

# Housing Finance of Austrian Households

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*This study presents a first summary of the housing finance results of the OeNB's Household Survey on Housing Wealth in Austria. 22% of Austrian households have taken out debt to finance housing. The probability of holding such debt is significantly higher for younger and higher-income households than for others. High-income households are much more likely to have a variable rate loan or a foreign currency loan, but at the same time they also have lower loan-to-value (LTV) ratios than the other groups. Regional differences – or more specifically, a west-east pattern – were identified regarding the type and amount of debt incurred: Austrian households in the western provinces tend to have higher debt and higher LTV ratios than those in the eastern provinces. Housing assistance funds and alternative forms of financing, such as inheritances or inter vivos gifts (money), play quite a significant role in housing finance. Austrian households use their property mainly for residential purposes rather than as an investment instrument: Of the households with outstanding housing loans, 74% used (at least part of) the money to purchase their primary residence, 12% used it to finance the deposit they had to make for their housing association apartment, and 17% purchased a second home. 52% of the households that took out a loan to purchase a second property use it for residential or similar purposes, while 26% of them offer it for rent and the remaining households (roughly one-quarter) use it as a store of value. These facts and the existence of a strongly subsidized rental market seem to have contributed to the rather low ownership ratio and the moderate development of Austrian real estate and rental prices by international standards. The differences identified in the structure of housing finance of Austrian households suggest that the impact of monetary policy on wealth (and hence on household consumption and investment) will also differ markedly.*

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Over the past decade, households' housing debt has increased in most euro area countries. The rise in the number of mortgage loans was supported by several factors: comparatively low interest rates, increasing disposable incomes, growing population figures, and deregulation and liberalization trends that pushed up the number of providers, and widened the range, of housing finance products. With interest rates at a historical low, households' interest rate burden remained under control despite the rise in debt, though.

Real estate debt accounts for the lion's share of household debt. Financial accounts data show that in 2007 housing loans accounted for some 61.5% of households' credit liabilities, while consumer loans accounted for 17.5% and "other lending" (e.g. loans to self-

employed persons) for 21%. Therefore, data on real estate holdings and housing finance offer important information for the assessment of a country's housing market, while at the same time providing valuable insights into numerous monetary and economic policy issues (e.g. monetary policy transmission, on consumption and investment, formation of a real estate bubble).

The particular way in which households finance real estate can have a strong impact on the speed and intensity of the transmission of a shock to the economy. The higher e.g. household debt is, the stronger the effects of monetary shocks are, because the pressure on disposable income – and thus also on consumer spending – is higher. The type of interest rate is another factor: Compared with fixed rate loans, vari-

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able rate loans can also accelerate the transmission of monetary shocks to disposable income. Long repayment periods can have the opposite effect, as borrowers can cushion the impact of such shocks on disposable income and thus limit or at least delay the effects of monetary policy decisions. This contribution highlights aspects like risk orientation, collateral for housing loans and possible consequences for the stability of the real estate market and financial stability in Austria at large.

Such analyses are, however, inconclusive without disaggregated data on various household characteristics. Especially the current economic crisis and the developments on the U.S. housing and housing finance market in summer and fall 2007 have underscored the significance of microdata, which provide valuable information e.g. on the distribution and repayment of debt by income groups, thus allowing for more detailed and refined analyses of households' vulnerability than aggregated data do.

This is the first study to evaluate Austrian data on real estate financing at the household level, while at the same time looking into data on loans extended by employers and households to households, which are not covered in the financial accounts. The analysis is based on data compiled from the Household Survey on Housing Wealth (HSHW) commissioned by the OeNB in 2008.

This paper is organized as follows: Section 1 presents the data and defines key variables, while section 2 highlights two aspects of household debt, the determinants of debt and its size on the one hand, and households' associated vulnerability on the other. Section 3

analyzes the characteristics of housing loans taken out by Austrian households and their relevance for monetary and economic policy. Section 4 provides a brief overview and some evaluations of alternative forms of housing finance. Section 5 discusses the role of taxes and subsidies in the real estate sector, and section 6 provides a summary and draws conclusions.

## 1 Data and Definitions

We use data from the OeNB's 2008 HSHW. The sample covers 2,081 respondents who answered up to 168 questions about their housing wealth and finance, among other things. For general information on the data, see Fessler et al. (2009). Methodological aspects of e.g. sample design and weighting can be found in Wagner and Zottel (2009), and the multiple imputation method we used is presented in Albacete et al. (2009).

In the following, the terms "debt," "loans" and "housing loans" are used synonymously to refer to the sum of all housing loans of Austrian households that were still outstanding as of December 31, 2007. This definition covers loans taken out to finance deposits that were made to housing associations (*Genossenschaftsbeitrag*)<sup>2</sup> as well as credit to purchase land, which are both captured in the financial accounts. It also covers loans extended by employers or by family or friends, which are not captured in the financial accounts. These data have thus been compiled for the first time for Austria. Loans taken out to finance home improvements and maintenance are not included, as they were not considered in the OeNB's HSHW.

<sup>2</sup> Upon termination of the rental agreement, tenants receive back the deposit they paid made minus 1% per year.

A household's housing wealth is defined as the sum of any real estate<sup>3</sup> the household (co)owns; its value is based on the owners' sales price estimate as of December 31, 2007.

For some evaluations, the wealth and debt definitions mentioned above refer only to primary residences or exclude the financing of deposits for housing association apartments, as no detailed credit data were available for the other categories. Restrictions will be indicated in the individual subsections whenever they apply.

## 2 Households' Housing Debt

Which households are indebted, which are not? Which households are more heavily indebted than others? Does household debt pose a risk for financial stability? Section 2.1 addresses the first two questions; section 2.2 tackles the last one.

### 2.1 Determinants of Housing Debt

#### 2.1.1 Debt Rate

The second column in table A1 shows that 22% of Austrian households had outstanding housing loans in 2007. An above-average debt rate is reported for the following households: age group from 30 to 39 years, married, employed, higher education or above-average income level. A breakdown by professions shows that the housing debt rate is highest among civil servants (39%), followed by business owners and self-employed persons, and lowest for farmers, pensioners and nonemployed people. A breakdown by provinces indicates that the number of indebted households is relatively low in Carinthia and Styria and comparatively

high in Vorarlberg and Burgenland. The wealthier (as measured by the interviewers' assessment of the standard of living at the respondents' primary residence) a household seems to be, the more likely it is to have taken out (housing) loans. A look at the various forms of financial investment undertaken by Austrian households substantiates this impression: The highest debt rates are reported for households that hold equity (44%), bonds and mutual fund shares. Households without any common financial assets are indebted rather rarely (13%). As expected, the lowest debt rates are reported for housing association tenants who did not have to make a deposit for their primary residence (5%) and homeowners who inherited their primary residence (14%), while relatively high debt rates are observed for homeowners who purchased their primary residence (46%).

Purchasing a home requires that people are willing and able to incur debt: Our data show that credit seems to be one of the main reasons for people to rent instead of buying: When asked why they did not own their apartment or house, 8% of tenants replied that to do so, they would have to take out a loan but did not want to, and 7% of respondents claimed that banks would not give them a loan.

We use a logit model to estimate the probability of holding debt. Unlike the statistics in table A1, this allows us to control for several variables at the same time and thus identify important determinants of household debt. Table A3 shows that the probability of holding debt rises significantly with income. Age and the square of age have a highly

<sup>3</sup> *Coownership is allocated to the respective household on a proportionate basis. In the survey, "property" denotes all types of real property, i.e. apartments, houses, plots of land, fields, forests, etc., including real estate abroad. Private foundations are not covered, but it is highly unlikely that the survey sample contains such a household, as wealthy households tend to be underrepresented in such surveys.*

significant influence, and the probability of holding debt also rises with the education level. Interestingly, households that never received an inheritance are more likely than others to take on debt. The probability of holding debt is much higher for married couple households than for single households.

### 2.1.2 Size of Debt

The third column of table A1 presents the reported mean and median amounts of household debt, which for many household characteristics follow a pattern similar to that of debt rates: Young, married couple households with high education and income levels hold above-average amounts of debt. The mean value of household debt in Austria is around EUR 77,500. The median value, at EUR 43,000, is much lower, which points to a very uneven distribution of debt amounts (section 2.2).

For some household characteristics, the distribution patterns of debt amounts are different from those of debt rates. A case in point is the breakdown by provinces: In Burgenland, debt amounts are at the lower end of the spectrum, while debt rates are among the highest in Austria; it is the other way round in Tyrol. Another case in point is the type of rental agreement: As expected, households that did not have to pay a deposit for a housing association apartment are indebted markedly less often than those who did (5% as opposed to 20%). At the same time, the first group tends to have larger debt for the purchase of second properties. Another interesting pattern emerges for inheritances: While the debt rate is below average for households that inherited at least (part of) one property (17%) – and thus much lower than for homeowners who

did not inherit a property (43%) – debt amounts are much higher for the heirs group than for the other group (EUR 91,132 compared with EUR 83,114).<sup>4</sup> Upon closer examination, it turns out that the heirs group has above-average incomes, which probably increases their borrowing capacity.

We also found differences in the households' debt amounts depending on the type of loans they took out. Debt amounts are above average for households with at least one foreign currency loan (as most of these loans are bullet loans, see section 3.7) and households with at least one loan granted by a building and loan association or one bank loan (table A2). By contrast, the amounts are below average for those who have at least one government loan<sup>5</sup>. The choice of loan type, in turn, is correlated with particular sociodemographic characteristics of borrowers (section 3).

In a next step, we conduct a linear regression analysis to estimate the determinants of debt amounts (table A3). It is noteworthy that, after controlling for the specified regressors, neither income, nor education, nor age, nor inheritance turned out to have an impact on debt amounts that is significantly different from zero. In addition, we found that business owners and self-employed people hold significantly higher amounts of debt than nonemployed people, as do households in Vorarlberg compared with those in the other Austrian provinces.

## 2.2 Financial Situation of Households

Over recent years, the development of household debt and, above all, housing-related debt has raised many questions

<sup>4</sup> The same goes for *inter vivos* gifts.

<sup>5</sup> In this contribution, "government loans" are loans granted by the provincial government or other public institutions.

about the credit risk associated with housing finance and about financial stability. These issues have become all the more urgent in the context of the financial crisis. Microdata have turned out to be especially useful to answer these questions, as they provide information on the distribution and repayment of debt and thus allow more detailed and refined analyses of the household sector's vulnerability<sup>6,7</sup>.

In line with Johansson and Persson (2006), we assign each household in the data set to one of four equally sized income categories. For the further analysis, however, only indebted house-

holds are taken into account, as the others cannot cause housing loan losses and thus do not pose the associated risk.<sup>8</sup> Table 1 shows some descriptive statistics for the four income categories. It turns out that income, housing wealth and debt size tend to move in tandem.<sup>9</sup> The correlation coefficients between these three variables show that the correlation of housing wealth with debt amounts is strongest, followed by housing wealth with income. The correlation of debt amounts with income is weakest. Still, all correlations are statistically significant at least at the 5% level.<sup>10</sup> The number of house-

Table 1

### Income, Housing Wealth and Housing Debt of Austrian Indebted Households in 2007<sup>1</sup>

	Income quartile								Total	
	1		2		3		4		Mean	Median
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Annual income (EUR)	9,166	10,468	19,151	19,200	29,879	30,000	60,239	50,786	35,828	30,000
Housing wealth (EUR)	327,632	150,000	200,647	155,000	212,843	189,237	325,310	245,000	260,311	200,000
Debt amounts (EUR)	71,469	41,866	69,933	32,000	72,655	41,567	89,006	55,000	77,514	42,944
Debt ratio (in % of income)	1,177	449	364	180	250	148	168	91	335	142
Value-to-loan ratio (in % of debt amounts)	1,245	242	1,175	263	933	256	1,929	395	1,352	296
Share of indebted households (in %)	9	0	18	0	30	0	33	0	22	0

Correlation of housing wealth and debt amounts

Pearson correlation: 0.25<sup>2</sup>

Kendall's tau: 0.25<sup>2</sup>

Correlation of housing wealth and income

Pearson correlation: 0.08<sup>2</sup>

Kendall's tau: 0.17<sup>2</sup>

Correlation of debt amounts and income

Pearson correlation: 0.05<sup>2</sup>

Kendall's tau: 0.06<sup>2</sup>

Source: OeNB 2008 HSHW.

<sup>1</sup> Only households with outstanding housing loans.

<sup>2</sup> Significant at the 5% level or below.

<sup>6</sup> Vulnerability refers to households that are not able to repay outstanding debt.

<sup>7</sup> A comprehensive vulnerability analysis of the household sector has to be based on data on the households' total net assets (financial assets, real estate assets, other assets and total liabilities). As our data capture only part of total net assets, the following analysis should be interpreted with caution.

<sup>8</sup> The default risk for other types of loans, e.g. home improvement loans, consumer loans or loans taken out by self-employed persons, is not included here owing to a lack of data.

<sup>9</sup> Especially the median values.

<sup>10</sup> These correlations should be regarded as approximations, as they consider only the within variance, but not the between variance of the multiple imputed data set. See Albacete et al. (2009) for further details on the imputations we used in this contribution.

holds varies across income quartiles, as the analysis only considers households with outstanding debt. In the lowest income category, the share of indebted households is 9%. It rises across income categories and stands at 33% in the highest quartile. The value-to-loan ratio<sup>11</sup> in table 1 shows that the real estate assets held by the household sector seem sufficient to collateralize its debt: The mean household in each income category has assets worth more than twice as much as the underlying debt.

We use two indicators commonly found in the literature<sup>12</sup> for a better assessment of households' vulnerability: (1) the distribution of debt across

income categories, and (2) the debt-servicing ratios.

#### (1) Distribution of Debt and Income

Chart 1 shows the distribution of Austrian households' total debt across income categories and these income groups' respective shares in total housing assets. Housing assets are an important constituent of individual households' financial situation, as these assets can be sold to repay debt, if necessary. Indebted households in the highest income quartile account for 39% of the total volume of Austrian households' outstanding housing loans (blue bars). At the same time, they also hold 15% of all real estate assets (red bars). Please note that while the debt shares across all income categories add up to 100%, the shares in housing assets do not, as not all homeowners are indebted. All in all, indebted households own 36% of housing wealth.<sup>13</sup> The distribution of debt is rather strongly left-skewed. Low-income households account for a small share of total debt, which means that the associated risks for the banking sector are relatively small. It also implies, however, that these households may have only limited access to loans, which can, in fact, give rise to welfare costs owing to lower consumption and investment.

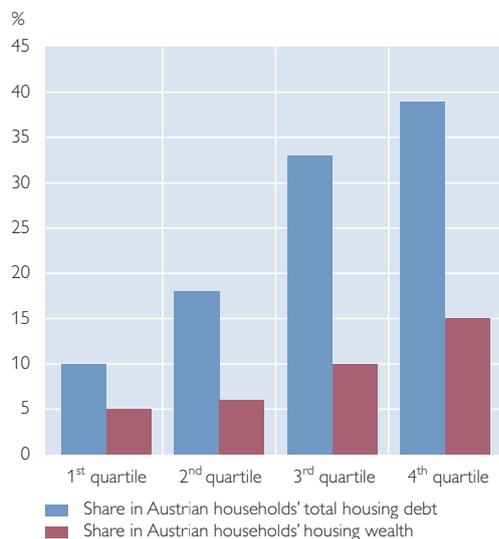
#### (2) Debt-Servicing Ratios<sup>14</sup>

An alternative approach to assessing the vulnerability of an indebted household is to measure the share in disposable income it uses to repay debt. A large share would imply that a household's sensitivity to interest rate and income

Chart 1

### Distribution of Debt by Income Groups

#### Housing Wealth and Housing Debt by Income Quartiles in 2007



Source: OeNB 2008 HSHW.

<sup>11</sup> This ratio refers to the households' housing wealth and loans outstanding.

<sup>12</sup> See Gyntelberg et al. (2007).

<sup>13</sup> This share is perhaps smaller than expected, which is attributable to the fact that this study only considers the most important debt category, namely debt incurred to purchase housing. Still, including households that hold other types of debt (e.g. consumer loans) would lead to a manifold increase in the housing wealth of all indebted households and would thus also boost the share in total real estate assets held by indebted households.

<sup>14</sup> The figures indicated below refer exclusively to primary residence owners, as this is the only group for which data on debt service are available.

fluctuations will be rather high. Chart 2 shows the share in disposable income the median indebted household of each income category use to repay the loans they took out to purchase their primary residence. This share, which is 50% in the lowest income quartile (chart 2), declines continuously in each higher category and comes to 12% in the highest quartile. Accordingly, the distribution of debt-servicing ratios is very strongly right-skewed toward the lowest-income households. A comparison with other countries<sup>15</sup> shows that the values for the lowest-income quartile in Austria are above the 35% mean<sup>16</sup> and roughly equal to the values observed e.g. in Spain (48%) or the Netherlands (54%) in 2005.

In addition to servicing debt, households have to pay for other housing costs, e.g. for electricity or heating. When asked if they had to limit house-

hold spending for food, clothing, vacations, etc. to be able to afford all housing costs, 34% of respondents answered in the affirmative. Chart 2 shows that this reply was given not only by households in the first (lowest) income quartile but also by a disproportionately large number from the second and third quartiles, which suggests that there are vulnerable households also in these income groups. Detailed statements on this issue would, however, require more in-depth information on how much each household spends on housing and its ability to meet its daily needs.<sup>17</sup>

### 3 Loan Characteristics<sup>18</sup>

In addition to the outstanding loan amounts, several loan characteristics are also highly relevant for the monetary transmission mechanism and for the associated risks for financial stability. We will focus on the following aspects: type of loan, lender, purpose of the loan, collateralization, maturity, interest rates, repayment and loan-to-value ratios.

Given that one household can have several outstanding loans (chart A1), the figures for individual loan characteristics always refer to households that have at least one such loan. This is why the household percentage shares do not necessarily add up to 100% unless a household has only one outstanding loan.

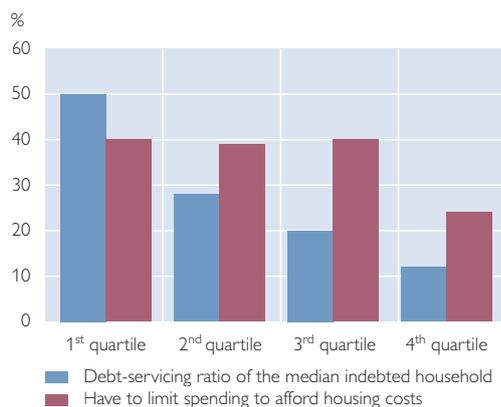
#### 3.1 Type of Loan

The available data allow us to distinguish between loans in terms of collateralization (mortgage-backed loans and

Chart 2

#### Housing Debt-Servicing Ratio of Austrian Households by Income Groups

Debt Service in Relation to Disposable Income by Income Quartiles in 2007



Source: OeNB 2008 HSHW.

<sup>15</sup> See ECB (2009) for the results of household surveys for Germany, Greece, Spain, Italy, the Netherlands and Portugal.

<sup>16</sup> We calculated the mean value for the countries listed in footnote 15 using data from ECB (2009).

<sup>17</sup> See Albacete and Fessler (2010).

<sup>18</sup> If not indicated otherwise, the figures in this section always refer to loans taken out to purchase the primary residence, as no detailed information was available on the characteristics of any other type of loan.

loans that are not secured by a mortgage) and currency (foreign currency and euro loans). Within the mortgage-backed loans group, we can further distinguish between loans granted by building and loan associations and housing loans granted by the government. In the following, we will examine both types of mortgage-backed loans. The other loan types will be discussed in section 3.4 (mortgage-backed loans) and section 5 (government loans).

Despite the risks involved, foreign currency loans have become very popular in Austria: 29% of all indebted Austrian households have at least one outstanding foreign currency loan. In the fourth quarter of 2007<sup>19</sup> 28% of the volume of outstanding loans to households was in a foreign currency (Swiss franc, Japanese yen) according to the ECB's money and banking statistics. The risks associated with foreign currency loans include (1) exchange rate risk, which means that borrowers have to pay back a higher amount than they received initially if the foreign currency in which the loan was taken out appreciates, and (2) interest rate risk, which means that changes in the economic environment may quickly erode the interest rate advantage of a foreign currency loan against a euro loan or even turn it into a disadvantage. Considering that most foreign currency loans are bullet loans linked to repayment vehicles, performance risk is another factor that is incidentally also relevant for other types of loans (section 3.7). 73% of Austrian households with a bullet loan have at least also one foreign currency loan (table A5).

Table A4 shows that foreign currency loans are especially popular among young households: In the age

group 18 to 29 years, 42% of respondents say their household has at least one foreign currency loan, which is far above the 29% mean. A breakdown by income groups shows that high-income households are much more likely than others to have at least one foreign currency loan (35% in the highest income quartile). Young and rich people seem to be least averse to the risks associated with foreign currency loans. A breakdown by provinces reveals that the share of foreign currency borrowers is by far highest (64%) in the westernmost province, Vorarlberg, which is probably due to the geographical and currency proximity to Switzerland, followed by Upper Austria (46%).

The results of a logit estimation substantiate this outcome: The probability of holding a foreign currency loan increases significantly with rising income and education levels. Employees, civil servants and nonemployed people are significantly less likely to hold a foreign currency loan than business owners. The same is true of single households compared with (married) couple households. A breakdown by provinces shows that households in Tyrol, Salzburg, Lower Austria and Vienna are significantly less likely to have a foreign currency loan than those in Vorarlberg (table A3).

57% of all indebted Austrian households have loans that were granted by a building and loan association. Such loans are highly popular in the youngest age group (18 to 29 years). 89% of debtors in this category have at least one such loan (table A4). No clear pattern was observed for income, though – it seems that (unlike foreign currency loans) this type of loan is also attractive for more risk-averse house-

<sup>19</sup> This was the time when the respondents of the OeNB's 2008 HSHW were asked about their outstanding loans.

holds, as it does not involve exchange rate risk and reduces interest rate risk. Among the Austrian provinces, households from Vorarlberg and Upper Austria again rank first at 76% and 72%, respectively, followed by Vienna, which at 63% is also markedly above the mean value of 57%. Table A5 shows that many households have both types of loans at the same time: 85% of households with a foreign currency loan have also taken out at least one loan from a building and loan association.

### 3.2 Lender

So far, no data has been available on loans extended to households by employers or other households in Austria, as the financial accounts cover only bank loans and loans granted by the government. This is the first study to present such data.

The survey results show that these alternative lenders play a rather minor role in lending to Austrian households (table A4). A mere 4% of all homeowners with outstanding debt have at least one outstanding loan that was granted by their employer (e.g. advances on salary) or by another household (e.g. family or friends). This compares with 77% holding bank loans<sup>20</sup> and 38% government loans. The picture is similar for the total volume of loans outstanding: Bank loans account for 79%, government loans for 17% and loans extended by employers or households for 4%. Taking out loans from employers or households is more customary among homeowners with high education levels, civil servants and farmers, households in rather low in-

come categories, and households in Carinthia, Tyrol and Vienna.

Government loans are more common among older households, while bank loans are more customary among younger ones. Regarding income categories, government loans are more frequently taken out by high-income households, but no specific pattern emerges for bank loans. A breakdown by professions reveals that only 55% of civil servants with outstanding debt have at least one outstanding bank loan. This group seems to finance housing primarily via government loans (67%). The latter type of loans seems to be more common in small municipalities and rural areas, while bank loans seem to be more customary in bigger municipalities and urban areas. Of the Austrian households with outstanding debt, those living in Burgenland and Lower Austria account for an above-average share of government loans, while those in Vorarlberg and Vienna account for an above-average share of bank loans.

### 3.3 Purpose<sup>21</sup>

According to the survey results, 74% of all Austrian households with outstanding loans took out housing loans to purchase at least one primary residence.<sup>22</sup> Households in the age group 30 to 49 years make up an above-average share of these borrowers (table A4). This purpose is far more common in rural areas than it is in cities: The larger a municipality is, the smaller the share of primary residence borrowers among indebted households is. In the capital city, Vienna, for instance, just 37% of

<sup>20</sup> Including loans extended by credit institutions like e.g. building and loan associations.

<sup>21</sup> In this section, we refer to all indebted households (including those who have taken out a housing loan to finance a housing association deposit or to purchase a second property).

<sup>22</sup> By comparison, an OeNB housing finance survey conducted among Austrian commercial banks in summer 2008 shows that 83% of new mortgage loans taken out in 2007 were used to finance owner-occupied housing.

indebted households have such a loan. The size of the property also plays an important role: Only 37% of the households with a primary residence up to 65m<sup>2</sup> took out a loan, while it is 93% of those with housing of 130m<sup>2</sup> or larger.

12% of indebted households took out a loan to finance a deposit for their housing association apartment. These households tend to be younger than those with a loan to purchase a primary residence, or they have rather lower education levels. Nonemployed people, blue-collar workers or rather low-income earners make up an above-average share, as do people living in large municipalities and urban areas: 28% of households in Vienna and 30% of households in Carinthian municipalities hold such a loan. An above-average share of them live in rather small homes and would like to move somewhere else.

17% of indebted households used at least one of their loans to purchase one or more additional properties. People aged 50+ are especially likely to have taken out a loan for this purpose. In terms of education levels and professions, it is 21% in the group with the highest education level, 29% of civil servants, 25% of self-employed persons and business owners, and 24% of pensioners. As expected, also households with the following characteristics make up an above-average share of second property buyers among households with outstanding loans: highest income quartile, living in Vienna or other urban areas and living in apartments smaller than 65m<sup>2</sup>. Of the households that took out a loan to purchase a second property, 52% use the property for

residential or similar purposes<sup>23</sup>, only 26% offer it for rent and 25% use it as an investment.<sup>24</sup>

Households can secure a loan against their primary residence and use it for purposes other than purchasing real estate. At the time of the survey, this was the case with 24% of homeowners who had taken out a loan at some point in time to purchase their primary residence.<sup>25</sup> Such loans can be used to finance e.g. consumption, home improvements, investment or repayment of other debt. Mortgage equity withdrawal, or equity extraction, as this type of financing is also called, is very popular in the U.S.A. Extracting home equity is only possible as long as the current market value of the property is higher than the mortgage debt. Mortgage equity withdrawals increase the liquidity of households' real estate assets, but they also lead to stronger wealth effects caused by interest rate changes. Table A4 shows that an above-average share of young households (51% in the age group 18 to 29 years) and high-income households (28% of the highest income quartile) rely on this type of financing. Salzburg (39%) and Lower Austria (31%) are the two provinces with the highest share of households holding such loans.

### 3.4 Collateralization

The OeNB's HSHW addressed two types of loans that help increase the probability that lenders' claims are paid: mortgage-backed loans and guarantor loans.

Mortgage loans are very customary in Austria. An overwhelming majority of homeownership households with out-

<sup>23</sup> Residential real property: used as vacation home, relatives live there; plots of land: (additional) usable space, building a house for family or children later on.

<sup>24</sup> The sum of all indicated purposes does not add up to 100%, as respondents could select multiple responses.

<sup>25</sup> The respective figure for all homeownership households is unfortunately not available.

### Rental Market in Austria

A 50% ratio of primary homeowners shows that a strong rental market exists in Austria. It comprises government-subsidized housing and apartments as well as housing rented out by private landlords.

In the following, we will look into the survey data on tenancy arrangements (see also section 5). As many as 30% of all survey respondents (i.e. including those who are not indebted) live in subsidized rental apartments: public housing apartments (*Gemeindewohnung*) or housing association apartments (*Genossenschaftswohnung*). Only 13% of respondents are tenants or subtenants of property rented out by private landlords.

We will focus on homeowners of primary residences and other residential real estate (i.e. excluding land, fields, forests, office space, hotels, business premises, etc.). 56% of all households surveyed own residential property, but how many of them actually live in the houses they own? While 88% of homeowners indicate that they live in one of the properties they own, 7% of homeowners live in government-subsidized buildings or housing association apartments, even though they own a place. The households in our data set own a total of 2,220 residential units. 79% of them are used as a primary residence, 7% are vacation homes, and 4% are inhabited by the homeowners' relatives. Only 5% of residential real estate holdings are rented out. Who are these (comparatively) few private landlords? 43% of them are employees, 22% are civil servants, and 6% are contract employees. The mean age of landlords is 47 years; the other homeowners are slightly older (50 years).

A closer look at the survey data on tenants shows that 34% of tenants have a housing association apartment, and another 26% have a public housing apartment, so that 60% of tenants in Austria live in government-subsidized apartments or houses. Only 30% are tenants or subtenants of homes rented out by private landlords,<sup>1</sup> and 8% of tenants are usufruct holders.

The data from the OeNB's HSHW provide an accurate reflection of the situation in the Austrian rental market. The share of government-subsidized housing is high by European standards. While the eligibility of future tenants is rigorously reviewed before the conclusion of rental agreements, less strict criteria apply when such an apartment is passed down to the next generation.

To sum up, Austrian households purchase and own residential property mainly for their own use, and less for the purpose of renting out or as an investment. There are two main reasons why renting out is not as attractive in Austria as it is in other countries: First, tenant protection laws are rather strict in Austria (e.g. Landlord and Tenant Act – *Mietrechtsgesetz* – and a law cushioning the impact of inflation on housing costs – *Mietrechtliches Inflationslinderungsgesetz*), and second, landlords do not benefit that much from tax relief (e.g. deductibility of mortgage interest payments from taxable income) that apply in several other European countries (e.g. the Netherlands or Spain). These two factors are among the reasons why real estate and rental prices in Austria have developed modestly by European standards. The emergence of a real estate bubble is thus rather unlikely in Austria.

<sup>1</sup> According to 2007 data of residential building statistics by Statistics Austria 46% of apartments or houses are rented out by private landlords and 54% are housing association apartments or public housing apartments. These differences in the data partly reflect different definitions of tenancy types (private, government-subsidized, usufruct rights).

standing debt (90% of them accounting for 86% of the outstanding loan volume) have at least one such loan. Single or divorced homeowners are less likely than the other groups to hold such a loan (table A4).

Guarantor loans – where a third party (usually a family member) under-

takes to repay the loan should the borrower fail to do so – are less common, but still relevant. 44% of Austrian households with outstanding loans (representing 50% of the total outstanding loan volume) have such a loan. The younger a household, the more likely it is to hold such a loan. 70% of

guarantors for such loans are the borrowers' partners, 22% are parents, 6% are other relatives and 2% are other people. Married couple homeowners and nonemployed persons make up an above-average share of guarantor loan borrowers, as do low-income groups. A breakdown by provinces shows that Vorarlberg ranks first in this category: A huge share – 83% – of indebted homeowners has at least one such loan.<sup>26</sup>

### 3.5 Maturity

Since the start of Stage Three of EMU, the average maturity of new loans has climbed steadily in the euro area. This development reflects a rise in real estate prices and the associated increase in debt, but also longer life expectancy and a higher retirement age. Other contributing factors are stronger competition and better long-term financing conditions by banks. The longer average maturity of new loans is important in that it can balance the effects of rising debt levels: While the latter raise households' vulnerability to monetary shocks (and thus amplify the effects of such shocks), longer maturities can reduce these risks and dampen these effects.

Against this background, we will examine the characteristics of households that have loans with especially long maturities. Comparability is, however, limited based on the survey data, as comparing maturities would make sense only if we had a sample of house-

holds that took out their loans at the same time. Our data cover households that took out a loan between 1941 and 2008, though, and the sample would be too small if we focused on one particular year (e.g. 2007). Alternatively, we will compare data on residual maturity, which for this purpose is defined as the difference between the year in which the loan will mature and the year in which the interview took place (2008).<sup>27</sup>

The average total maturity period of all loans outstanding as of 2007 was between 22 and 25 years (for the average household's loan with the shortest and longest maturity, respectively), depending on how many outstanding loans the household had.<sup>28</sup> The average residual maturity period of loans per household was 14 to 16 years (table A4). As expected, residual maturity declines the older borrowers are: While the minimum residual maturity for borrowers aged 18 to 29 is on average 19 years, the maximum residual maturity for those aged 60 to 69 years is 11 years. Maximum residual maturities tend to be shorter for high-income households than for low-income borrowers, who probably simply take longer to repay their loans. A similar picture emerges for debt amounts: The higher a loan is, the longer the residual maturity period. The longest average residual maturity periods are observed for borrowers from Vorarlberg (17 years) and Vienna (maximum<sup>29</sup> 19 years), while the shortest periods are recorded for Carinthia (maximum 11 years).

<sup>26</sup> This result is not very robust, though, as it is based on only 30 respondents from Vorarlberg.

<sup>27</sup> 49 households with negative residual maturity were not taken into account. Negative residual maturities can occur when respondents did not consider later extensions of maturity in their replies regarding the overall term of the loan and when the date of maturity as originally agreed had already passed at the time of the interview.

<sup>28</sup> According to the OeNB's housing finance survey, which was conducted among Austrian banks in summer 2008, the maximum maturity of new mortgage loans was 25 to 30 years in 2007.

<sup>29</sup> Maximum values are indicated because one household can have more than one loan.

### 3.6 Type of Interest Rate

The type of interest rate agreed for a loan is relevant for how quickly monetary shocks affect disposable income. Financial accounts data show that the bulk of loans in Austria are variable rate loans: 61% of housing loans extended in 2007 were variable rate loans, compared with 43% in the euro area.<sup>30</sup> Accordingly, the monetary transmission of interest rate changes to disposable income can be expected to be faster in Austria than on average in the euro area. The factors leading to the predominance of variable rate loans in Austria are not clear and may be highly varied. On the demand side, it may be cultural characteristics and rather low risk aversion. On the supply side, it could be banks' short-term refinancing practices or the historically strong bank competition, which has led banks to attract customers with low short-term interest rates. Institutional factors such as interest rate ceilings and floors have also played a role. See ECB (2009) for a more comprehensive discussion of these issues.

In this study, the variable rate loan category includes loans assigned to this category by the borrowing household as well as loans with a combination of fixed and floating rates. The survey data (table A4) indicate that 66% of households holding loans have at least one variable rate loan, 36% have at least one fixed rate loan and only 6% have at least one interest-free loan. These results are broadly confirmed by the aggregated data. Looking at households' characteristics, we find that the

share of variable rate borrowers is especially high among young homeowners (75% of those aged 18 to 29 years) and university graduates (79%). In a breakdown by provinces, it turns out that households from Vienna (82%), Burgenland (77%) and Vorarlberg (74%) rank first in this category. Fixed rate housing loans, by contrast, are more common among older households (42% of those aged 60 to 69 years) and civil servants (52%).<sup>31</sup> Among the Austrian provinces, Lower Austria has the highest share of such loans (48%). Borrowers with outstanding interest-free loans<sup>32</sup> tend to be in older age cohorts (32% of those aged 70+). Regarding income and regions, low-income groups (16%) and households from Tyrol (15%) are more likely to hold such loans than the other groups.

In a next step, we use a logit model to estimate the determinants of likelihood of variable rate debt, controlling for various sociodemographic variables (table A3). An interaction term of education and income shows that the likelihood of holding variable rate debt increases with income across all education levels – with the exception of the lowest education level: The term is significantly different from zero for all groups except graduates of secondary academic and secondary vocational schools. A decline in this likelihood with rising income is only observed for the group with the lowest education level. One possible interpretation of this outcome could be that households with low (compulsory) education levels tend to be more risk-averse and there-

<sup>30</sup> In this context, variable rate loans include loans with a floating rate and loans with an initial rate fixation of up to one year.

<sup>31</sup> 82% of farmers hold fixed rate housing loans, but the survey sample was too small (less than 50 households) to yield robust results.

<sup>32</sup> These results are not very robust, as the number of respondents holding interest-free loans was small in our sample (less than 50 households).

fore prefer to take out fixed rate or interest-free loans.<sup>33</sup> In addition, Lower Austria is the only province with a significantly lower prevalence of variable rate loans than Vorarlberg, which confirms the descriptive data according to which an above-average share of households from Lower Austria hold fixed rate loans. Age has no significant impact on the likelihood of holding variable rate debt.

Two other interesting outcomes are that 81% (i.e. a disproportionately large share) of households with bullet loans have at least one variable rate loan (table A5), and that the share of variable rate loans rises with average residual maturity, so that a trend emerges toward variable rate housing loans.

### 3.7 Repayment

The most common way for Austrian private borrowers to repay a loan is through regular installments of both interest and principal. These installments are higher in the beginning and decline gradually as more of the principal is repaid. 60% of Austrian households with outstanding housing loans in 2007 had at least one such installment loan for housing, which is by far the most common type of loan, accounting for 85% of the total volume of outstanding loans.

Another, less common way is bullet loans, where the entire initial loan amount is due at maturity (one-time payment) and borrowers make only monthly interest payments. A mere 12% of indebted households (accounting for 15% of the outstanding credit

volume) have at least one such loan (table A4). Bullet loans are especially popular among high-income groups (17%) and among households from Vorarlberg (38%) and Burgenland (32%).<sup>34</sup>

Bullet loans are usually linked to repayment vehicles that borrowers use to save the amount of money required to redeem the loan at maturity. The higher the assumed average yield that is generated by the repayment vehicle, the lower the monthly saving amount that is required to pay back the loan. In case the interest yields fall behind expectations, however, borrowers may find it difficult to pay back the full loan amount. Our data indicate that most indebted households that hold repayment vehicles rely primarily on capital market investment to achieve their returns: 60% have a life insurance policy, 38% hold a mutual fund policy, and 4% hold stocks. Building and loan contracts (9%) and savings books (4%) play only a minor role as repayment vehicles.<sup>35</sup> This is why repayment vehicles involve the same risk as other types of security speculation: the higher the expected return, the greater the associated risk.

The average amount repaid in 2007 was EUR 7,883. Repayment amounts were especially high among university graduates (EUR 11,207), self-employed persons/business owners and civil servants (EUR 10,787 and EUR 10,077, respectively) as well as among households from Tyrol, Upper Austria and Vorarlberg (EUR 14,334, EUR 10,299 and EUR 9,969, respectively). The breakdown by households' loan portfolios in table A5 shows that repayment

<sup>33</sup> We developed risk aversion indicators based on the households' financial investment portfolios and included them as regressors. The impact of these variables on the likelihood of variable rate debt was, however, always insignificantly different from zero.

<sup>34</sup> The results for households that have bullet loans are not very robust, though, as the sample included only few such households.

<sup>35</sup> All figures in this sentence refer to households that hold at least one such instrument.

obligations are particularly high for households that have a foreign currency loan (EUR 9,594 per year), even though this group also has an above-average share of bullet loans. The longer the average residual maturity of a loan was (based on 2007 data), the higher the annual repayment amounts.

### 3.8 Loan-to-Value Ratio<sup>36</sup>

The trend toward longer loan terms and new types of credit that allow for delaying repayment has led to a rise in the ratio of housing loans to housing wealth in the euro area. In 2007, this loan-to-value (LTV) ratio was on average 51% for Austrian households.<sup>37</sup> While households with a high LTV ratio can use a relatively larger share of their income for consumption, high LTV ratios also exacerbate potential wealth effects on consumption (e.g. through changes in real estate or security prices), which would eventually amplify the influence interest rate changes have on aggregate demand.

Table A4 shows that LTV ratios are higher the younger a household with outstanding debt is (74% in the youngest age group). It is the other way round with income: The higher household income, the lower the LTV ratio. While the LTV ratio is 68% for indebted households in the lowest income group, it is just 42% for those in the highest. The highest LTV ratios are reported for Vorarlberg (85%) and Vienna (60%), the lowest for Carinthia (37%), Burgenland (40%) and Lower Austria (42%).

The breakdown by loan types in table A5 shows that especially households with foreign currency loans or bank loans tend to have above-average LTV ratios (68% and 61%, respectively). The lower the average interest rate households pay for their loans, the higher their LTV ratio (64% in the lowest interest quartile).

## 4 Alternative Forms of Housing Finance<sup>38</sup>

Taking out a loan is not the only way to finance real estate – people can make an inheritance or receive financial support from family or friends. These alternative forms of housing finance are important insofar as they are loan substitutes: If the amounts thus obtained make up a substantial share of housing finance, households will take out smaller loan amounts (if at all), household debt will be lower (as people do not have to pay back any money), and the households' sensitivity to changes in interest rates and income levels will decline. In this section, we focus exclusively on primary homeowners, as no data on alternative forms of housing finance are available for the other households.

Two-thirds of all homeowners in our data set had to rely on third-party financing<sup>39</sup> to purchase their primary residence. Around one-half of them financed their homes through credits alone, while the other half (at least also) used alternative forms of finance (40% received financial sup-

<sup>36</sup> In this section, we refer to all indebted households (including those who have taken out a housing loan to finance a housing association deposit or to purchase a second property).

<sup>37</sup> This share covers the entire stock of outstanding housing loans, not only new loans. According to the OeNB's housing finance survey, LTV ratios were between 70% and 96% for bank loans taken out in Austria in 2007.

<sup>38</sup> Our analysis of the variables presented in sections 4 and 5 (loan taken out, inheritance, inter vivos gift from family or friends and government-subsidized housing loan) is based on values at the time of the real estate purchase and not on values as of December 31, 2007, like in the previous sections. The data on sociodemographic characteristics, however, refer to the time of the interview. Our results should be interpreted in this light.

<sup>39</sup> This includes loans, inheritances or money received as an inter vivos gift from family or friends.

Table 2

**Share of Different Financing Forms in the Primary Residence Purchase Price<sup>1</sup>**

	Mean	Median
	% of the purchase price	
<b>Repayment required:</b>		
Loan financing	96	61
of which:		
Government-subsidized housing loans	72	29
Loans granted by households <sup>2</sup>	55	39
<b>No repayment required:</b>		
Inheritance	83	43
Inter vivos gifts from family or friends (money)	46	16

Source: OeNB 2008 HSHW.

<sup>1</sup> Only households that have purchased their primary residence.

<sup>2</sup> Number of households <50.

port from family or friends, 15% made an inheritance). The characteristics of households that rely at least partly on alternative forms of housing finance are very similar to those that use loans only (see table A6 for details).<sup>40</sup> The few differences refer e.g. to age (households that use alternative forms of housing finance tend to be younger) and use (they tend to use their primary residence for professional purposes). No clear pattern is observed for income. A breakdown by provinces shows that an above-average share of these households live in Carinthia and Upper Austria. In addition, households with high-value homes (measured by the estimated sales price) make up an especially large share of this group.

Table 2 shows the contribution of each form of financing to the purchase price of the primary real estate. Among home loan borrowers, loan financing accounted for the bulk of the purchase price paid for the primary residence (median: 61%). Among those who used an inheritance to finance their homes, this form of financing covered almost one-half of the purchase price (median: 43%). The households that received

financial support from family or friends reported that this money covered only a small portion of the purchase price (median: 16%).

The remaining third of Austrian homeownership households did not require third-party financing. As expected, these are primarily households that received the property as an inheritance or inter vivos gift. This group is characterized by a low educational level of the household head or a low household income, which indicates low creditworthiness. A breakdown by regions shows that no third-party financing is required above all by households living in small municipalities or rural areas and those living in Styria and Lower Austria.

## 5 Taxes and Subsidies in the Real Estate Sector

Regulation helps smooth price fluctuations in the real estate market. Several economic policy tools and measures can be used to promote residential construction investment and affordable homeownership. The range of regulatory measures at the international level includes income-tax deductibility of interest payments or mortgage loan subsi-

<sup>40</sup> The values for the second group represent the complementary set of the first group's values (table A6, columns 3 and 4 as well as 7 and 8).

dies for households. Direct housing subsidies can be capital grants or lump sum exemptions from interest payments. Other measures taken by governments to promote nonprofit residential construction include financing or subsidizing housing construction. The question whether national differences in tax relief and housing assistance schemes are responsible for the substantial differences in homeownership ratios across Europe is frequently addressed in the literature. In 2007, homeownership ratios were highest at above 75% in Cyprus, Spain, Greece, Ireland or Sweden, in the mid-range between 55% and 60% in Austria, France, Finland and the Netherlands, and at the lower end of the spectrum at 43% in Germany (ECB, 2009). The question whether mortgage interest tax relief stimulates owner-occupied housing is often discussed in the literature. In an analysis of the relevant features of the Dutch tax system, Swank et al. (2002) find that both starters and movers benefit from tax relief for higher income groups. Tax breaks for homeowners, however, tend to favor the emergence of real estate bubbles (especially if interest rates are low and LTV ratios are high). The authors come to the conclusion that the efficiency of implicit tax subsidies for homeowners depends critically on the price elasticity of demand for newly built dwellings. Flevotomou and Matsaganis (2007) show for the Netherlands, Sweden, Finland, Italy and Greece that the distributional effects of tax deductibility of interest payments are regressive: Higher-income groups account for a disproportionately large share of those who benefit from mortgage interest tax relief in all countries under review.

In the OeNB's HSHW, 25% of all respondents (homeowners and tenants)

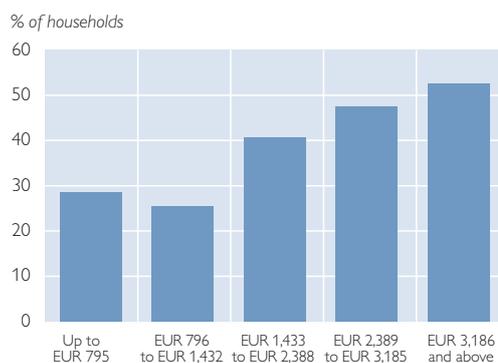
stated that the actual housing costs were higher than they had expected when moving in.

The survey results indicate that in 2007, 12% of tenants received rent subsidies from the provincial government. As expected, these were above all households with low income and education levels – the share of recipients is highest in the income group up to EUR 1,432 and among those who completed only compulsory schooling or an apprenticeship. According to the survey respondents, rent subsidies were between EUR 120 and EUR 4,200 for the whole year (with 28% of recipients receiving less than EUR 1,000).

The Austrian housing assistance schemes (*Wohnbauförderung*) are another economic policy tool for providing direct subsidies. While the concrete arrangements and subsidy amounts differ across the Austrian provinces, housing assistance funds (like, of course, the capital available for down payments) generally play an important role in a bank's assessment of housing loan applications. As many as 42% of primary homeowners received funds from a housing assistance scheme when they purchased or built their home. These funds account for a considerable

Chart 3

### Housing Assistance Recipients by Income Groups



Source: OeNB 2008 HSHW.

share of the primary residence purchase price (mean: 72%, median: 29%; see table 2). Interestingly, the share of housing assistance recipients increases with rising income (chart 3). 64% of the assistance provided was loans, 33% was (repayable or nonrepayable) interest or repayment subsidies.

Public housing is another key area of housing subsidies in Austria. 12% of respondents live in a public housing apartment<sup>41</sup> (*Gemeindewohnung*). The households' income background seems to play only a minor role in this context: As many as 18% of public housing tenants were from the highest income group.

Nonprofit housing construction (*gemeinnütziger Wohnungsbau*) is another

means of providing direct housing construction subsidies. In 2006, nonprofit housing associations managed some 22% of all apartments in Austria. This share has increased steadily over the past decades – 30 years ago, it was only around 10%. 17%<sup>42</sup> of the surveyed households stated that they were housing association tenants.<sup>43</sup> Households with mid-level incomes make up the majority of housing association tenants – 27% of them have a monthly net income between EUR 796 and EUR 1,432, and another 31% receive between EUR 1,433 and EUR 2,388 (table 3).

The share of housing association tenants is smaller in the other income

Table 3

### Tenants of Subsidized Apartments by Income Category

	Monthly net income				
	Up to EUR 795	EUR 796 to EUR 1,432	EUR 1,433 to EUR 2,388	EUR 2,389 to EUR 3,185	EUR 3,186 EUR and above
	% of households				
Public housing apartment	8	35	25	14	18
Housing association apartment	9	27	31	16	17
Loan to finance the deposit required for the housing association apartment	3	15	37	20	25
<b>Size of the deposit made when moving in</b>					
Up to EUR 1,000	13	33	34	12	8
EUR 1,001 to EUR 2,000	8	44	32	6	10
EUR 2,001 to EUR 10,000	8	27	27	23	15
EUR 10,001 to EUR 20,000	4	18	39	18	21
EUR 20,001 to EUR 40,000	17	21	23	15	24
EUR 40,001 to EUR 60,000	6	28	38	15	13

Source: OeNB 2008 HSHW.

<sup>41</sup> Public housing apartments are owned by the respective municipality, which is the developer and landlord of these traditionally very affordable apartments. For a small share of these apartments (mainly new dwellings), the municipality can demand that tenants make a down payment for construction costs in addition to paying rent.

<sup>42</sup> 17% of the surveyed households are housing association tenants – the 22% mentioned above refer to housing association apartments.

<sup>43</sup> Eligibility criteria for housing association tenants differ across the Austrian provinces. In general, tenants must be citizens of Austria or an EU Member State, and household income must not exceed a specified limit. The apartment must not be used as a second home or sublet to a third party. Another potential barrier for housing association tenants is the deposit they need to pay upon conclusion of the rental agreement. The amount of the deposit depends on when the apartment was built, where it is located and what size it is. Upon termination of the rental agreement, tenants receive back the deposit they paid made minus 1% per year.

categories. 62% of these tenants completed an apprenticeship or graduated from vocational school. The share of housing association tenants is highest in the youngest age group, and it drops significantly among households aged 50+.

25% of housing association tenants took out at least one loan to finance the deposit they had to make to the housing association. It is noteworthy, though, that while 9% of housing association tenants are in the lowest income group, only 3% of those tenants who took out a loan to finance the deposit are in the lowest income group. This goes to show, once again, that higher income earners find it easier to obtain a loan. 11% of housing association tenants did not have to make a deposit at all when moving in, and for another 40% the amount was below EUR 5,000. Higher income households tended to pay higher amounts than lower income groups.

Thus, we find differences in the extent to which each income group benefits from the various housing subsidy schemes: While direct housing subsidies seem to benefit higher income earners more than lower income groups (chart 3), the latter receive support in the form of rent subsidies and government-subsidized housing (table 3).

## 6 Summary and Conclusions

This study presents a first overview of the results of the OeNB's HSHW in Austria.

22% of Austrian households had outstanding housing loans in 2007. Loan-to-value ratios, loan amounts and loan types are highly heterogeneous across household characteristics: Socio-demographic factors (e.g. age), socio-economic factors (e.g. income) and geographical factors (e.g. province) seem to play an important role.

Homeowners in the age group 18 to 39 years are significantly more likely to

hold housing loans, and their debt levels tend to be higher than in the other age groups. Purchasing the primary residence (homeowners) or financing the housing association deposit (tenants) are the main reasons for this age group to take out a housing loan. Higher-risk financing, e.g. foreign currency loans, mortgage equity withdrawals, variable rate loans or high LTV ratios, is more common in this group than in the others. At the same time, these borrowers hold an above-average share of guarantor loans, the loans' residual maturities tend to be longer, and many of these borrowers also rely on alternative forms of financing (money they do not have to pay back, e.g. inheritance, financial support from family or friends). By contrast, older homeowners tend to take out loans to purchase a second property, which most of them use for themselves (e.g. vacation home, usable space). Austrians rather rarely purchase homes to rent them out or as an investment. Households in these age groups tend to avoid taking out bank loans, relying on loans granted by the province or public institutions or loans granted by employers or households instead. An above-average share of primary home buyers in this age group do not need third-party funds (be it loans, an inheritance or support by family or friends).

A breakdown by income groups reveals that a disproportionately large share of low-income households did not take out a housing loan at all, which points to a limited propensity or possibility to borrow. It seems that low-income households with outstanding housing debt are especially vulnerable, given that their LTV ratios and their debt-servicing ratios in relation to income are disproportionately high. The median share in disposable income used to pay back primary residence loans is

50% in the lowest income quartile, but only 12% in the highest one. As the lowest-income households account for only 10% of all outstanding housing loans, the associated risks to financial stability are limited, though. When low-income households incur debt, they tend to additionally use alternative forms of financing they do not have to pay back (inheritance, financial support by family or friends) or take out an interest-free loan or a loan granted by their employer (e.g. advances on salary) or by other households (e.g. family or friends). High-income households, by contrast, are significantly more likely to hold debt, and the amounts taken out are higher. An above-average share of them use the money to purchase a second property. Higher-risk financing, e.g. foreign currency loans, bullet loans linked to repayment vehicles or mortgage equity withdrawals, is also more common in this income group than in others. Such higher-risk financing and the fact that high-income households tend to take out variable rate loans expose them more to interest rate risk than other households. However, as LTV and debt-servicing ratios decline with rising income, the risk potential of households in the highest income quartile seems manageable from a financial stability perspective.

There are substantial regional differences in the type and amount of debt incurred. Certain loan characteristics, e.g. debt amounts, seem to follow a west-east pattern (with the exception of Salzburg): While average household debt for housing comes to as much as EUR 161,455 in the west of the country (Vorarlberg), this amount is EUR 98,568 in Upper Austria and only EUR 53,084 in the east (Lower Austria). A similar picture emerges for guarantor loans: They are disproportionately common in the west (Vorarlberg) but rather rare

in the east (Vienna). Another west-east pattern can be observed for LTV ratios (except for Vienna): This ratio is 85% for the median household in Vorarlberg, but only 40% in Burgenland and 42% in Lower Austria. We identified a number of other prominent loan characteristics for the individual provinces. A case in point is foreign currency loans: A disproportionately large share of households from Vorarlberg have taken out foreign currency loans, which likely reflects the geographical proximity to Switzerland and the Swiss franc. Another case in point is the purpose of the loan: We found that very many Viennese households are second home borrowers, many households from Carinthia (and Vienna) have taken out a loan to finance deposits to the housing associations, and very many households from Vorarlberg are primary residence borrowers. Loans granted by the government are especially common in Burgenland and Lower Austria; fixed rate loans are also very customary in Lower Austria.

This survey for the first time provides us with Austrian data on loans granted to households by employers (e.g. advances on salary) and other households (e.g. family or friends). It turns out that Austrian households hardly ever use these types of loans: They account for no more than 4% of the total volume of outstanding household loans for housing, while bank loans make up 79% and loans granted by the government account for 17%.

Alternative forms of financing that do not have to be paid back (e.g. inheritance, inter vivos gifts by family or friends) must be considered in our analysis, as they play a significant role in the field of housing finance. Households that receive such funds can take out smaller loans, if any. For the median borrower, loans accounted for 61% of

the purchase price. For the median heir, the inheritance made up 43%, and for the median recipient of inter vivos gifts from family or friends, this type of financing accounted for 16% of the purchase price.

The survey results also show that Austria has a strong rental market that is mainly based on subsidized housing: 50% of all Austrian households rent their primary homes, and 60% of these properties are housing association or public housing apartments. The fact that the rental market is strongly subsidized seems to have contributed to the rather low homeowner ratio by European standards: Homeowning households mainly use their property for residential purposes and not so much as an investment. Among second home borrowers, 52% use the property for residential or similar purposes, while only 26% rent them out and the remaining households (roughly one-quarter) use them as an investment.

In addition, the Austrian housing assistance schemes – which are less vulnerable to cyclical developments than tax-based systems are – seem to be one of the reasons for the moderate

development of real estate and rent prices. These schemes have led to varying effects of each housing subsidy instrument on the different income groups: While direct housing subsidies seem to benefit higher income earners more than lower income groups, the latter receive support in the form of rent subsidies and government-subsidized housing.

The differences in the structure of Austrian households' housing finance suggest that the impact of monetary policy on wealth (and hence on household consumption and savings) will also differ markedly. Changes in the regulation of the housing finance market have an impact not only on households' behavior, but also on financial stability and the effectiveness of the monetary transmission mechanism, and thus also on the development of other macroeconomic variables. Last, but not least, the survey data show that there is still some leeway for economic policymakers to optimize the specific design of the housing assistance framework and the range of available housing finance instruments.

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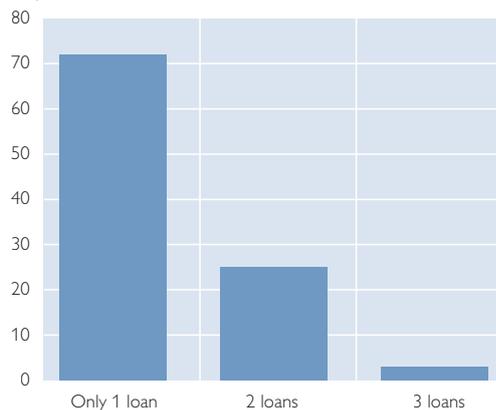
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## Annex

Chart A1

### Number of Outstanding Housing Loans

% of indebted Austrian households



Source: OeNB 2008 HSHW.

Note: Only primary residence debt.

## Housing Debt Rates and Housing Debt Amounts by Households' Characteristics

	Number of households surveyed	Share of indebted households <sup>1</sup>	Debt amounts (if the household is indebted)		Number of households surveyed	Share of indebted households <sup>1</sup>	Debt amounts (if the household is indebted)	
			Mean	Median			Mean	Median
			EUR				EUR	
	%				%			
<b>All households</b>	2,081	22	77,514	42,944				
<b>Gender</b>								
Male	981	24	75,456	40,000				
Female	1,100	21	79,609	50,000				
<b>Age</b>								
18 to 29 years	285	15	72,426	40,000				
30 to 39 years	382	33	86,314	65,434				
40 to 49 years	491	32	82,828	36,000				
50 to 59 years	384	21	69,023	40,000				
60 to 69 years	310	14	63,196	29,403				
70 years and older	229	6	42,292	24,330				
<b>Highest educational level completed</b>								
Compulsory education (maximum)	356	10	71,501	32,000				
Apprenticeship, vocational school, intermediate or higher technical/vocational school	1,191	23	74,859	41,458				
Academic secondary school, higher-level technical/vocational school	319	24	69,029	41,967				
College, university, academy	215	38	96,539	56,089				
<b>Marital status</b>								
Single	489	15	60,397	39,280				
Married	1,141	31	85,715	50,000				
Divorced	276	17	64,410	35,000				
Widowed	175	6	26,534	24,330				
<b>Occupational status / work generating the household's main income</b>								
Liberal professions, business owners	109	30	130,194	88,446				
Employees	614	28	70,901	39,901				
Civil servants	117	39	79,052	41,508				
Farmers	56	11	66,856	47,271				
Workers	329	27	82,640	51,177				
Other	81	23	79,606	55,000				
Pensioners	553	11	61,160	30,000				
Nonemployed	222	15	76,951	42,082				
<b>Total monthly net income</b>								
Up to EUR 795	173	10	72,807	56,185				
EUR 796 to EUR 1,432	472	9	67,713	27,109				
EUR 1,433 to EUR 2,388	598	24	74,717	40,000				
EUR 2,389 to EUR 3,185	373	31	69,064	40,241				
EUR 3,186 and above	464	34	90,170	55,000				
<b>Interviewer's impression of the apartment or house</b>								
Very exquisite and luxurious	53	43	100,388	50,000				
Rather high standard of living	494	36	87,000	61,105				
Good, medium standard of living	1,053	22	69,244	32,613				
Rather basic standard of living	416	7	74,409	50,000				
Poor standard of living	65	3	48,802	53,939				
<b>Province</b>								
Vorarlberg	79	32	161,455	118,924				
Tyrol	164	22	116,131	101,037				
Salzburg	134	25	50,848	41,458				
Upper Austria	326	24	98,568	55,000				
Carinthia	140	11	69,103	31,360				
Styria	295	17	71,559	50,000				
Burgenland	72	31	61,476	40,000				
Lower Austria	420	27	53,084	26,615				
Vienna	451	20	64,775	27,986				
<b>Holds bonds</b>								
No	1,942	21	74,239	40,000				
Yes	139	36	104,880	80,000				
<b>Holds stocks</b>								
No	1,847	21	79,110	42,327				
Yes	234	32	69,068	44,240				
<b>Holds mutual fund shares</b>								
No	1,991	22	75,661	41,475				
Yes	90	34	103,411	84,191				
<b>Holds equity investment</b>								
No	2,052	22	77,427	42,176				
Yes	29	44	80,905	86,040				
<b>Does not hold any investment instruments</b>								
No	1,917	23	77,570	42,944				
Yes	164	13	76,444	40,532				
<b>Owns the primary residence</b>								
Yes, purchased	614	48	92,275	66,850				
Yes, inherited	281	14	70,883	31,554				
Yes, inter vivos gift	125	26	84,094	30,000				
Yes, combination of several factors	31	34	139,875	129,262				
Yes, other	34	15	154,072	50,000				
No, tenant who paid a deposit	293	20	16,067	7,965				
No, tenant who did not pay a deposit	703	5	43,986	23,010				
<b>Purchased at least one property</b>								
Yes, at least partly	768	46	86,439	55,363				
No, other form of financing	501	16	76,416	30,000				
No, tenant who paid a deposit	247	18	13,914	7,262				
No, tenant who did not pay a deposit	565	0	0	0				
<b>Inherited at least one property</b>								
Yes, at least partly	446	17	91,132	55,000				
No, other form of financing	823	43	83,114	50,000				
No, tenant who paid a deposit	247	18	13,914	7,262				
No, tenant who did not pay a deposit	565	0	0	0				
<b>Housing wealth quartile</b>								
Up to EUR 109,571	79	25	45,079	26,930				
EUR 109,572 to EUR 200,000	128	36	80,058	50,000				
EUR 200,001 to EUR 310,691	118	40	83,570	60,000				
EUR 310,692 and above	113	35	119,478	77,659				

Source: OeNB 2008 HSHW.

<sup>1</sup> Refers to the share of indebted households in each category.

Table A2

**Housing Debt Amounts by Households' Loan Characteristics<sup>1</sup>**

	Number of households surveyed	Debt incurred to purchase the primary residence			Number of households surveyed	Debt incurred to purchase the primary residence	
		Mean	Median			Mean	Median
		EUR				EUR	
<b>All households</b>	360	91,279	61,434				
<b>Sales price quartiles (based on the estimated sales price of the primary residence)</b>				<b>At least one loan granted by the government</b>			
Up to EUR 120,000	75	58,950	44,609	No	224	103,678	80,000
EUR 120,001 to EUR 200,000	107	85,099	59,945	Yes	136	70,932	40,960
EUR 200,001 to EUR 300,000	101	97,868	90,000	<b>At least one loan granted by the employer or by another household</b>			
EUR 300,001 and above	76	123,985	79,818	No	347	89,987	60,044
				Yes	13	122,447	105,151
<b>Debt amount quartiles (only debt incurred for purchasing the primary residence)</b>				<b>At least mortgage equity withdrawal</b>			
Up to EUR 25,492	94	13,451	12,000	No	229	85,650	56,485
EUR 25,493 to EUR 61,434	88	42,010	40,000	Yes	131	101,347	75,000
EUR 61,435 to EUR 127,779	89	92,077	92,296	<b>At least one guarantor loan</b>			
EUR 127,780 and above	89	217,842	189,927	No	199	82,207	57,618
<b>At least one foreign currency loan</b>				Yes	161	102,955	71,028
No	258	76,879	50,000	<b>At least one variable rate loan</b>			
Yes	102	127,351	97,925	No	128	70,720	35,000
<b>At least one loan from a building and loan association</b>				Yes	232	101,909	80,000
No	153	77,149	38,028	<b>At least one bullet loan</b>			
Yes	207	101,825	78,216	No	317	79,123	50,432
<b>At least one government-subsidized housing loan</b>				Yes	43	180,692	170,000
No	188	103,834	74,125	<b>Average LTV ratio in quartiles</b>			
Yes	172	77,362	50,000	Up to 12%	94	20,289	14,667
<b>At least one bank loan</b>				13% to 31%	90	55,360	41,475
No	87	55,476	28,140	32% to 60%	90	114,492	99,508
Yes	273	102,250	78,402	60% and above	86	175,300	151,765

Source: OeNB 2008 HSHW.

<sup>1</sup> This table refers only to households that took on debt to purchase their primary residence.

**Determinants of Housing Debt**

Binomial logit estimation or OLS estimation of the determinants of ...

Variables	Housing debt rate (Logit)	Logarithmized housing debt amounts (OLS)	Foreign currency housing loan (Logit)	Variable rate housing loan (Logit)
<b>Household net income</b>	2e-04*** (-7.29e-05)	-7.83e-06 (3.13e-05)	1.43e-04** (0.032)	-0.001* (0.000)
<b>Household net income<sup>2</sup></b>	-1.13e-08** (4.33e-09)			
<b>Age</b>	0.0708** (0.0323)	-0.0314 (0.0360)	-0.014 (0.078)	0.071 (0.072)
<b>Age<sup>2</sup></b>	-1.06e-03*** (3.6e-04)	1.95e-04 (3.79e-04)	-4.91e-04 (0.001)	-0.001 (0.001)
<b>Highest educational level completed (categories)</b> Reference: compulsory schooling (maximum) Apprenticeship, vocational school, intermediate or higher technical/vocational school	0.568** (0.221)	-0.0997 (0.233)	1.871** (0.757)	-1.707 (0.967)
Academic secondary school, higher-level technical/vocational school	0.878*** (0.267)	0.0898 (0.267)	1.477* (0.840)	-1.660 (1.195)
College, university, academy	1.428*** (0.281)	0.267 (0.269)	1.701** (0.835)	-1.213 (1.271)
<b>Interaction term education*income</b> Reference: compulsory schooling (maximum)*income Apprenticeship, vocational school, intermediate or higher technical/vocational school*income				0.001* (0.000)
Academic secondary school, higher-level technical/vocational school* income				0.001 (0.000)
College, university, academy*income				0.001* (0.000)
<b>Have you ever inherited a property?</b> Reference: Yes No	0.363** (0.167)			
<b>Number of household members</b>	0.0797 (0.0605)		0.021 (0.129)	
<b>Number of children</b>		0.0992 (0.0701)		
<b>Number of adults</b>		0.0178 (0.0915)		
<b>Year the household moved in/year the loan was taken out</b>				-0.068*** (0.019)
<b>Year the household last moved into a property/year the household last took out a housing loan</b>		-0.0242*** (0.00808)		
<b>Gender</b> Reference: Male Female	-0.0716 (0.128)	0.0662 (0.141)	0.208 (0.317)	-0.262 (0.292)
<b>Occupational status</b> Reference: Liberal profession, business owner Employees	0.294 (0.259)	-0.311 (0.246)	-1.228** (0.543)	0.224 (0.638)
Civil servants	0.524 (0.318)	-0.387 (0.292)	-1.651** (0.728)	-0.644 (0.775)
Farmers	-0.589 (0.603)	0.794 (0.768)		-0.621 (1.113)
Workers	0.298 (0.285)	-0.333 (0.273)	-0.651 (0.564)	-0.0108 (0.655)
Other	0.102 (0.367)	-0.538 (0.386)	-1.049 (0.950)	-0.208 (0.840)
Pensioners	0.360 (0.330)	-0.263 (0.381)	0.045 (0.768)	0.643 (0.813)
Nonemployed	-0.227 (0.346)	-0.624* (0.353)	-1.456** (0.743)	0.396 (0.780)
<b>Occupational status of the respondents' partners</b> Reference: No paid work No partner		-0.0185 (0.330)		
Partner is engaged in paid work		0.0111 (0.216)		
<b>Marital status</b> Reference: Single Married	0.860*** (0.200)	0.131 (0.248)	0.881 (0.571)	-0.121 (0.436)
Divorced	0.259 (0.250)	0.193 (0.250)	1.207* (0.704)	-1.063* (0.552)
Widowed	0.114 (0.426)	0.163 (0.527)	2.937*** (0.989)	0.265 (0.880)

Source: OeNB 2008 HSHW.

Note: \*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1. Standard errors are indicated in brackets.

Sample size for debt rate: all 2,081 households surveyed; for debt amounts all 483 indebted households; for foreign currency and variable rate loans all 360 households that took on debt to purchase their primary residence.

The sample size also varies depending on the imputation data set. The numbers of observations indicated in the table refer to the lowest figure of the five data sets used in the multiple imputations.

(continued) Table A3

Binomial logit estimation or OLS estimation of the determinants of ...

Variables	Housing debt rate (Logit)	Logarithmized housing debt amounts (OLS)	Foreign currency housing loan (Logit)	Variable rate housing loan (Logit)
<b>Currently attending school or university</b>				
<i>Reference: Yes</i>				
No	1.040** (0.446)	-0.2 (0.468)	-0.542 (0.909)	
<b>Province</b>				
<i>Reference: Vorarlberg</i>				
Tyrol	-0.518 (0.341)	-0.407 (0.355)	-3.342*** (0.827)	-0.637 (0.676)
Salzburg	-0.166 (0.351)	-1.067*** (0.354)	-2.142*** (0.749)	-0.280 (0.738)
Upper Austria	-0.442 (0.302)	-0.702** (0.280)	-0.479 (0.544)	-0.423 (0.609)
Carinthia	-1.291*** (0.427)	-1.197** (0.439)	-1.300 (0.850)	-0.408 (0.881)
Styria	-0.674** (0.327)	-0.857** (0.320)	-0.784 (0.589)	-0.533 (0.673)
Burgenland	-0.0719 (0.392)	-0.949** (0.374)	-0.814 (0.722)	-0.211 (0.819)
Lower Austria	-0.118 (0.298)	-1.179*** (0.286)	-2.269*** (0.635)	-1.311** (0.629)
Vienna	-0.395 (0.333)	-0.949** (0.397)	-1.613** (0.661)	-0.120 (0.807)
<b>Interviewer's assessment of the type of building</b>				
<i>Reference: Residential farm building</i>				
Detached (single-family) house	0.438 (0.324)	0.763* (0.408)	0.984 (1.536)	
Row house or duplex	0.696** (0.346)	0.725 (0.434)	1.424 (1.521)	
Apartment block <9 apartments	-0.0121 (0.356)	0.274 (0.430)	0.904 (1.592)	
Apartment block with 10 to 19 apartments	-0.00997 (0.369)	0.246 (0.465)	1.398 (1.624)	
Apartment block >20 apartments	-0.242 (0.395)	0.287 (0.486)	1.936 (1.656)	
Residential building for community living	0.975 (0.656)	0.7 (0.788)	x	
<b>Have you ever owned an apartment/house before becoming the owner of this place?</b>				
<i>Reference: No</i>				
Yes	0.377** (0.159)		-0.102 (0.374)	
<b>Acquired through an inheritance</b>				
<i>Reference: acquired in another way</i>				
At least part of the property was acquired through an inheritance		-0.0684 (0.163)		
Tenant who paid a deposit for a housing association apartment		-1.503*** (0.293)		
<b>Has to limit spending to afford housing costs</b>				
<i>Reference: Yes</i>				
No				-0.570* (0.302)
<b>Size of the municipality</b>				
<i>Reference: Up to 2,000 inhabitants</i>				
Up to 5,000 inhabitants				-0.300 (0.400)
Up to 20,000 inhabitants				-0.392 (-0.418)
Up to 50,000 inhabitants				-0.651 (0.641)
More than 50,000 inhabitants				-0.701 (0.657)
<b>Constant</b>	-5.131*** (0.856)	12.56*** (1.217)	-0.866 (2.707)	2.368 (-2.031)
<b>Number of observations</b>	2,081	479	352	360

**Housing Loan Features by Households' Characteristics<sup>1</sup>**

	Type of loan		Lender			Purpose			
	Foreign currency loan	Loan granted by building and loan association	Bank loan	Government loan	Loan granted by employer/household	Loan to finance deposit	Loan to purchase primary residence	Loan to purchase second property	Mortgage equity withdrawal (at least once)
Share									
%									
<b>All households</b>	29	57	77	38	4	12	74	17	24
<b>Gender</b>									
Male	25	59	77	43	3	10	72	20	25
Female	32	55	77	33	5	13	76	14	22
<b>Age</b>									
18 to 29 years	42	89	100	19	0	6	57	6	51
30 to 39 years	32	59	83	29	4	5	78	12	33
40 to 49 years	31	58	73	41	4	3	80	12	28
50 to 59 years	16	46	73	47	1	1	70	31	21
60 to 69 years	23	54	70	50	6	1	72	27	11
70 years and older	17	17	34	47	20	0	62	38	0
<b>Highest educational level completed</b>									
Compulsory schooling (maximum)	11	41	70	54	0	20	78	2	9
Apprenticeship, vocational school, intermediate or higher technical/vocational school	34	59	76	37	2	13	74	16	25
Academic secondary school, higher-level technical/vocational school	24	61	75	41	6	6	75	20	26
College, university, academy	23	55	81	29	9	10	72	21	26
<b>Marital status</b>									
Single	19	61	84	24	1	18	74	13	27
Married	31	57	76	42	4	10	75	18	25
Divorced	27	54	78	23	13	13	67	21	22
Widowed	42	52	48	86	0	21	79	0	10
<b>Occupational status / work generating the household's main income</b>									
Liberal professions, business owners	43	72	85	23	7	4	78	25	24
Employees	26	58	78	36	1	13	75	14	27
Civil servants	19	41	55	67	12	11	60	29	21
Farmers	0	35	89	37	14	0	100	0	28
Workers	40	67	87	34	2	18	74	10	32
Other	26	75	85	22	6	2	83	15	43
Pensioners	25	44	68	42	7	4	77	24	10
Nonemployed	22	48	67	46	5	18	71	14	31
<b>Total monthly net income</b>									
Up to EUR 795	13	48	81	36	9	9	80	18	30
EUR 796 to EUR 1,432	32	64	66	38	16	21	68	17	12
EUR 1,433 to EUR 2,388	26	52	81	32	3	15	74	12	21
EUR 2,389 to EUR 3,185	24	62	76	43	4	12	74	16	27
EUR 3,186 and above	35	58	75	40	1	5	75	23	28
<b>Interviewer's impression of the apartment or house</b>									
Very exquisite and luxurious	44	71	94	15	5	5	73	21	41
Rather high standard of living	29	54	76	37	3	6	82	15	24
Good, medium standard of living	28	59	74	43	4	17	68	18	24
Rather basic standard of living	16	51	82	28	4	6	81	17	13
Poor standard of living	57	100	100	0	57	0	100	0	36
<b>Province</b>									
Vorarlberg	64	76	100	15	0	0	100	0	27
Tyrol	7	57	86	32	8	2	88	12	28
Salzburg	19	51	67	49	0	12	81	6	39
Upper Austria	46	72	85	35	6	2	82	18	20
Carinthia	31	58	77	30	10	30	61	9	12
Styria	32	58	86	18	4	0	89	17	22
Burgenland	30	49	68	65	4	12	82	10	13
Lower Austria	13	41	53	62	1	13	82	8	31
Vienna	26	63	90	15	7	28	37	37	7
<b>Holds bonds</b>									
No	29	57	76	37	3	13	74	15	23
Yes	27	62	78	43	10	0	74	32	28
<b>Holds mutual fund shares</b>									
No	27	57	76	38	4	12	75	16	23
Yes	60	65	93	30	4	3	66	31	27
<b>Holds equity investment</b>									
No	28	57	76	38	4	12	74	16	23
Yes	49	69	81	19	10	0	66	34	36
<b>Does not hold any investment instruments</b>									
No	29	57	76	38	4	11	74	17	23
Yes	16	59	90	29	0	22	72	6	31

Source: OeNB 2008 HSHW.

<sup>1</sup> All households still indebted for the purchase of their primary residence, with the exception of the columns "Purpose" and "LTV ratio" (all households with any housing debt) as well as "Mortgage equity withdrawal" (all households indebted for the purchase of the primary residence at any point in the past, even if already repaid).

Note: Share refers to the share of households in the respective household category.

Collateralization		Maturity		Interest rate					Repayment		LTV ratio (in % of housing wealth)
Guarantor loan	Mortgage loan	Residual maturity of the loan with the shortest maturity	Residual maturity of the loan with the longest maturity	Fixed rate loan	Variable rate loan	Interest- free loan	Interest rate of the lowest- rate loan (if not interest- free)	Interest rate of the highest- rate loan (if not interest- free)	Bullet loan	Repay- ment amounts	
		Mean		Share			Mean		Share	Mean	
		years		%					%	EUR	%
44	90	14	16	36	66	6	2.8	3.3	12	7,883	51
37	91	13	15	41	66	5	2.8	3.4	12	7,631	43
50	90	15	16	31	66	7	2.7	3.2	12	8,124	60
58	97	19	20	36	75	0	2.8	3.5	5	7,972	74
17	87	16	18	30	72	5	2.7	3.2	15	7,908	69
49	91	13	15	37	61	7	2.7	3.2	14	8,439	49
37	91	10	12	44	67	2	2.8	3.3	10	6,617	36
19	93	9	11	42	60	13	2.9	4.0	2	8,242	28
0	90	15	15	24	44	32	4.3	4.3	17	6,446	14
45	95	12	13	39	62	3	2.6	3.4	11	6,736	57
49	90	14	15	34	64	8	2.8	3.2	14	7,611	52
42	91	14	17	52	61	2	2.7	3.4	8	5,926	46
27	88	14	16	26	79	7	2.7	3.4	10	11,207	50
36	85	14	16	31	72	5	2.8	3.4	4	6,214	46
50	92	14	15	36	68	7	2.8	3.3	14	8,624	47
17	82	14	15	48	46	6	2.7	3.1	12	5,871	91
19	100	18	18	30	57	13	3.6	4.4	0	6,674	17
38	90	15	18	30	73	4	1.9	2.3	15	10,787	56
48	89	15	16	39	66	4	2.8	3.2	14	6,814	58
40	90	12	14	52	56	9	2.5	3.4	5	10,077	45
40	100	14	15	82	43	14	2.2	3.4	0	4,996	23
48	93	13	14	34	67	5	2.8	3.3	14	7,916	54
43	88	14	16	29	72	6	3.5	4.1	18	8,040	72
26	88	11	13	31	63	13	3.4	4.1	12	8,303	29
55	95	14	17	22	72	9	2.0	3.0	0	7,943	42
55	89	13	17	37	60	16	1.8	2.9	0	5,348	68
46	96	14	18	37	54	14	2.9	3.2	8	10,013	74
40	84	14	15	35	67	6	3.0	3.5	13	7,877	56
38	93	14	15	32	71	6	3.0	3.6	8	7,065	45
49	93	14	15	40	65	4	2.5	2.9	17	8,247	42
39	86	16	17	40	69	5	2.7	2.8	19	11,038	43
50	89	14	16	35	64	9	2.6	3.2	13	8,583	42
43	94	13	15	37	66	5	2.9	3.4	11	7,257	59
21	79	15	16	27	79	4	3.3	3.9	9	5,845	50
0	100	8	13	100	57	0	3.1	3.2	0	9,721	51
83	91	17	17	30	74	1	2.3	2.8	38	9,969	85
38	86	14	16	26	71	15	2.7	3.1	8	14,334	51
41	96	15	15	30	68	6	3.4	3.8	6	7,668	47
56	95	12	15	42	70	4	3.2	4.0	16	10,299	50
69	100	10	11	42	65	10	3.4	3.4	10	5,225	37
42	79	15	16	26	70	4	2.9	3.0	8	5,777	44
34	86	12	15	37	77	1	2.5	3.6	32	5,358	40
34	93	13	14	48	47	10	2.5	3.0	6	4,371	42
21	87	16	19	24	82	3	2.3	3.0	3	9,072	60
46	90	14	16	37	65	6	2.8	3.3	12	7,353	50
28	95	12	15	25	71	10	3.0	3.5	16	12,314	55
43	91	14	16	37	65	6	2.8	3.3	10	7,865	48
55	82	16	16	27	76	10	2.6	2.7	42	8,157	86
44	90	14	16	37	65	6	2.8	3.3	12	7,845	49
27	88	19	20	8	92	10	3.7	3.7	27	9,526	105
44	90	14	16	36	66	6	2.8	3.3	12	7,918	51
47	88	12	14	30	59	9	2.3	3.0	11	7,180	46

Credit Portfolio of Indebted Households in Austria<sup>1</sup>

	Type of loan		Lender			Purpose			
	Foreign currency loan	Loan granted by building and loan association	Bank loan	Government loan	Loan granted by employer/household	Loan to finance deposit	Loan to purchase primary residence	Loan to purchase second property	Mortgage equity withdrawal (at least once)
Share									
%									
<b>All households</b>	29	57	77	38	4	12	74	17	24
<b>Sales price quartiles (primary residence)</b>									
Up to EUR 120,000	25	60	75	34	4	0	92	11	18
EUR 120,001 to EUR 200,000	29	60	78	39	4	0	96	7	23
EUR 200,001 to EUR 300,000	31	59	76	40	1	0	96	5	27
EUR 300,001 and above	28	47	77	37	7	0	93	12	25
<b>Debt amount quartiles (only debt incurred for purchasing the primary residence)</b>									
Up to EUR 25,492	14	36	57	52	3	0	100	1	30
EUR 25,493 to EUR 61,434	18	59	74	41	4	0	100	4	37
EUR 61,435 to EUR 127,779	41	72	88	30	2	0	100	6	35
EUR 127,780 and above	42	62	87	29	7	0	100	2	42
<b>Foreign currency loan</b>									
No	0	46	68	45	4	15	67	20	20
Yes	100	85	98	21	3	0	100	4	42
<b>Loan granted by building and loan association</b>									
No	10	0	50	55	6	20	55	27	15
Yes	43	100	96	25	2	0	100	3	40
<b>Government-subsidized housing loan</b>									
No	43	82	94	6	3	18	60	24	19
Yes	13	30	57	73	5	0	100	4	35
<b>Bank loan</b>									
No	2	9	0	95	11	27	40	35	12
Yes	37	72	100	20	2	0	100	3	38
<b>Government loan</b>									
No	36	69	98	0	4	16	64	22	20
Yes	15	37	41	100	3	0	100	4	36
<b>Mortgage equity withdrawal (at least once)</b>									
No	26	53	74	38	6	16	65	23	0
Yes	33	65	81	38	0	0	100	0	100
<b>Guarantor loan</b>									
No	23	56	74	39	6	17	62	23	17
Yes	36	59	80	36	2	0	100	3	43
<b>Mortgage loan</b>									
No	29	0	89	7	7	35	22	44	8
Yes	28	63	75	41	4	0	100	3	37
<b>Average residual maturity per household in quartiles</b>									
Up to 9 years	18	54	78	38	2	0	100	2	30
10 to 15 years	31	62	76	42	6	0	100	6	28
16 to 20 years	41	60	84	25	3	0	100	2	40
21 years and longer	26	59	75	41	6	0	100	3	49
<b>Variable rate loan<sup>2</sup></b>									
No	21	43	56	47	7	23	49	29	14
Yes	32	65	87	33	3	0	100	5	38
<b>Average interest rate per household in quartiles</b>									
Up to 1.1%	27	48	72	31	4	0	100	5	38
1.2% to 2.8%	42	63	76	48	3	0	100	4	35
2.9% to 4.4%	32	59	84	43	2	0	100	2	40
4.5% and higher	21	73	91	23	3	0	100	3	33
<b>Bullet loan</b>									
No	23	57	74	39	4	13	72	18	22
Yes	73	61	95	29	1	0	100	5	48
<b>Repayment amounts in 2007 in quartiles</b>									
Up to EUR 2,940 EUR	10	32	49	57	3	0	100	2	28
EUR 2,941 to EUR 6,000	30	63	81	39	2	0	100	4	45
EUR 6,001 to EUR 10,034	30	68	86	28	3	0	100	4	35
EUR 10,035 and above	44	66	90	27	8	0	100	4	36
<b>Average LTV ratio in quartiles</b>									
Up to 12%	15	34	56	52	3	0	100	2	31
13% to 31%	21	61	79	38	4	0	100	5	33
32% to 60%	36	70	86	32	5	0	100	4	37
60% and above	42	64	86	29	5	0	100	2	42
<b>At least one alternative form of financing</b>									
No	30	60	79	38	3	0	94	9	22
Yes	26	54	72	38	5	0	96	8	27
Tenants	x	x	x	x	x	54	0	47	x

Source: OeNB 2008 HSHW.

<sup>1</sup> All households still indebted for the purchase of their primary residence, with the exception of the columns "Purpose" and "LTV ratio" (all households with any housing debt) as well as "Mortgage equity withdrawal" (all households indebted for the purchase of the primary residence at any point in the past, even if already repaid).

Note: Share refers to the share of households in the respective household category.

Collateralization		Type of interest rate					Repayment		LTV ratio (in % of housing wealth)
Guarantor loan	Mortgage loan	Fixed rate loan	Variable rate loan	Interest- free loan	Interest rate of the lowest- rate loan (if not interest- free)	Interest rate of the highest- rate loan (if not interest- free)	Bullet loan	Repay- ment amounts	
					Mean		Share	Mean	
								EUR	%
44	90	36	66	6	2.8	3.3	12	7,883	51
24	87	35	67	7	2.9	3.4	4	5,801	104
47	92	40	65	4	2.6	3.1	10	7,307	48
50	92	37	66	5	2.9	3.6	16	7,411	37
51	90	30	66	10	2.7	3.1	17	11,438	25
46	87	50	47	8	2.7	3.1	3	3,143	10
38	93	37	65	6	2.7	3.2	2	5,659	28
40	94	31	78	4	2.9	3.6	12	8,320	67
51	87	26	74	8	2.7	3.3	31	14,423	111
39	90	40	62	8	2.9	3.4	5	7,199	46
55	90	27	75	3	2.6	3.1	31	9,594	68
42	77	39	55	11	2.5	2.8	11	6,781	49
45	100	34	74	3	3.0	3.6	13	8,705	53
41	82	27	70	3	3.1	3.3	15	8,493	54
47	100	46	61	11	2.4	3.3	8	7,206	46
37	95	45	37	19	2.2	2.3	2	5,372	34
46	89	33	75	3	2.9	3.5	15	8,652	61
45	85	26	71	3	3.1	3.3	14	8,738	57
42	98	53	58	12	2.3	3.3	9	6,479	36
39	88	37	63	8	2.8	3.3	10	8,095	48
52	94	34	71	3	2.7	3.3	16	7,503	58
0	89	35	66	7	2.9	3.5	7	7,824	53
100	92	38	66	5	2.6	3.1	19	7,958	47
35	0	27	72	6	2.9	3.2	27	7,401	53
45	100	37	65	6	2.8	3.3	10	7,934	50
30	93	49	52	5	2.9	3.3	7	7,597	53
48	93	37	71	10	2.8	3.3	9	7,496	40
43	83	21	80	6	2.8	3.4	14	7,626	57
47	91	27	75	5	2.5	3.1	13	9,403	74
44	92	77	0	15	2.5	2.8	7	6,399	44
44	89	15	100	2	2.9	3.5	15	8,650	57
45	88	33	59	3	1.1	1.1	7	8,312	64
46	92	44	68	2	1.6	2.2	15	7,758	57
53	93	38	78	1	3.2	4.2	21	7,609	54
32	88	31	76	7	5.3	5.8	7	9,174	47
40	92	38	64	7	2.8	3.3	0	7,668	47
69	78	19	81	4	2.8	3.3	100	9,460	90
42	90	53	41	6	2.5	2.7	5	1,477	26
42	91	32	73	6	2.9	3.5	13	4,534	40
42	87	30	73	5	2.9	3.5	13	8,133	77
49	93	30	77	8	2.8	3.4	16	17,681	76
46	89	47	45	10	2.7	3.0	3	4,264	6
41	93	39	70	4	2.9	3.5	7	6,211	20
44	92	33	75	4	2.9	3.6	15	9,715	45
43	87	25	73	8	2.7	3.2	23	11,355	145
36	90	32	70	7	2.9	3.5	12	8,334	52
55	90	42	59	6	2.6	3.1	12	7,207	51
x	x	x	x	x	x	x	x	x	43

**Alternative Forms of Housing Finance by Households' Characteristics<sup>1</sup>**

	No third-party funds required		At least partly financed the primary residence through alternative forms of finance (if third-party funds were required)			No third-party funds required		At least partly financed the primary residence through alternative forms of finance (if third-party funds were required)	
	Number of households	Share in %	Number of households	Share in %		Number of households	Share in %	Number of households	Share in %
	1	2	3	4		5	6	7	8
<b>All households</b>	1,085	32	740	49					
<b>Age</b>									
18 to 29 years	48	31	35	55					
30 to 39 years	159	21	126	56					
40 to 49 years	302	27	220	53					
50 to 59 years	246	30	172	45					
60 to 69 years	210	40	128	44					
70 years and older	120	51	59	40					
<b>Highest educational level completed</b>									
Compulsory education (maximum)	165	44	89	46					
Apprenticeship, vocational school, intermediate or higher technical/vocational school	655	34	442	48					
Academic secondary school, higher-level technical/vocational school	141	24	107	56					
College, university, academy	124	18	102	50					
<b>Marital status</b>									
Single	162	40	98	65					
Married	722	28	522	46					
Divorced	106	34	68	53					
Widowed	95	45	52	44					
<b>Occupational status / work generating the household's main income</b>									
Liberal professions, business owners	73	32	50	55					
Employees	285	24	220	49					
Civil servants	74	20	60	49					
Farmers	54	61	21	65					
Workers	140	25	106	48					
Other	40	19	32	70					
Pensioners	335	41	202	42					
Nonemployed	84	41	49	56					
<b>Total monthly net income</b>									
Up to 795	65	51	33	63					
EUR 796 to EUR 1,432	189	45	100	52					
EUR 1,433 to EUR 2,388	321	31	220	44					
EUR 2,389 to EUR 3,185	212	26	160	47					
EUR 3,186 and above	298	24	227	52					
<b>Province</b>									
Vorarlberg	46	21	37	42					
Tyrol	103	29	76	51					
Salzburg	75	29	55	32					
Upper Austria	203	24	157	59					
Carinthia	59	32	39	66					
Styria	187	43	106	40					
Burgenland	59	22	46	53					
Lower Austria	265	41	157	50					
Vienna	88	22	67	46					
<b>Primary residence used for professional purposes</b>									
No	913	32	628	47					
Yes	172	35	112	62					
<b>Have you ever inherited real estate in your life?</b>									
No	795	28	577	45					
Yes	290	46	163	64					
<b>How was the primary residence acquired?</b>									
Purchase	614	18	505	43					
Inheritance	281	52	139	62					
Inter vivos gift	125	50	62	59					
Combination	31	27	23	87					
Other	34	69	11	64					
<b>Sales price quartiles (primary residence)</b>									
Up to EUR 120,000	267	37	170	47					
EUR 120,001 to EUR 200,000	303	31	210	47					
EUR 200,001 to EUR 300,000	269	28	198	46					
EUR 300,001 and above	246	34	162	59					
<b>No third-party funds required to purchase the primary residence</b>									
No	740	0	740	49					
Yes	345	100	0	0					

Source: OeNB 2008 HSHW.

<sup>1</sup> All households that own their primary residence.

Note: Share refers to the share of households in the respective household category.