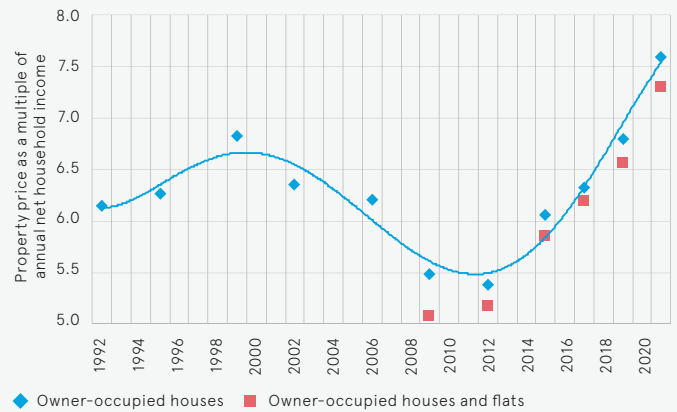
A comparison of prices for owner-occupied homes by type of district,²⁾ based on settlement structures, shows that prices basically decline as the density level decreases. The same applies to the level of disposable income, although differences specific to certain types of regions are much less pronounced here than with residential property prices. Homebuyers in metropolitan centres must therefore pay significantly higher amounts than in other types of regions, not only in absolute terms but also in relation to their disposable income (cf. Figure 3b).

The results for 2021 show, however, that this gradation in the form previously used no longer applies. Due to the strong demand for home ownership in the areas surrounding large cities (mostly "urban districts" but also "rural districts with more densely populated areas"), property prices have risen considerably more

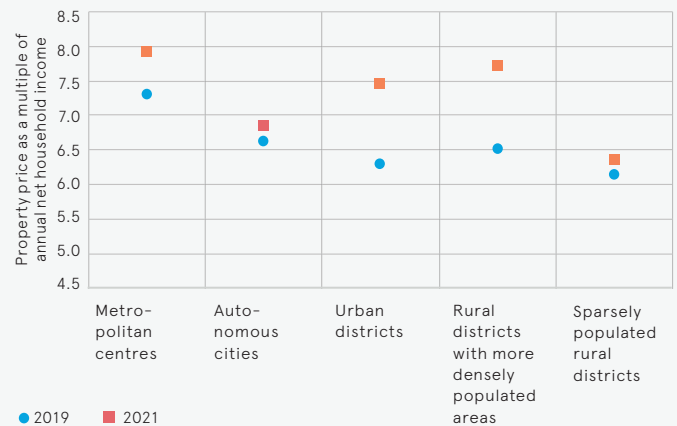
²⁾ The data collected allow analyses to be carried out for various types of settlement structures (urban vs. rural regions). With regard to their classification, the survey draws on a definition by the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR). According to this, all rural and urban districts are assigned to the settlement structure types "metropolitan centres", "autonomous cities", "urban districts", "rural districts with more densely populated areas" and "sparsely populated rural districts".

Figure 3: Property price to income ratio

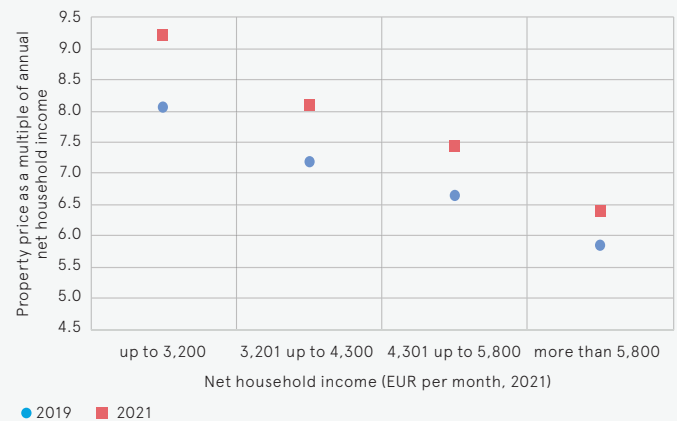
a.) Development 1992-2021



b.) By type of district based on settlement structure



c.) By income bracket



Source: vdp, based on information provided by its member institutions

strongly than incomes. As a result, the level of the property price to income ratio has moved markedly closer to the level in metropolitan centres.

By contrast, more significant differences become apparent in the financing structure when looking at buyers according to income bracket. Buyers are assigned to individual income brackets in accordance with the quartile limits for net disposable household incomes. There are large differences between the individual income brackets in terms of the financial expenditure necessary when buying a home in relation to disposable income. On average, property buyers in the lower income bracket must pay more than nine times their annual net income in order to purchase their own flat or house, while those in the upper income bracket invest slightly less than 6.5 times their annual disposable household income on average (cf. Figure 3c). A comparison with the results of the previous survey in 2019 shows an increase in the property price to income ratio over all income brackets.

Use of borrowed funds

The trend towards greater use of borrowed funds that was observed in the previous surveys did not continue in 2021. The average borrowed funds ratio – the ratio of borrowed funds used for purchase or construction to the property purchase price (excluding ancillary purchase costs) – was 80% in 2021, two percentage points lower than in 2019 (cf. Figure 4a).

An analysis based on borrowed funds ratio classes shows that the proportion of financing arrangements with a higher borrowed funds ratio (classes 80% up to 100% and more than 100%), which rose between 2015 and 2019, dipped slightly overall in 2021. The proportion of loans awarded with a borrowed funds ratio of 80% up to 100% fell from 49% to 43%, while the ratio of more than 100% of the purchase price was unchanged at 18% (cf. Figure 4b).

It needs to be borne in mind here that the borrowed funds ratio pertains to the loan volume taken out for the construction or purchase in relation to the purchase price or construction costs of the financed property, without taking into account any other collateral. If the volume of the loan exceeds the value of the property, the borrower house-

hold will generally provide additional collateral. The shares accounted for by the classes up to 60% and 60% up to 80% rose by three percentage points in each case.

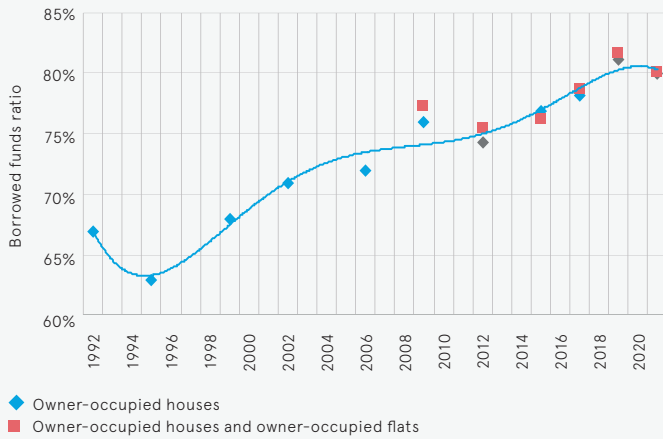
There are barely any differences between settlement structures with regard to the borrowed funds ratio. Only in urban districts is the borrowed funds ratio somewhat higher than in other district types with a different settlement structure, averaging 85% (cf. Figure 4c).

“Urban districts” frequently make up the areas surrounding metropolitan regions. Younger families who relocate there from the city and buy homes often have little capital of their own but comparatively high incomes, and are thus able to finance their property purchase with an above average borrowed funds ratio. There was a slight decrease in the borrowed funds ratio for districts with all settlement structures compared with 2019.

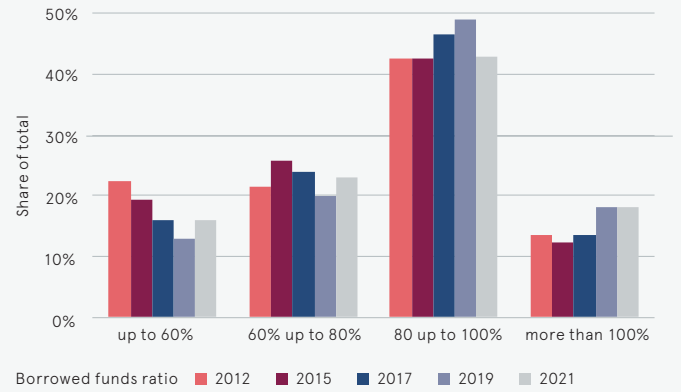
More significant differences emerged between different income brackets with regard to the use of borrowed funds. In 2021, the average borrowed funds ratio in the lowest income bracket was 77%, and thus much lower than in the other income brackets. It stood at roughly the same level two years earlier, at 76%, and thus was also considerably lower than for households with higher incomes (cf. Figure 4d). Among other factors, the Mortgage Credit Directive (Wohnimmobilienkreditrichtlinie, WIKR) is having a noticeable impact here. Since the transposition of the WIKR into German law in March 2016, banks are required to check that a loan is appropriate for the borrower household. A breach of their duty to conduct creditworthiness checks would have far reaching consequences for banks. Under section 505d (1) of the German Civil Code (Bundesgesetzbuch, BGB), any fixed interest rate agreed in the loan contract would in such a case be reduced to the refinancing rate. Moreover, the borrower household would be entitled to terminate the loan agreement at any time without notice, without the bank being entitled to claim early payment compensation. In this context and under the current conditions, increasing the borrowed funds ratio would obviously be incompatible with the principles of cautious lending whereby risks must be limited.

Figure 4: Use of borrowed funds

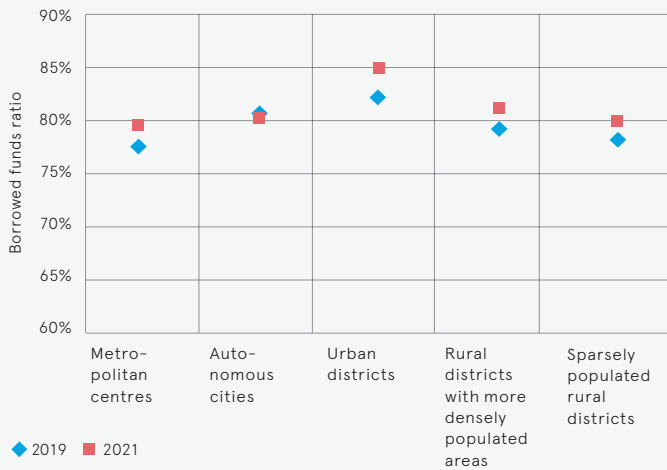
a.) Development 1992-2021



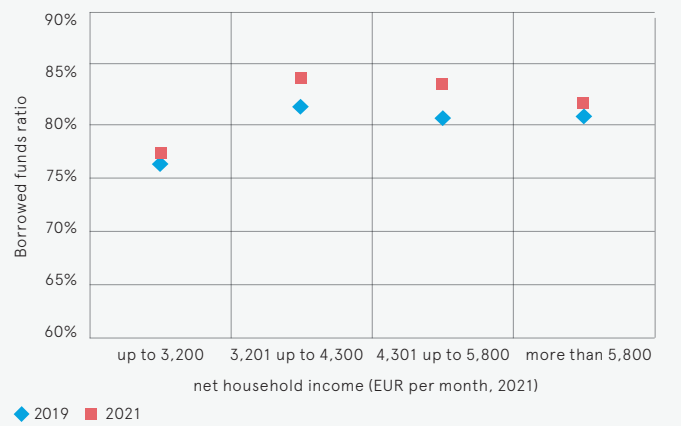
b.) By borrowed funds ratio



c.) By type of district based on settlement structure



d.) By income bracket



Source: vdp, based on information provided by its member institutions

Debt burden

In the first phase of the current real estate cycle (2009–2015), the substantial decline in interest rates on housing loans had the effect of making home ownership increasingly affordable. The debt burden ratio – the share of expenses for servicing the loan in relation to the buyer’s disposable household income – reached a historic low of 22% in 2015 (cf. Figure 5a). Interest rates subsequently moved sideways up until 2019 and thus no longer compensated for the increase in prices with regard to the debt burden. As a result, the debt burden ratio rose to 26% by 2019, whereby that was still a moderate level. By contrast, it had consistently stood at considerably above 30% between 1992 and 2002. In 2021, the debt burden ratio fell slightly (to 25%) compared with 2019 on the back of a subdued expansion of the lending volume, accompanied by an even lower level of interest rates and a virtually unchanged initial amortization.

The predominant share of expenses for servicing a loan is accounted for by amortization and thus serves to build wealth. On average, only 7% of disposable income was spent on interest payments in 2021.

In around two thirds of financing arrangements, the debt burden ratio is below 30%. Just under a quarter of buyer households spend between 30% and 40% of disposable household income on servicing their loan, while 10% of homebuyers have a debt burden ratio of more than 40% (cf. Figure 5b).

With regard to the debt burden ratio – as with the borrowed funds ratio – there are no significant differences between urban and rural areas (cf. Figure 5c). Almost all types of regions recorded a decline compared with the previous study.

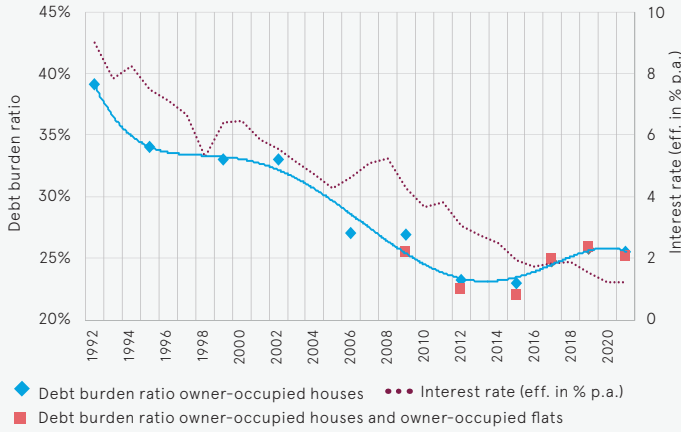
However, there are larger differences between individual income brackets. The debt burden ratio is comparatively high among buyers in the lower income bracket, at 29%, and declines as incomes increase. Borrower households from the highest income bracket only need to spend on average 23% of their net income on interest and amortization payments (cf. Figure 5d).

The relative debt burden was down slightly in all income brackets compared with the 2019 survey. As with the drop in the borrowed funds ratio described in the previous section, this reflects the Pfandbrief banks’ prudent lending practices, which are designed to limit risks in line with the WIKR.

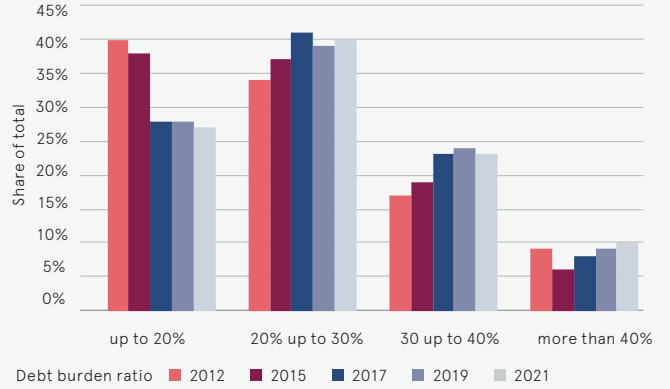
The distribution of financing agreements by borrowed funds ratio and debt burden ratio points to little correlation between the two variables (cf. Figure 6).

Figure 5: Debt burden

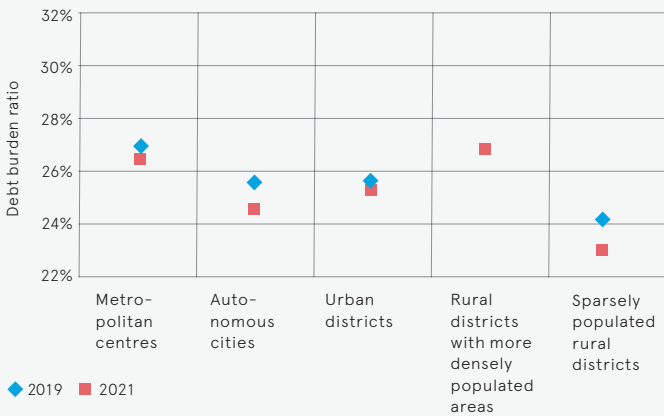
a.) Development 1992-2019



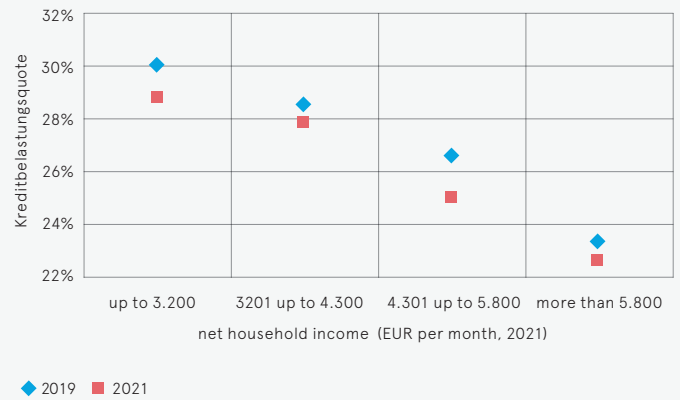
b.) By debt burden ratio



c.) By type of district based on settlement structure

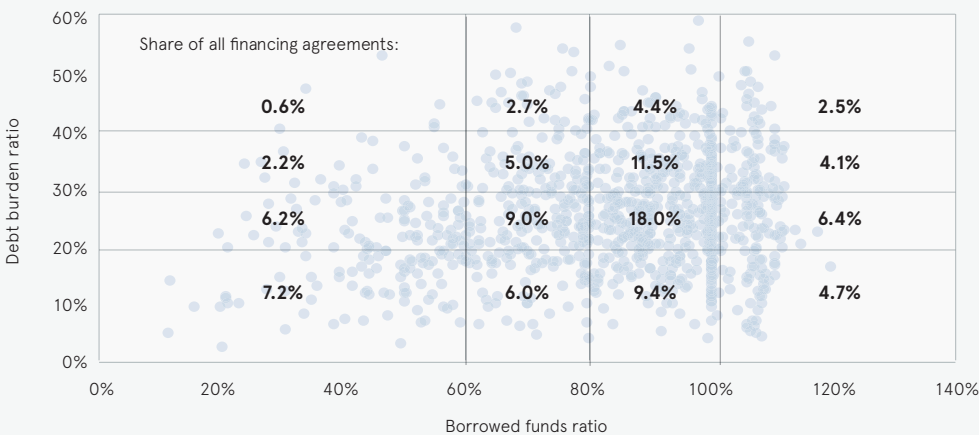


d.) By income bracket



Source: vdp, based on information provided by its member institutions

Figure 6: Financing agreements by borrowed funds ratio and debt burden ratio 2021



Source: vdp, based on information provided by its member institutions

Loan conditions

There are, at most, only marginal differences between the interest rates measured within the scope of this survey and the above-mentioned development for the market as a whole. Interest rates on housing loans dropped from 4.7% to 1.8% p.a. between 2009 and 2015. They then moved sideways over several years before falling most recently by a further 0.6 percentage point to 1.2% (cf. Figure 7a).

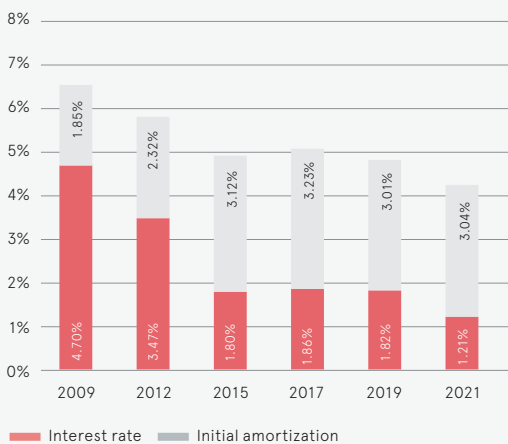
The drop in interest rates was accompanied by a marked increase in the average agreed initial amortization, which rose continuously during the period from 2009 to 2017 (from 1.85% to 3.23%). In both 2019 and 2020, it stood at just over 3%,

which was slightly below the previous level, and thus remained comparatively high.

Buyer households are securing for themselves the favourable financing conditions for as long as possible. Whereas the average fixed-interest period was around ten years in 2009, it has settled down at 14 to 15 years since 2017 (cf. Figure 7b). Although the share of long-term loans with a fixed-interest period of more than ten years fell from 70% (2019) to 64% (2021), there was a marked rise in loans with a fixed-interest period of up to and including ten years (from 27% to 35%). Accounting for a share of just under 1%, short- and medium-term fixed-interest periods play only a marginal role.

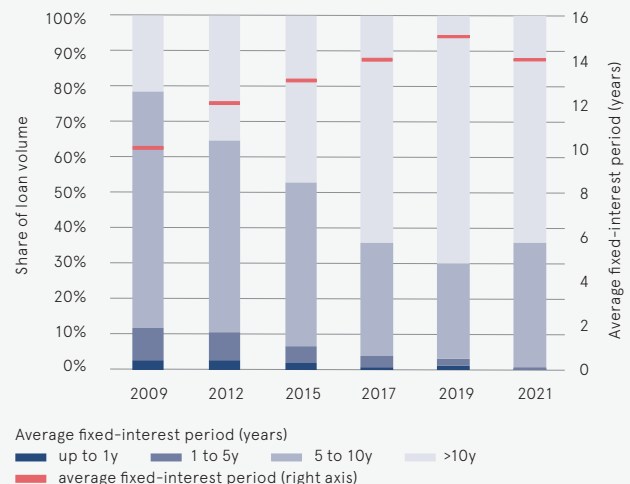
Figure 7: Interest rate, initial amortization and fixed-interest period

a.) Interest rate and initial amortization 2009-2021



Source: vdp, based on information provided by its member institutions

b.) Fixed-interest periods 2009-2021



Conclusion

Growth in households' disposable monthly incomes ceased to keep up with property price increases a number of years ago. Previous surveys among vdp member banks have already shown that this also affects the financing structure. The borrowed funds ratio climbed until 2019, and the debt burden ratio – the ratio of expenses for servicing the loan to disposable household income – likewise increased, although in 2019 it again stood at a moderate level from a long-term perspective. The amount of own funds used was largely constant over a number of years, and growth in the net incomes of borrower households included in the survey largely followed a similar path to that of all households in Germany. Because interest rates on housing loans fell over a long period of time, the acquisition of home ownership remained affordable for broad sections of the population.

The situation has changed somewhat in the meantime. Between 2019 and 2021, too, property prices rose at a considerably faster pace than incomes. However, clearly not all buyer groups are in a position to compensate for this, even though interest rates on housing loans have dropped further. Thus, the amount of own funds used has gone up considerably, causing the borrowed funds ratio and debt burden ratio to decrease slightly on average. That said, the survey also shows that growth in borrower households' incomes most recently followed a clearly more positive path than for households as a whole. This finding and the substantial increase in own funds indicate that it has become more and more difficult for younger or lower-income households to acquire home ownership, as they are unable to accumulate the necessary own funds.

The findings that the borrowed funds ratio and the debt burden ratio fell, that the average initial amortization remained stable, and that borrower households are locking in the favourable financing conditions for as long as possible are clear evidence that lenders and borrowers continue to put safety first.

ANNEX A:

Results of the survey on the structure of residential property finance in 2021

Table A1: Property and financing information for 2021

Owner-occupied houses and owner-occupied flats

	Living space (m ²)	Property price (EUR)	Borrowed funds (EUR)	Borrowed funds ratio	Net month. house- hold inc. (EUR)	Total month. burden (EUR)	Debt burden ratio	Ratio of property prices to income	Cases (number)
Total	124	422,000	338,000	80%	4,800	1,200	25%	7.3 : 1	1,105
by financing motive									
New construction	135	513,000	402,000	78%	5,000	1,360	27%	8.6 : 1	293
Purchase of existing property	120	388,000	315,000	81%	4,700	1,140	24%	6.9 : 1	812
by settlement structure									
Metropolitan centres	105	504,000	392,000	78%	5,300	1,400	26%	7.9 : 1	238
Autonomous cities	118	386,000	311,000	81%	4,700	1,150	24%	6.8 : 1	76
Urban districts	124	412,000	339,000	82%	4,600	1,160	25%	7.5 : 1	508
Rural districts with more densely populated areas	139	399,000	317,000	79%	4,300	1,150	27%	7.7 : 1	136
Sparsely populated rural districts	140	359,000	281,000	78%	4,700	1,080	23%	6.4 : 1	147
By income quartile									
up to 3,200 €	103	276,000	213,000	77%	2,500	720	29%	9.2 : 1	277
3,200 € up to 4,300 €	118	368,000	300,000	82%	3,800	1,060	28%	8.1 : 1	276
4,300 € up to 5,800 €	132	446,000	359,000	80%	5,000	1,250	25%	7.4 : 1	277
5,800 € and more	142	597,000	482,000	81%	7,800	1,760	23%	6.4 : 1	275
by borrowed funds ratio									
up to 60%	124	511,000	229,000	45%	4,700	970	21%	9.1 : 1	179
60% up to 80%	128	466,000	335,000	72%	4,800	1,220	25%	8.1 : 1	251
80% up to 100%	120	389,000	360,000	93%	4,700	1,200	26%	6.9 : 1	479
more than 100%	126	362,000	388,000	107%	4,900	1,330	27%	6.2 : 1	196

Source: vdp, based on information provided by its member institutions

Table A2: Financing structure for owner-occupied homes, 2009-2021

	Borrowed funds ratio						Debt burden ratio						Ratio of property prices to income					
	2009	2012	2015	2017	2019	2021	2009	2012	2015	2017	2019	2021	2009	2012	2015	2017	2019	2021
Owner-occupied houses and owner-occupied flats																		
Total	77%	75%	76%	79%	82%	80%	25%	23%	22%	25%	26%	25%	5.1 : 1	5.2 : 1	5.9 : 1	6.2 : 1	6.6 : 1	7.3 : 1
by type of property																		
Owner-occupied houses	76%	74%	77%	78%	81%	80%	27%	23%	23%	25%	27%	25%	5.5 : 1	5.4 : 1	6.1 : 1	6.3 : 1	6.8 : 1	7.6 : 1
Owner-occupied flats	82%	80%	75%	80%	83%	81%	22%	21%	21%	25%	25%	24%	4.1 : 1	4.5 : 1	5.5 : 1	6.0 : 1	6.3 : 1	7.1 : 1
by financing motive																		
New construction	73%	72%	73%	75%	77%	78%	29%	25%	25%	29%	29%	27%	6.3 : 1	6.2 : 1	7.5 : 1	8.2 : 1	8.1 : 1	8.6 : 1
Purchase of existing property	80%	77%	78%	81%	84%	81%	24%	22%	21%	24%	25%	24%	4.6 : 1	4.8 : 1	5.2 : 1	5.5 : 1	6.0 : 1	6.9 : 1
by settlement structure																		
Metropolitan centres	79%	72%	73%	77%	80%	78%	25%	22%	22%	27%	27%	26%	5.1 : 1	5.3 : 1	6.3 : 1	6.5 : 1	7.2 : 1	7.9 : 1
Autonomous cities	77%	78%	70%	78%	80%	81%	27%	28%	22%	25%	26%	24%	4.9 : 1	5.5 : 1	5.6 : 1	6.1 : 1	6.6 : 1	6.8 : 1
Urban districts	76%	79%	78%	81%	85%	82%	28%	24%	23%	25%	26%	25%	5.7 : 1	5.3 : 1	6.0 : 1	6.2 : 1	6.2 : 1	7.5 : 1
Rural district*	78%	74%	77%	76%	81%	79%	24%	20%	22%	24%	27%	26%	4.6 : 1	4.8 : 1	5.7 : 1	6.3 : 1	6.5 : 1	7.7 : 1
Sparsely populated rural districts	78%	74%	82%	79%	80%	78%	23%	19%	22%	24%	24%	23%	4.4 : 1	4.3 : 1	5.3 : 1	6.1 : 1	6.1 : 1	6.4 : 1
by income bracket*																		
Group 1	78%	75%	76%	79%	76%	77%	32%	28%	27%	30%	30%	29%	6.3 : 1	6.7 : 1	7.2 : 1	7.6 : 1	8.1 : 1	9.2 : 1
Group 2	81%	80%	79%	80%	84%	82%	29%	25%	24%	27%	29%	28%	5.8 : 1	5.8 : 1	6.2 : 1	6.8 : 1	7.2 : 1	8.1 : 1
Group 3	80%	77%	77%	80%	83%	80%	27%	23%	23%	25%	27%	25%	5.4 : 1	5.3 : 1	6.3 : 1	6.5 : 1	6.6 : 1	7.4 : 1
Group 4	73%	72%	74%	77%	82%	81%	21%	19%	20%	23%	23%	22%	4.4 : 1	4.4 : 1	5.1 : 1	5.5 : 1	5.8 : 1	6.4 : 1

* Definition acc. to quartile limits: Group 1 < Q_{0.25} < Group 2 < Q_{0.5} < Group 3 < Q_{0.75} < Group 4

Source: vdp, based on information provided by its member institutions

ANNEX B:

Survey of vdp member banks in 2021

The Association of German Pfandbrief Banks (vdp) has conducted regular surveys on the structures of home ownership financing since the 1980s in order to obtain informative data on the structure and development of the borrowed funds ratio and the debt burden of borrower households as well as on loan conditions, and to make this information available to the professional public. This survey was conducted in the third quarter of 2021.

For the purpose of analyzing the financing structure for owner-occupied houses and flats, data were collected on a total of almost 1,400 financing agreements with vdp member banks in the first half of 2021. The method applied for the survey was that used for stratified random sampling. A total of 15 banks from all pillars of the German banking system took part, meaning that the majority of vdp member banks operating in that business field were involved in the survey.

Information was collected for each financing agreement about various characteristics of the property, the cost and financing structure and the borrower household's economic situation. The survey design was largely that used for the 2019 residential property finance survey. The following characteristics were recorded (cf. Figure B1):

Figure B1:

vdp survey of home ownership financing: overview of characteristics

Property:

- Type of property (single-family house, owner-occupied flat)
- Type of use (owner-occupied, let)
- Age of building
- Living space
- Macro-location (postcode area)

Cost and financing structure:

- Purchase or construction costs (total price, ancillary costs)
- Loan volume
- Interest rate
- Initial amortization
- Fixed-interest period

Borrower households:

- Disposable household income
- Burden from borrowed funds

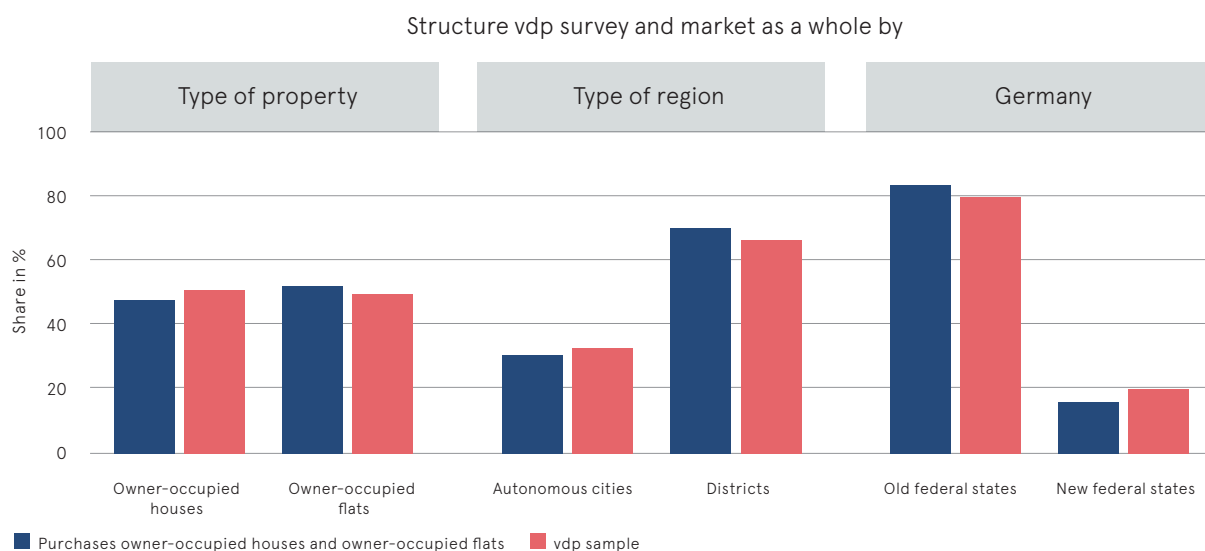
Source: vdp

Following adjustments for datasets that could not be evaluated as well as for statistical outliers, a total of 1,356 financing agreements were included in the analysis. Of these, 687 related to owner-occupied houses, 418 to owner-occupied flats and 251 to let flats.

Figure B2 shows the distribution of transactions and surveyed financing agreements recorded by property

type and regional criteria. Basically, the structure of the sample obtained through the survey resembles very closely that of the overall market in Germany. This is true both of the relationship between owner-occupied houses and owner-occupied flats and of the distribution of the financing agreements based on settlement structure (urban-rural) and regional characteristics (federal states).

Figure B2: Transactions overall market and financing agreements vdp sample



Sources: vdp, based on information provided by its member institutions; vdpResearch, based on information provided by committees of experts in property values

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