

Housing Wealth of Austrian Households

Pirmin Fessler,
Peter Mooslechner,
Martin Schürz,
Karin Wagner¹

Real estate holdings, i.e. housing wealth and estates in land account for the majority of assets owned by Austrian households. At the same time, the associated mortgage loans constitute the bulk of households' liabilities. Therefore, detailed data on real estate holdings and real estate financing are highly relevant both from the monetary policy perspective and with regard to the objective of maintaining financial stability. This is why in September 2008 the Governing Council of the ECB decided to initiate a comprehensive project aimed at collecting comparable data on household assets and liabilities across the euro area. All Eurosystem central banks will take part in this project. Many other central banks, including those in the U.S.A., Italy, Spain and Cyprus, have a long tradition of collecting and analyzing such data.

As a first contribution by the Oesterreichische Nationalbank (OeNB) to this Eurosystem project, this study provides the first microdata-based assessment of Austrian households' real estate holdings. In the primary residence category, Austrian households' average housing wealth is estimated at EUR 130,000 (or at EUR 110,000, excluding the top 1% of observations in the real estate wealth distribution of the primary residence), while their average total housing wealth is estimated to come to EUR 250,000 (or EUR 200,000, excluding the top 1% of observations in the total real estate wealth distribution). The total housing wealth of Austrian households is estimated at a minimum of EUR 690 billion.

JEL classification: D14, D31, R21, R31

Keywords: households' wealth, real assets, housing finance

The major part of Austrian households' assets is made up of real estate holdings, i.e. housing wealth and estates in land. Housing wealth differs from other types of assets. While being part of households' assets, owner-occupied housing is also a consumer good. In many cases, owner-occupied housing is mainly debt-financed. Real estate incurs relatively high transaction costs and is not easily liquidated. Moreover, tax regulations applying to real estate financing have an influence on incentives for acquiring real estate assets and render international comparisons of real estate markets more difficult.

Real estate is often used as collateral for loans. Changes in real estate prices have an impact on household consumption and on the capacities of households to take on credit burdens. A number of papers suggest that wealth effects triggered by real estate price changes affect household consumption

more strongly than changes in stock prices (Case et al., 2005).

Liquidity-constrained households are granted access to consumer loans because of their real estate wealth. However, as the current financial and economic crisis has shown, even a small fraction of households with exceeding (mortgage) debt can have a major impact on the entire financial and economic system.

As mortgage debt accounts for a large share in total household debt, the concrete structure of mortgage markets significantly influences the transmission mechanism of monetary policy. Changes of key policy rates lead to changes in mortgage interest rates (via the interest rate channel) and impact households' repayment capacity while at the same time influencing credit supply (credit channel). From the monetary policy perspective, whether monetary policy measures have an effect on

Refereed by:
Tobias Schmidt,
Deutsche Bundesbank

¹ *pirmin.fessler@oebn.at; peter.mooslechner@oebn.at; martin.schuerz@oebn.at; karin.wagner@oebn.at. The authors wish to thank Nicolás Albacete, Michael Andreasch and Siegfried Zottel for valuable comments and support in compiling statistics.*

the real estate market or on economic growth not only depends on the concrete structure of the lending market and the availability of alternative means of financing but, to a large extent, on the share of variable rate loans in total loans. The general tendency to neglect conventional lending instruments (mortgage loans) in favor of more strongly market-based types of real estate financing (e.g. securitization) poses new challenges to monetary policy. Regulatory and institutional characteristics of mortgage markets (loan-to-value ratios, banks' valuation methods, etc.) may curb or augment the transmission effect of real estate prices on the availability of loans to households.

There are major differences in the structures of real estate financing in Europe and the U.S.A. While fixed interest rate loans dominate the U.S. market, variable rate mortgage loans prevail in some European countries (e.g. Spain or Germany), with a substantial variation across countries, ranging from 10% to 99% of total loans (ECB, 2009a). Different refinancing practices on the part of banks as well as institutional differences (e.g. the amount of exit fees due in case of early repayment) and cultural factors appear to be the reason why variable rate loans are not equally popular across countries. Fiscal factors also play an important role in households' real estate financing decisions (e.g. tax deductibility of mortgage rate payments).

In Austria, mortgage loans denominated in foreign currency (mainly in Swiss francs) are very common. These loans entail substantial risks,² as has become evident during the financial crisis.

Although real estate holdings play a major role in Austria, so far there have been only a few data sources and studies that estimate real estate wealth (Hahn and Magerl, 2006; Eizinger et al., 2004). And none of these studies had access to disaggregated household data.

Section 1 sums up essential aspects in the relationship between monetary policy and housing wealth. Section 2 presents the OeNB Household Survey on Housing Wealth 2008 (HSHW). Section 3 presents various estimates derived from this household survey, with section 3.1 dealing with estimates of homeownership rates and section 3.2 with valuation issues. Section 3.3 provides estimates concerning the average value of real estate holdings per household and estimates of the aggregate housing wealth of all households. Finally, section 4 focuses on one of the most important transmission channels of monetary policy – i.e. via housing wealth – and contains key figures on households' mortgage debt. Section 5 points to follow-up studies dealing in more detail with methodological issues and specific aspects of housing wealth.

1 Housing Wealth and Monetary Policy

To improve their economic analyses of monetary policy and financial stability, central banks make increasing use of microdata on the assets, liabilities and expenditure of households. The first central banks to conduct related surveys at the national level were Italy (in the early 1960s) and the U.S.A. (as of 1983). Nowadays, many central banks carry out such surveys, mostly at regular intervals, e.g. those of Australia, Cyprus, Greece, the Netherlands,

² This is particularly true for foreign currency loans linked to fixed-maturity repayment vehicles and means that such loans are riskier than others since they are not only subject to exchange rate risk, but the yield curve of the underlying repayment vehicles is unpredictable and additional valuation risks may exist.

Portugal and Spain. In September 2008, the Governing Council of the ECB decided that in the future all central banks in the euro area would conduct such household surveys (ECB, 2009b). This measure aims at substantially improving the basis for analyzing monetary policy and financial stability-related issues within the Eurosystem.

The current financial crisis clearly illustrates the significance of such data: It is the varying degree of indebtedness across different income, professional and age groups rather than the amount of household debt across the entire house-

hold sector which indicates potential risks for financial stability and the transmission of monetary policy stimuli. Central banks' fundamental objective of ensuring financial stability would be difficult to attain without economic analyses on the basis of microdata. However, quantitatively realistic models of households' spending behavior are also of crucial importance for monetary policy and continue to gain significance in a globalized environment. Housing wealth plays a particularly important role in the transmission of monetary policy (box 1).

Box 1

Transmission of Monetary Policy via Housing Wealth¹

A Direct Transmission Channels

A.1 Cost of Capital

If short-term interest rates are raised following a monetary policy decision, long-term interest rates tend to increase as they are tied to the expected future short-term rates. This drives up the cost of borrowing capital, which in turn reduces demand for real estate. The greater the share of variable rate loans in total loans, the stronger this effect will be.

A.2 Expected Future Changes in Real Estate Prices

When interest rates are raised, demand for real estate goes down and so do real estate prices. However, if an interest rate increase additionally reinforces expectations of a further tightening of monetary policy, this slows down the expected rise of real estate prices, which results in higher current costs of capital and, consequently, a further decline in the supply of and demand for real estate. This is only the case if the expectations of a future price increase are influenced by monetary policy. Otherwise, if expectations of a future increase of real estate prices remain unchanged, a drop in current real estate prices will have a positive effect on demand.

A.3 Real Estate Supply

As real estate is developed relatively quickly, short-term interest rates are relevant for the supply side as well. Higher interest rates increase the cost of real estate development, which in turn curbs building activities.

B Indirect Transmission Channels

B.1 Effects of Real Estate Price Changes

The life-cycle theory implies that every unexpected change in asset prices impacts consumption. This also applies to real estate assets, which are distributed more evenly across the household population than more volatile forms of assets (e.g. stock holdings). Changes in real estate prices therefore do not only concern wealthy households, which have a lower marginal propensity to consume than households with smaller assets. Many studies suggest that real estate price changes impact consumption more strongly than stock price changes (ECB, 2004; Catte et al., 2004).

¹ See Mishkin (2007).

B.2 Credit Channel and Balance Sheet Effect on Consumption

An increase in real estate prices may indirectly boost consumption if loans become more easily accessible for households. This applies not only to households whose access to credit was previously restricted. Many households hold assets while at the same time being subject to considerable liabilities (Fessler and Mooslechner, 2008). Generally, information on asset-backed collateralization is important for lenders, which plays a significant role particularly in markets where access to information is asymmetrical. Borrowing and lending can thus be modeled as strategic interaction.

Studies on the U.S.A. have examined the effects of housing wealth on consumption (for an overview, see e.g. Altissimo et al., 2005). The findings imply that a change in housing wealth by USD 1 results in changes in consumption patterns of between USD 0.02 and USD 0.09. Case et al. (2005) provide evidence that a 10% increase in housing wealth boosts consumption by approximately 1.1%, while a 10% increase in stock holdings hardly impacts consumption at all. Carroll et al. (2006) also differentiate between short-term and long-term effects of housing wealth on consumption. With regard to financial wealth, Catte et al. (2004) estimate the long-run propensity to consume out of financial wealth to be between 0.01 in Italy and 0.07 in Japan. The OECD average is 0.035 and the U.S. average is 0.03.

B.3 Credit Channel and Balance Sheet Effect on Real Estate Demand

From a neoclassical perspective, it does not make a difference whether a household opts for a fixed rate or a variable rate loan, since the average interest rate over the duration of real estate ownership is the relevant parameter also for variable rate loans. If households have restricted credit access or their borrowing behavior is based on nothing more than rules of thumb, however, short-term interest rates and the chosen type of financing (fixed rate or variable rate loans) have an impact on real estate demand. The higher the short-term interest rates and the greater the share of variable rate loans in total loans, the lower demand will be. Especially for households with restricted credit access, the cash flow, i.e. the difference between current income and expenditure, is an important factor in financing. If financing costs for variable rate loans increase due to a rise in short-term interest rates, the households affected will have higher expenses. Higher nominal interest rates impact the cash flow, which in turn reduces demand for real estate since a lower cash flow also restricts the amount of credit these households can afford to take on or will be granted.

For Austria, these effects are of specific relevance because on the one hand, Austria posts a considerably high percentage of variable rate loans by international standards and on the other hand a number of risks accumulate due to the relatively large share of foreign currency loans in total loans in Austria.

2 OeNB Household Survey on Housing Wealth 2008

This study is based on empirical data collected during the OeNB Household Survey on Housing Wealth 2008 (HSHW 2008), which was conducted as a pilot project for the planned comprehensive Eurosystem household survey.³ It is a representative household

survey investigating the housing wealth of Austrian households. The respondents were either the owners or tenants⁴ of the respective household's real estate at the time of the interview. The survey focused on the ownership of the respective house/apartment and of additional real estate belonging to any of the household members as well as on

³ The HSHW 2008 fieldwork was conducted by the Institute for Empirical Social Studies (IFES).

⁴ The person identified as tenant in the applicable rental agreement.

the related liabilities owned by the household.⁵ Furthermore, detailed socio-economic characteristics and data concerning intergenerational transfers in connection with housing wealth were compiled. The questionnaire contained a total of 168 questions, 28 of which were related to socio-economic characteristics (additionally, 8 questions had to be answered personally by the interviewers themselves).

The survey was carried out using a computer-assisted personal interviewing (CAPI) method, which allows for

immediate plausibility checks during the course of the interview, thus making it possible to correct for inconsistencies right away. The survey was conducted in January, February and March 2008 with fieldwork taking approximately nine weeks. Comprehensive follow-up research was carried out until September 2008.

2.1 Sample

The selection process and criteria for choosing individual units of the target population that are to be included in

Table 1

HSHW 2008 Coverage

	Addresses drawn	Neutral non-responses (wrong address, etc.)	Adjusted sample	Not present at time of interview	Refused to take part in survey	Eliminated interviews (high rate of non-response, editing)	Successful interviews	Coverage rate
	Number							%
Vienna	938	35	903	133	309	10	451	49.9
Lower Austria	576	11	565	59	79	6	420	74.3
Burgenland	108	9	99	19	9	1	72	72.7
Styria	432	5	427	61	67	2	295	69.1
Carinthia	204	3	201	32	27	1	140	69.7
Upper Austria	504	33	471	59	75	12	326	69.2
Salzburg	192	7	185	28	21	2	134	72.4
Tyrol	252	24	228	27	32	6	164	71.9
Vorarlberg	132	14	118	15	17	7	79	67.0
HSHW 2008, total	3,338	141	3,197	433	636⁶	47	2,081	65.1
The Spanish Survey of Household Finances (EFF) 2005 ¹	15,662	1,275	14,387	1,602	6,634	189	5,962	41.4
Survey of Consumer Finances (SCF) Area probability sample 2004 ²	x	x	x	x	x	x	3,007	68.7
Survey of Consumer Finances (SCF) List sample 2004 ²	x	x	x	x	x	x	1,515	34.7
Socio-Economic Panel (SOEP) 2006 ³	3,931	181	3,750	485	1,659 ⁶	100	1,506	40.2
Household Wealth Survey (HWS) 2004 ⁴	x	x	5,228	x	x	x	3,455	66.1
Survey on Household Income and Wealth (SHIW) 1998 ⁵	17,668	1,425	16,243	2,727	6,369	x	7,147	44.0

Source: HSHW 2008, EFF (2005), SCF (2004), SOEP (2006), HWS (2004), SHIW (1998).

¹ Bover (2008, p. 26).

² Kennickell (2005, p. 4) and Bucks et al. (2009, p. 54).

³ Von Rosenblatt et al. (2007, p. 15f); first survey, sample „H“.

⁴ Niemeläinen et al. (2006, p. 26).

⁵ D'Allesio and Faiella (2002, p. 20).

⁶ Refused to take part in survey or could not participate due to health problems or language barriers (SOEP: 172 of 1,487 addresses).

⁵ The survey also included real estate holdings abroad. Private foundations were not included in the survey, but the probability that one of the households in the sample owns a private foundation is very low since rich households tend to be underrepresented in surveys of this type.

the sample in order to attain a representative sample of the target population are laid down in the sample design (Fessler et al., 2009). Additionally, it may be important to ensure representativeness at sublevels or include a disproportionately large number of respondents from specific population groups in order to obtain more precise estimators (oversampling).⁶ The HSHW 2008 uses a stratified multistage cluster address random sample.⁷

2.2 Response Rates – Unit Nonresponse

Unit nonresponse occurs when a selected household refuses or is unable to participate in the survey. From a total of 3,338 addresses drawn, 2,081 turned out evaluable CAPI interviews in the end, corresponding to a response rate of 65.1%. By comparison, the coverage rate reached in the Fed's Survey of Consumer Finances (SCF) in 2004 was 68.7%, while it was 41.4% in Banco de España's Survey of Household Finances (EFF) in 2005 and 40.2% in the Socio-Economic Panel of the German Institute of Economic Research in 2006 (table 1). It must be kept in mind, however, that these surveys cover both households' housing wealth and financial wealth (if respondents receive advance information on all topics of the survey, lower response rates have to be expected for surveys that include questions on both financial and housing wealth than for surveys that include questions on housing wealth only). Table 1 presents the nonresponses categorized by reasons for nonresponse. Nonresponse rates were comparatively high in Vienna, which is in line with experience gained in other surveys in urban areas.

Households were weighted ex post in order to align the sample with certain characteristics of the general population. Households were weighted according to their province of residence, the size of the respective municipality and of the individual household.

2.3 Item Nonresponse – Imputations

Besides the problem of unit nonresponse, i.e. the nonresponse of an entire household selected (drawn), item nonresponse issues may also occur in such surveys. Item nonresponse refers to a situation where respondents either refuse to respond to individual questions or cannot answer them. This would not pose a problem if data omissions were distributed randomly over households. But this cannot be assumed. Evidence for the fact that wealthy or high-income households tend to refuse responses more often, especially if questions concern wealth and income, can be found in the literature (Kennickell, 1998; Albacete et al., 2009). Without taking this fact into account, the estimates for the related variables will be biased. To correct for such omissions, research has come to rely on imputation methods.

Table 2 illustrates the item nonresponse rates for several important variables where data omissions occurred. The HSHW 2008 item nonresponse rate for these questions is average by international standards. The question on household income, for example, had a response rate of 67%, while 23% of Austrian households were willing to assign their household income to a certain bracket. The German Socio-Economic Panel achieved a response rate of 78% for the household income question

⁶ *Oversampling was not applied in the HSHW 2008.*

⁷ *See Wagner and Zottel (2009) for further details.*

in 2000 (Frick and Grabka, 2003), the Fed's SCF obtained 69% in 1995 (Kennickell, 1998) and Banco de España's EFF reached 48% in 2002 (Bover, 2004). The response rate for classifying income according to brackets was 23% for the HSHW 2008 and 18% for the SCF in 1995.⁸

If missing data are not imputed, estimates will be biased because these data would be left out in the estimation process. This method is referred to as "listwise deletion" in the literature (Little and Rubin, 2002). The missing data are often associated with specific household characteristics, especially with variables such as high income, high educational level or expensive residential area that correlate positively with a high wealth. Imputation corrects for these distortions at least partially. Certain statistical imputation methods (multiple imputation) additionally take into account that imputed data do not exactly correspond to the real values but are subject to a certain degree of uncertainty. For the HSHW 2008, a multiple imputation method was used (Albacete et al., 2009).

3 Real Estate Ownership and Housing Wealth

How many households own real estate? This question generally refers to *ownership of the primary residence*. The primary residence is defined as the place of residence where the respondent mainly lives at the time of the survey, i.e. the responding owners/main tenants need not have registered this residence as their primary residence. The question addresses ownership of the house/apartment in which the interviewed household member lives. Any other pieces of real estate assignable to the same household are subsumed as *other real estate*. Other real estate (e.g. houses, apartments, hotels, office spaces, plots of land, etc.) is assigned to the household if one household member is the (partial) owner of the real estate.

3.1 Real Estate Ownership

According to the HSHW 2008, some 50% of Austrian households own their primary residence. This rate is below the ownership rate of around 57% extrapolated by Statistics Austria, which may be attributed either to the preci-

Table 2

Selected Item-Nonresponse Rates for the HSHW 2008

	Have items ¹	Rate of households surveyed that indicated a specific amount	Rate of households surveyed that indicated a specific bracket	Rate of households that opted for "don't know"	Rate of households that refused to answer
	%				
Net household income	100.0	67.3	22.6	0.4	9.6
Estimated selling price of property	52.1	73.4	14.8	7.3	4.4
Estimated purchase price of property	39.8	65.7	20.9	8.1	5.3
Amount of loan (first loan taken out)	29.6	84.4	6.9	4.0	4.7
Estimated value of inherited property	20.1	61.5	0.0	6.9	31.6

Source: HSHW 2008.

¹ In line with Kennickell (1998), "have items" designates the rate of households to which the question applies.

⁸ Some of the quoted survey waves are not very recent. They were nevertheless used in comparing coverage rates for the household income question as more recent data are not available.

sion of the two estimators or to incongruent definitions of “primary residence.” For example, a student living in her own household – a rented apartment – in Vienna would be considered the tenant of a primary residence in the HSHW 2008 even if the apartment was only officially registered as her secondary residence. The definition of “primary residence” chosen for the HSHW 2008 relates more closely to the actual (living) situation and is more in line with what is identified in such surveys as being a “household.”

Ownership rates (of the primary residence) differ widely between Vienna and the rest of Austria. In Vienna, around 19% of respondents said they owned their primary residence while the ownership rate is significantly higher at about 59% in the rest of Austria. Chart 1 shows the estimators for the ownership rate in different age categories for Austria as a whole. The age given is the age of the responding (main) owner or tenant of the household surveyed. Ownership of the pri-

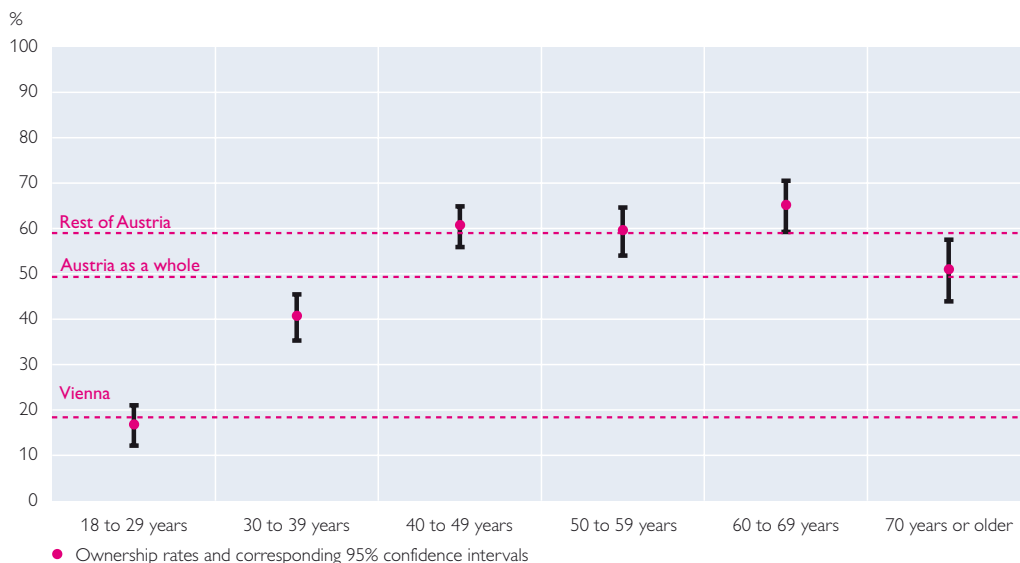
mary residence starts to be of particular relevance for the age groups of 30 to 39 years and above. The ownership rate increases significantly again in the age group of 40 to 49 years and then declines slightly for age 70 or older.

With regard to household size, the ownership rate for Austria as a whole (chart 2) rises significantly with the number of persons living in the same household. It is worth noting that ownership rates climb most significantly at the transition from one-person households to two-person households, namely from some 35% to 54% (which is above the Austrian average). The highest ownership rate, at about 67%, is recorded for the largest households (five or more persons).

Blue-collar and white-collar workers are significantly less likely to own their primary residence than self-employed persons, entrepreneurs and civil servants (chart 3), while farmers record an above-average ownership rate. The estimators for farmers and for other

Chart 1

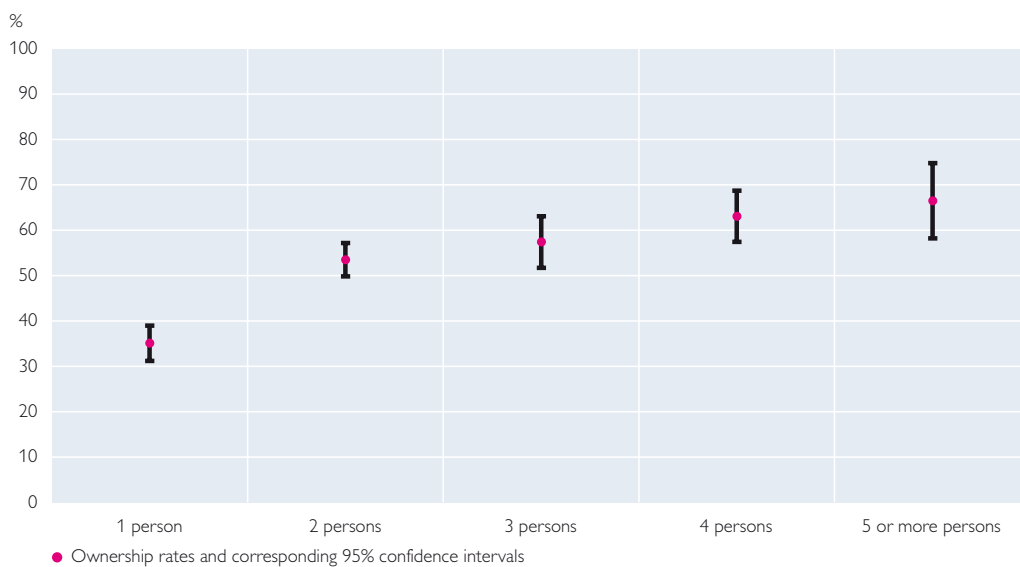
Ownership Rates for Primary Residences according to Owners' Age



Source: HSHW 2008.

Chart 2

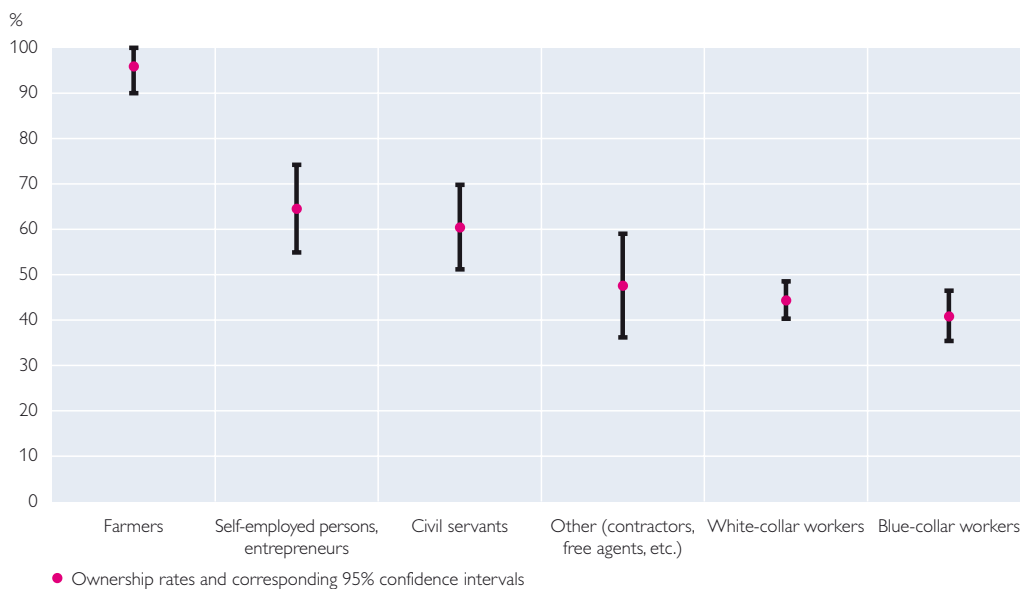
Ownership Rates for Primary Residences according to Number of Household Members



Source: HSHW 2008.

Chart 3

Ownership Rates for Primary Residences according to Occupation



Source: HSHW 2008.

Note: The upper limit of the confidence interval for farmers was corrected downward to the highest possible value.

Chart 4

Vienna versus Rest of Austria: Ownership Rates for Primary Residences according to Net Household Income



Source: HSHW 2008.

occupational groups (contractors, free agents, etc.) are based on a small sample size (each $n < 60$), however; so that these estimates have to be interpreted with caution.

Chart 4 illustrates the ownership rate for Vienna as compared to that for the rest of Austria, broken down by net household income. Both in Vienna and in the rest of Austria, the ownership rate increases with household income. However, this correlation is significantly stronger in Vienna, where the ownership rate triples between the first and the fourth income quartile.

3.2 Assessment of Housing Wealth

The assessment of housing wealth poses a special challenge in data analysis. In principle, there are several ways of dealing with these conceptual difficulties.

In the HSHW 2008, respondents are asked to provide the purchase price of the real estate, the construction costs or, if applicable, the costs of conversion after purchasing/building the property. Additionally, the respondents

are asked to specify when they purchased the property. On the basis of price development information, these data can then be extrapolated for 2008. This method has obvious weaknesses, since real estate prices develop differently in different regions, while the equivalent value in terms of purchasing power can only be computed on the basis of the Austria-wide consumer price index (CPI). Moreover, this extrapolation is based on the assumption that real estate prices have developed in line with consumer prices.

Information provided by respondents about their property's living space in square meters and the type of property (house, owner-occupied apartment, building located on property owned by others), the interviewer's assessment of the property's quality (basic, medium, good or very good housing quality) and its location (ZIP code) allow for a comparison with current selling prices on the basis of the real estate price report of the Austrian Federal Economic Chamber (*WKÖ Immobilienpreisspiegel*).

The respondents were also requested to give an estimate of the currently achievable selling price of their property. It is easier to assess the validity of data through a comparison of the various available estimates. In comparable international surveys, the selling price estimate provided by the owner of the respective property is considered the most reliable source for the actual value of the property (Bucks and Pence, 2006; Cannari and Faiella, 2008; Cannari et al., 2008). Whether the owner actually is the most reliable source for estimating the property's currently achievable selling price may, however, depend on the availability of disaggregated statistics on current selling prices and/or on whether residential areas can easily be differentiated by residents' social status and household wealth, as all this information is essential for the validity of any other estimates.

By way of a plausibility check, owners' estimates were compared to data provided by the *WKÖ Immobilienpreisspiegel*, which indicates current selling prices (per square meter) of real estate (used owner-occupied apartments, detached and terraced houses, building plots, etc.) across all Austrian districts, broken down by housing quality (basic, medium, good, very good).

A comparison of the various estimates reveals that distributions are rather congruent, particularly with respect to their spread. Specifically, the mean value and the median calculated from the value of primary residences as estimated by owners are EUR 260,000 and EUR 200,000 respectively, and the corresponding values extrapolated from data given in the *WKÖ Immobilienpreisspiegel* are EUR 180,000 and EUR 150,000. Differences may be attributable, for example, to interviewers underestimating the housing quality category or owners overestimating the value of their real estate. Moreover, the *WKÖ Immobilienpreisspiegel* only contains a small number of observations for some districts. Premium-value real estate is not represented at all using the calculations based on the *WKÖ Immobilienpreisspiegel*. For example, the highest purchase price quoted by an owner in the HSHW 2008 is twice the maximum value calculated on the basis of the *WKÖ Immobilienpreisspiegel*.

3.3 Value of Housing Wealth

3.3.1 Value of Primary Residence

In the primary residence category, the average value of household real estate wealth in Austria is approximately EUR 130,000 (table 3). The corre-

Box 2

Information on the Disclosed Data

All values given in this study are rounded to the next 10,000 to account for slight changes in data records that might be caused by a further refinement of the multiple imputation method in the coming months. Real estate wealth distribution is strongly skewed to the right, indicating that real estate wealth is distributed very unequally. A few observations can, therefore, substantially impact the mean values, so that two values are given in each case: one value that takes all data into account and one that excludes the uppermost percentile (top 1%) of all observations from the calculation. This calculation is based on the assumption that the mean value of the excluded top percentile equals the mean value of the remaining 99%. This type of representation was chosen in order to make as transparent as possible how robust the estimators are in relation to the skewness of the distribution. All represented values are gross values.¹

¹ Netting off loans taken out for housing financing is not useful since the survey did not capture all wealth components and real estate may also be used as collateral for consumer loans.

sponding value of housing wealth based on the data excluding the top 1% of observations in the real estate wealth distribution of the primary residence is EUR 110,000. As all tenants are assigned a value of zero in this calculation, the median for the two variables is zero. If the calculation includes only the households that actually own their primary residence, the respective values are EUR 260,000 and EUR 230,000.

If only the group of households owning their primary residence is considered (table 4), housing wealth is again unequally distributed across regions. The respective difference between mean value and median for Vienna is above that for the rest of Austria, both for all observations and for observations excluding the top 1%.

Data on real estate owners' educational level (table 5) reveal that the primary residences particularly of owners that have completed tertiary education have a significantly higher value. While

younger owners tend to have a higher level of education, the level of wealth correlates positively with age. These divergent effects dampen wealth differences across educational levels.

Breaking down the value of owner-occupied real estate by the educational level of the owners' fathers, it becomes evident that the above mentioned inequalities persist over time. The value of owner-occupied real estate belonging to owners whose fathers have completed tertiary education is significantly higher. In fact, given the age effect, obviously the value of property owned by respondents whose highest level of education is compulsory education is also relatively high.

3.3.2 Value of All Properties – Primary Residence and Other Properties

The average Austrian household has real estate holdings worth EUR 250,000 (all observations) or EUR 200,000 (excluding top 1% in the total real estate

Table 3

Estimated Selling Price of Primary Residence

	All observations		Excluding top 1%	
	Mean value	Median	Mean value	Median
	<i>EUR</i>			
All households	130,000	0	110,000	0
Owner households only	260,000	200,000	230,000	200,000

Source: HSHW 2008.

Table 4

Estimated Selling Price of Home Owners' Primary Residences

	All observations		Excluding top 1%	
	Mean value	Median	Mean value	Median
	<i>EUR</i>			
Rest of Austria	260,000	200,000	230,000	200,000
Vienna	260,000	190,000	230,000	180,000

Source: HSHW 2008.

Table 5

Estimated Selling Price of Home Owners' Primary Residences – Breakdown by Level of Education

		All observations		Excluding top 1%	
		Mean value	Median	Mean value	Median
<i>EUR</i>					
Owner's highest level of education	Compulsory education	220,000	170,000	200,000	170,000
	Apprenticeship, vocational school, intermediate or higher technical/vocational school	260,000	200,000	230,000	200,000
	High school (Matura)	260,000	200,000	220,000	190,000
	College, university, academy	300,000	230,000	250,000	220,000
Owner's father's highest level of education	Compulsory education	250,000	190,000	220,000	190,000
	Apprenticeship, vocational school, intermediate or higher technical/vocational school	260,000	200,000	230,000	200,000
	High school (Matura)	230,000	180,000	230,000	180,000
	College, university, academy	400,000	250,000	260,000	220,000

Source: HSHW 2008.

wealth distribution), respectively. If only the households that own their primary residence and/or other real estate are taken into consideration, average real estate wealth amounts to EUR 420,000 and EUR 330,000, respectively. The EUR 90,000 difference between the two mean values (table 6) clearly shows to what extent the top percentile of the distribution influences such calculations. The distribution of the value of all real estate, i.e. the value of primary residences plus any other real estate held, is even more unequally distributed than that of the value of primary residences alone.

A comparative analysis of households owning their primary residence or other real estate in Vienna and in the rest of Austria renders a picture similar to that of the analysis of primary residence ownership. Higher mean values and lower medians for Vienna point to more pronounced differences in Vienna which are not only attributable to the significantly lower ownership rate found there. Still, it should be noted that the estimator for Vienna is less precise than that for the rest of Austria as the number of observations for Vienna is smaller.

Table 6

Estimated Selling Price of Total Real Estate Holdings (Primary Residence and Other Real Estate)

	All observations		Excluding top 1%	
	Mean value	Median	Mean value	Median
<i>EUR</i>				
All households	250,000	100,000	200,000	90,000
Owner households only	420,000	220,000	330,000	210,000

Source: HSHW 2008.

Table 7

Estimated Selling Price of Owner Households Total Real Estate Holdings (Primary Residence and Other)

	All observations		Excluding top 1%	
	Mean value	Median	Mean value	Median
<i>EUR</i>				
Rest of Austria	400,000	220,000	330,000	220,000
Vienna	500,000	200,000	360,000	200,000

Source: HSHW 2008.

3.3.3 Total Value of Real Estate

Microdata surveys do not primarily aim at estimating aggregates. Rather, such surveys seek to derive economic relationships from abundant data on households. Unfortunately, in Austria – as in many other countries – hardly any conclusive macroeconomic data are available on households' housing wealth.

Hahn and Magerl (2006) estimate the market value of total real estate holdings in Austria at EUR 692 billion, with households accounting for EUR 387 billion (estates in land worth EUR 133 billion, residential buildings worth EUR 254 billion), businesses for EUR 231 billion (estates in land worth EUR 33 billion, commercial buildings worth EUR 198 billion) and agricultural or forestry real estate coming to EUR 74 billion (estates in land worth EUR 34 billion, buildings worth EUR 40 billion). In the methodology used by Hahn and Magerl, the price indices published by Statistics Austria served to derive estimates based on the capital stock model of the Austrian Institute of Economic Research (WIFO), while estimates regarding estates in land were mainly based on price indicators. Eizinger et al. (2004) estimate the value of owner-occupied housing in Austria at EUR 428 billion (2002).

The HSHW 2008 also allows for projections for the total approximate real estate wealth of Austrian house-

holds. To this end, weighted household values are scaled upward in such a way as to reflect the total number of households in Austria in 2007 (most recently available value). According to this calculation, the total real estate wealth of Austrian households comes to a minimum of approximately EUR 690 billion. This calculation is based on the assumption that the mean value of the excluded top percentile equals the mean value of the remaining 99%. If the maximum value for the data set excluding the top 1% is used instead of the top percentile values, the total value would come to some EUR 790 billion. If all data, including the so-called outliers, are taken into account, the resulting value is approximately EUR 880 billion.

A value range from EUR 690 billion to EUR 880 billion for Austrian households' total real estate wealth, as derived from the above calculations, appears to be relatively plausible. International findings based on microdata surveys (Sierminska et al., 2006) record a share of housing wealth in households' total assets of some 60% (U.S.A., U.K.) to 80% (Italy, Germany, Sweden). The ECB estimates the share of real estate wealth in households' total assets for 2007 to come to about 60% (ECB, 2008). According to financial accounts data, the financial assets of Austrian households (including self-employed persons) were

EUR 416 billion in the fourth quarter of 2007.⁹ In line with this figure, the share of housing wealth in Austrian households' total assets would range from 62% to 68%. The plausibility of these figures is further supported by the fact that microdata surveys often underestimate financial assets in particular. Therefore, international findings derived from microdata surveys tend to indicate the upper limit for the share of real estate wealth in total assets.

4 Housing Finance

Debt resulting from real estate financing accounts for the largest share of total household debt. In turn, real estate is the most popular collateral for household debt.

In the HSHW 2008, households were asked whether they took out a loan to acquire or build their home; moreover, they had to give the number of loans taken out and provide additional details about the loans (type of loan, total loan amount, collateralization, residual debt outstanding, interest

rate, duration, underlying repayment vehicles).

According to the HSHW 2008, 33% of all home owners reported mortgage debt outstanding from real estate financing (result covers primary residences only).¹⁰ In the two lower age groups (18 to 29 years and 30 to 39 years), 51.6% and 64% of home owners, respectively, had taken out mortgage loans for the purchase of their home. Ownership rates for these two age groups are lower (16.5% and 40.4%, respectively). Households belonging to the two lowest income quartiles also exhibit below-average ownership rates. The share of home owners with outstanding loans is even lower for the two lowest income quartiles; in the higher quartiles, this share increases to some 40%.¹¹ 29% of the indebted households have taken out at least one foreign currency loan.

According to ECB monetary statistics, 27.5% (in terms of total amount) of households' outstanding loans in the fourth quarter of 2007¹² were issued in

Table 8

Share of Households with Outstanding Loans of at Least One of the Quoted Types¹

Type of loan	Vienna	Rest of Austria	Total
	% of households		
Foreign currency loan	26.2	28.8	28.5
Euro-denominated loan	79.0	74.9	75.3
Other loans (from family, friends, etc.)	6.4	6.0	6.0

Source: HSHW 2008.

¹ Share in total number of households with outstanding loans.

Note: Figures may not add up to 100% because households may have more than one loan outstanding. The "Other loans" option is of small sample size ($n < 50$).

⁹ This value includes investments in businesses not publicly traded to the amount of EUR 31.6 billion. Equity investment may partly include estates in land abroad, which are recorded as equity investment in the financial account (worth around EUR 3 billion).

¹⁰ For further details on housing finance of households, refer to Albacete and Wagner (2009).

¹¹ Sample sizes are small ($n < 50$) for both the lowest age group and the lowest income quartile.

¹² I.e. at the time when data on loans outstanding were collected in the HSHW 2008.

foreign currency (Swiss franc, Japanese yen). Slightly more than one-quarter of outstanding loans (26.3%) was denominated in foreign currency. In most cases, loans taken out were secured by a mortgage. The respondents claimed that 83.5% (in terms of volume) of their outstanding foreign currency loans were collateralized by mortgages. At 94.1%, the share of euro-denominated mortgage loans is even higher.

By European standards, the share of variable rate loans (ECB, 2009a) in Austria is rather high.¹³ According to the HSHW 2008, the majority of households with outstanding loans (65.9%) had agreed to a variable interest rate when taking out their loans, while 41.0% opted for a fixed rate loan. 6.3% of the indebted households said they had been granted at least one interest-free loan (from family or friends).¹⁴

Three-fourths of households in the two youngest age groups have at least one variable rate loan outstanding. This percentage successively drops to 44% in the older age groups. In the higher income quartiles, the share of variable rate loans increases.

5 Conclusions and Outlook

Detailed information on the volume and distribution of real estate holdings and the prevalent home financing forms is a key prerequisite for monetary analysis and the assessment of financial stability. In view of the financial crisis, this issue has gained even more importance as the real estate market is closely tied to key economic sectors (e.g. construction) and developments in the housing market and in mortgage markets may, therefore, have a massive impact on growth and employment.

Housing wealth and estates in land account for the biggest share of households' assets. At 50%, the ownership rate in Austria is higher than in Germany (40%) but by far lower than in Spain (close to 90%). Within Austria, real estate ownership has a strong regional dimension, featuring clearly lower rates in Vienna than in the rest of Austria. In the primary residence category, the average value of household real estate wealth in Austria is estimated at EUR 130,000 (EUR 110,000 excluding the top 1% of observations in the real estate wealth distribution of the

Table 9

Households with Outstanding Loans – Breakdown by Type of Interest Rate

	Fixed rate	Variable rate	Interest-free
	% of households		
Share in all home owners with outstanding loans	41.0	65.9	6.3
Share in all home owners	13.6	21.9	2.1
Share in all households (home owners and tenants)	6.8	10.9	1.0

Source: HSHW 2008.

Note: Figures may not add up to 100% because households may have more than one loan outstanding.

¹³ For fixed rate loans, a fixed interest rate is stipulated and applied over the entire duration of the loan. Loans with a combined fixed and variable interest rate were counted as variable rate loans. This implies a “broader” view of households' interest rate sensitivity, which means that the effectiveness of monetary policy action is possibly (somewhat) overestimated. Another consideration in choosing this approach was that, in the case of combined interest rate schemes, a longer variable-rate period usually follows a short initial fixed-interest period.

¹⁴ The sample size for the group of households with outstanding interest-free loans is rather small ($n < 50$), however.

primary residence), and the average value of total real estate holdings per household is EUR 250,000 (EUR 200,000 excluding the top 1% of observations in the total real estate wealth distribution). The total value of Austrian households' real estate holdings is estimated at a minimum of EUR 690 billion.

Previously, reliable data sources for estimating housing wealth were not available in Austria. This study presents the first microdata-based estimation of housing wealth that is in line with international standards; it was carried out within a comprehensive Eurosystem project. Microdata are preferable because they facilitate the identification of the percentage of households that are subject to (financial) risks. The significance of housing wealth for households' portfolio and consumption decisions and thus for economic policy measures (especially for measures burdening

households) has become particularly evident in the current financial crisis.

The present HSHW 2008 forms the basis for further studies on a variety of important issues. Further analyses are specifically envisaged for topics such as household debt, the identification of particularly debt-burdened households, foreign currency loans, determinants of holding real estate and issues concerning the distribution of real estate wealth or intergenerational transfers of real estate wealth. At the same time, fundamental methodological work will deal with the applied multiple imputation method, the various approaches to determining the current value of households' real estate holdings and various equivalence income calculations. Together with the corresponding results on households' financial wealth, the findings will be incorporated into the comprehensive Eurosystem analyses of the euro area as a whole.

References

- Albacete, N. and K. Wagner. 2009.** Housing Finance of Austrian Households – Evidence from the HSHW 2008. In: *Monetary Policy & the Economy Q3/09*. Vienna: OeNB. Forthcoming.
- Albacete, N., P. Fessler and K. Wagner. 2009.** Multiple Imputation in the Austrian Household Survey of Housing Wealth 2008. Vienna: OeNB. Mimeo.
- Altissimo, F., E. Georgiou, T. Sastre, M. T. Valderrama, G. Sterne, M. Stocker, M. Weth, K. Whelan and A. Willman. 2005.** Wealth and Asset Price Effects on Economic Activity. ECB Occasional Paper Series 29. June.
- Ando, A. and F. Modigliani. 1963.** The Life-Cycle Hypothesis of Saving: Aggregate Implications and Tests. In: *American Economic Review* 103. 55–84.
- Bover, O. 2004.** The Spanish Survey of Household Finances (EFF): Description and Methods of the 2002 Wave. Documentos Ocasiones 0409. Madrid: Banco de España.
- Bover, O. 2008.** The Spanish Survey of Household Finances (EFF): Description and Methods of the 2005 Wave. Documentos Ocasiones 0803. Madrid: Banco de España.
- Bucks, B. and K. Pence. 2006.** Do Homeowners Know Their Values and Mortgage Terms? Federal Reserve Board of Governors. January.
- Bucks, B., A. Kennickell, T. Mach and K. Moore. 2009.** Changes in U.S. Family Finances from 2004 to 2007: Evidence from the Survey of Consumer Finances. Federal Reserve Bulletin. February.

- Cannari, L. and I. Faiella. 2008.** House Prices and Housing Wealth in Italy. Temi di Discussione (Working Paper) A4. Rome: Banca d'Italia.
- Cannari, L., I. Faiella, G. Marchese and A. Neri. 2008.** The Real Assets of Italian Households. Temi di Discussione (Working Paper) A5. Rome: Banca d'Italia.
- Carroll, C., M. Otsuka and J. Slacalek. 2006.** How Large is the Housing Wealth Effect? A New Approach. NBER Working Paper W12746. December.
- Case, K., J. Quigley and R. Shiller. 2005.** Comparing Wealth Effects: The Stock Market versus the Housing Market. In: *Advances in Macroeconomics* 5(1).
- Catte, P., N. Girouard, R. Price and C. Andre. 2004.** Housing Markets, Wealth and the Business Cycle. OECD Economics Department Working Paper 394. Paris.
- D'Allesio, G. and I. Faiella. 2002.** Non-Response Behaviour in the Bank of Italy's Survey of Household Income and Wealth. Temi di Discussione (Working Paper) 462. Rome: Banca d'Italia. December.
- ECB. 2004.** Asset Market Effects on Economic Activity. Working Group on Econometric Modelling.
- ECB. 2008.** Financial Stability Review. December.
- ECB. 2009a.** Housing Finance in the Euro Area. ECB Occasional Paper 101.
- ECB. 2009b.** Household Finance and Consumption Network 2009. Survey Data on Household Finance and Consumption – Research Summary and Policy Use. ECB Occasional Paper 100.
- Eizinger, C., M. Kalmár, G. Kernbeiß, M. Prammer-Waldhör and M. Wagner-Pinter. 2004.** Vermögensbildung und Reichtum in Österreich. In: Bundesministerium für soziale Sicherheit, Generationen und Konsumentenschutz (ed.). Bericht über die soziale Lage 2003–2004. 233–251.
- Fenz, G. and P. Fessler. 2008.** Wealth Effects on Consumption in Austria. In: *Monetary Policy & the Economy* Q4/08. Vienna: OeNB. 73–90.
- Fessler, P. and P. Mooslechner. 2008.** Poor Debtors – Rich Debtors? Household Indebtedness and Financial Assets of Private Households Based on Micro Data (in German). In: *Intervention. European Journal of Economics and Economic Policies* 5(1). 31–45.
- Fessler, P., P. Mooslechner and M. Schürz. 2009.** Statistische Herausforderungen der Forschung zu Finanzen privater Haushalte im Euroraum. In: *Statistiken* Q1/09. Vienna: OeNB. 57–66.
- Fessler, P., P. Mooslechner and M. Schürz. 2009.** Stichprobenziehung bei Erhebungen zu Finanzen privater Haushalte im Euroraum. In: *Statistiken* Q2/09. Vienna: OeNB. 51–62.
- Frick, J. and M. Grabka. 2003.** Missing Income Data in the German SOEP: Incidence, Imputation and its Impact on the Income Distribution. Discussion Paper 376. DIW Berlin.
- Hahn, F. and C. Magerl. 2006.** Sektorale Vermögensrechnung für Österreich. Monographien 1/2006. WIFO.
- Kennickell, A. 1998.** Multiple Imputation in the Survey of Consumer Finances. Paper prepared for the August 1998 Joint Statistical Meetings. Dallas, TX.
- Kennickell, A. 2005.** Darkness Made Visible: Field Management and Nonresponse in the 2004 SCF. Paper prepared for the August 2005 Annual Joint Statistical Meetings. Minneapolis, MN.
- Little, R. and D. Rubin. 2002.** *Statistical Analysis with Missing Data*. New York: John Wiley.
- Mishkin, F. 2007.** Housing and the Monetary Transmission Mechanism. Board of Governors of the Federal Reserve System. Finance and Economics Discussion Series. Working Paper 40.
- Niemeläinen, S., T. Sandström, M. Säylä and V. Törmälehto. 2006.** Housing Wealth in Finland. Paper prepared for the 29th General Conference of The International Association for Research in Income and Wealth. Joensuu, Finland. August 20–26.

- Sierminska, E., A. Brandolini and T. Smeeding. 2006.** The Luxembourg Wealth Study – A Cross-Country Comparable Database for Household Wealth Research. In: *Journal of Economic Inequality* 4(3). 375–383.
- Von Rosenblatt, B., N. Sigel, S. Stimmel and F. Strutz. 2007.** SOEP 2006 Erstbefragung der Ergänzungsstichprobe H. Methodenbericht. TNS Infratest. June.
- Wagner, K. and S. Zottel. 2009.** Methodologische Aspekte der Immobilienvermögenserhebung 2008. In: *Statistiken Q4/09*. Vienna: OeNB. Forthcoming.

Annex

Table A1

Ownership of Primary Residences

	Frequency		Home owners only			
	Number	%	All observations		Excluding top 1%	
			Mean value	Median	Mean value	Median
			EUR			
Total	1,038	49.9	260,000	200,000	230,000	200,000
By age						
18 to 29 years	48	16.5	190,000	160,000	190,000	150,000
30 to 39 years	157	40.4	270,000	200,000	230,000	200,000
40 to 49 years	294	60.4	240,000	200,000	220,000	200,000
50 to 59 years	230	59.3	270,000	210,000	240,000	210,000
60 to 69 years	194	64.9	270,000	200,000	230,000	200,000
70 years or older	116	50.7	260,000	150,000	200,000	150,000
By highest level of education						
Compulsory education	162	45.2	220,000	170,000	200,000	170,000
Apprenticeship, vocational school, intermediate or higher technical/vocational school	616	52.5	260,000	200,000	230,000	200,000
High school (Matura)	136	41.3	260,000	200,000	220,000	190,000
College, university, academy	124	56.1	300,000	230,000	250,000	220,000
By occupation						
Self-employed persons, entrepreneurs	69	64.6	330,000	250,000	300,000	250,000
White-collar workers	275	44.4	220,000	200,000	220,000	200,000
Civil servants	71	60.5	240,000	210,000	240,000	210,000
Farmers	52	96.0	490,000	300,000	360,000	290,000
Blue-collar workers	135	40.9	220,000	180,000	190,000	170,000
Other occupational groups (contractors, free agents, etc.)	41	47.6	200,000	150,000	190,000	150,000
Retired persons	318	58.0	270,000	200,000	210,000	190,000
Not gainfully employed persons (pupils, students, on home duties, unemployed, on parental leave)	77	35.1	230,000	200,000	230,000	200,000
By net household income						
Up to EUR 795	68	36.4	290,000	200,000	240,000	200,000
EUR 796 to EUR 1,432	195	38.0	210,000	150,000	180,000	150,000
EUR 1,433 to EUR 2,388	301	51.1	230,000	180,000	200,000	180,000
EUR 2,389 to EUR 3,185	201	56.4	280,000	200,000	220,000	200,000
EUR 3,186 to EUR 4,999	177	62.5	310,000	250,000	290,000	250,000
EUR 5,000 or more	96	62.5	290,000	250,000	280,000	250,000
By location						
Rest of Austria	947	59.3	260,000	200,000	230,000	200,000
Vienna	91	18.8	260,000	190,000	230,000	180,000
By household size						
1 person	256	35.1	220,000	160,000	190,000	160,000
2 persons	319	53.5	250,000	200,000	220,000	200,000
3 persons	191	57.4	230,000	200,000	220,000	200,000
4 persons	174	63.1	270,000	230,000	260,000	230,000
5 or more persons	98	66.5	390,000	280,000	300,000	270,000
By marital status¹						
Single	169	32.0	210,000	150,000	180,000	150,000
Married	652	62.2	280,000	220,000	240,000	220,000
Divorced	111	36.4	220,000	160,000	190,000	160,000
Widowed	105	53.1	250,000	180,000	220,000	180,000

Source: HSHW 2008.

¹ Available information on other types of partnership is not reported separately.

Total Real Estate Holdings (Primary Residences and Other Real Estate)

	Frequency		Home owners only			
	Number	%	All observations		Excluding top 1%	
			Mean value	Median	Mean value	Median
			EUR			
Total	1,230	59.1	420,000	220,000	330,000	210,000
By age						
18 to 29 years	63	21.4	340,000	160,000	310,000	160,000
30 to 39 years	211	54.2	400,000	200,000	310,000	200,000
40 to 49 years	350	72.1	370,000	220,000	300,000	220,000
50 to 59 years	269	69.4	540,000	250,000	390,000	240,000
60 to 69 years	212	71.2	390,000	220,000	340,000	220,000
70 years or older	125	55.0	440,000	180,000	330,000	180,000
By highest level of education						
Compulsory education	179	50.1	420,000	200,000	300,000	190,000
Apprenticeship, vocational school, intermediate or higher technical/vocational school	725	61.8	420,000	220,000	330,000	220,000
High school (Matura)	169	51.1	410,000	200,000	330,000	200,000
College, university, academy	158	71.4	430,000	250,000	390,000	250,000
By occupation						
Self-employed persons, entrepreneurs	81	76.2	490,000	300,000	400,000	280,000
White-collar workers	356	57.5	340,000	200,000	300,000	200,000
Civil servants	95	81.7	360,000	250,000	340,000	240,000
Farmers	54	100.0	620,000	440,000	530,000	420,000
Blue-collar workers	160	48.2	550,000	200,000	310,000	190,000
Other occupational groups (contractors, free agents, etc.)	53	61.0	300,000	180,000	270,000	160,000
Retired persons	341	62.2	420,000	210,000	330,000	200,000
Not gainfully employed persons (pupils, students, on home duties, unemployed, on parental leave)	90	41.3	460,000	220,000	340,000	210,000
By net household income						
Up to EUR 795	78	42.0	500,000	220,000	380,000	220,000
EUR 796 to EUR 1,432	225	43.8	280,000	170,000	270,000	170,000
EUR 1,433 to EUR 2,388	352	59.9	340,000	200,000	280,000	200,000
EUR 2,389 to EUR 3,185	242	68.1	470,000	220,000	320,000	200,000
EUR 3,186 to EUR 4,999	212	74.5	550,000	280,000	400,000	270,000
EUR 5,000 or more	121	78.9	550,000	300,000	490,000	300,000
By location						
Rest of Austria	1,032	64.6	400,000	220,000	330,000	220,000
Vienna	199	40.9	500,000	200,000	360,000	200,000
By household size						
1 person	319	43.7	370,000	180,000	310,000	180,000
2 persons	386	64.7	450,000	200,000	330,000	200,000
3 persons	220	66.3	430,000	220,000	330,000	210,000
4 persons	195	70.6	360,000	250,000	330,000	250,000
5 or more persons	111	75.3	530,000	300,000	430,000	300,000
By marital status¹						
Single	204	38.5	350,000	190,000	320,000	190,000
Married	760	72.6	450,000	250,000	350,000	240,000
Divorced	151	49.5	350,000	180,000	290,000	180,000
Widowed	115	57.8	460,000	200,000	310,000	200,000

Source: HSHW 2008.

¹ Available information on other types of partnership is not reported separately.