

Saving, portfolio and loan decisions of households when interest rates are very low – survey evidence for Austrian households

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Do Austrian households adapt their savings and loan decisions in an ultra-low interest rate environment? To answer this question, we analyzed a special OeNB barometer survey conducted in spring 2015 that allows us to assess household interest rate perceptions as well as their impact on saving, portfolio allocation and borrowing decisions.

Overall, we find that the very low interest rates were only one of several determinants in savings and loan decisions and have had only a small effect so far. The impact of the ultra-low interest rate environment on portfolio choice is also quite limited. Households that did adapt their portfolio often showed a stronger preference for savings with savings and loan associations than for other options. Furthermore, we observe a shift to real assets. Portfolio rebalancing into riskier assets is not widespread.

Many households at the time of the survey considered circumstances relatively favorable for taking out loans. However, this does not imply that loan demand increased strongly, as borrowing decisions are also affected by other, potentially more important determinants. If they were faced with higher loan installments, most households would cut consumption expenditures.

The survey results may be useful in assessing e.g. the effectiveness of monetary policy. The modest impact of ultra-low interest rates on savings and portfolio rebalancing into riskier assets suggests that ultra-low interest rates have a limited ability to stimulate aggregate demand through the risk-taking and portfolio rebalancing channels, at least in the case of households in Austria.

JEL classification: D12, D14

Keywords: household finance, low interest rates, savings and loan decisions

The Austrian economy is strongly affected by the current phase of ultra-low interest rates. Interest rates on savings products are close to zero, and customer lending rates are extremely low compared to those in other euro area countries. Because inflation is higher in Austria than in the euro area as a whole, real interest rates in Austria are particularly low and even negative for many simple and low-risk savings products. How do Austrian households react to this extraordinary situation? Do low or even negative interest rates affect households' propensity to save? Do they change households' choice of savings products in favor of riskier forms of in-

vestment whose prices increase at low interest rates (e.g. shares)? Do Austrian households use the low interest rate environment to undertake more highly leveraged real investment, in particular in real estate? Which household-specific factors play a role?

To shed light on these aspects, we added questions on the knowledge of the interest rate level, interest rate expectations and the impact of the low interest rate level on households' financial decisions to a special edition of the OeNB barometer survey. Beer et al. (2015) analyzed survey data to determine whether households were aware of the fact that interest rates are cur-

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rently extremely low and to gauge households' interest rate expectations. In a nutshell, the results can be summarized as follows: Whereas Austrian households' knowledge of the interest rate level is limited, the vast majority of respondents is aware that we are currently experiencing a period of very low interest rates. Nevertheless, Austrian households overestimate the interest rate level. Furthermore, many respondents expect the low interest rate environment to persist in the foreseeable future. However, a large fraction of respondents has not formed any interest rate expectations.² In this paper, we use the same survey data to explore whether Austrian households have adapted their savings behavior and their portfolio allocation to ultra-low interest rates, and if so, how; we also look at whether Austrian households are more inclined to take out a loan now to benefit from the very low interest rates.

The paper is structured as follows: Section 1 discusses how the low interest rate environment has affected households' propensity to save. In section 2, we analyze whether low interest rates have prompted Austrian households to prefer other types of investment. Section 3 looks at households' loan decisions and section 4 concludes.

1 Households' propensity to save in an ultra-low interest rate environment

Generally, one would expect changes in interest rates to affect households' propensity to save. Theory does not allow us to determine the impact of a

change in the interest rate on the saving ratio a priori. Three effects are at play: First, the (intertemporal) substitution effect suggests that people will save less if interest rates decrease because lower interest rates make saving less attractive. Second, the income effect might prompt net savers to save more to make up for lower interest rate income, making it unclear whether the substitution effect or the income effect will ultimately predominate. Finally, wealth effects resulting from a revaluation of assets as a consequence of lower interest rates allow for higher future consumption even with a lower saving ratio (see also Deutsche Bundesbank, 2015). Thus, interest rate changes can affect households quite differently. For example, whether a change in interest rates will increase or decrease net interest income depends on whether a household has positive or negative net wealth. Furthermore, the magnitude of wealth effects depends crucially on the amount and type of assets a household owns (e.g. savings accounts, variable or fixed rate bonds, stocks, real estate).

Moreover, depending on the underlying saving motive, interest changes might have different effects on saving. For example, based on Keynes' General Theory, Browning and Lusardi (1996) list nine saving motives, only one of which (the intertemporal substitution motive) suggests a clear inverse relationship between the rate of interest and the propensity to save. If saving is driven by other motives (e.g. the life-cycle motive or the bequest motive), the income or the wealth effect might take precedence over the substitution

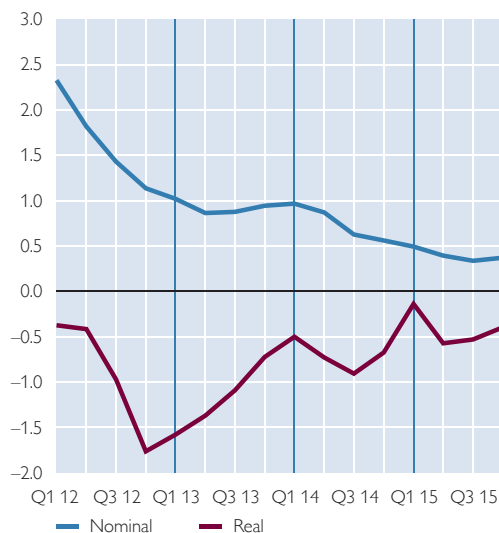
² Respondents were asked whether they expected interest rates to be lower, higher, considerably higher or at about the same level in five years. 48% of those that answered the question expect the monetary policy rate in 2020 to be the same or even lower than it was in 2015, 65% expect lower or stable interest rates for savings accounts and 34% expect mortgage rates to drop or to remain stable. However, 22% of respondents refused to, or were not able to, state their expectations for the monetary policy rate and the mortgage rate; 22% would not or could not state expectations for interest rates on savings accounts.

Chart 1

Interest rates on savings accounts and savings ratio

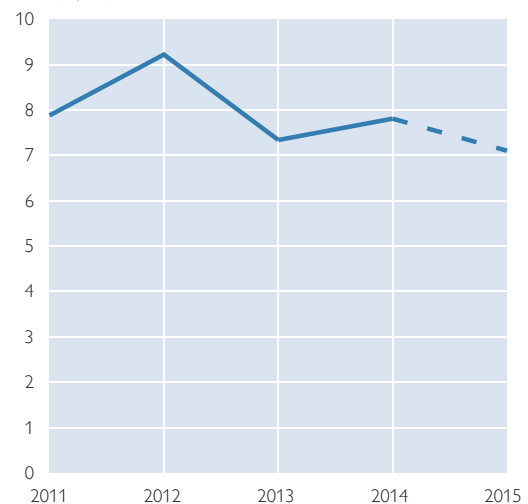
Interest rates on savings accounts

% per annum



Saving ratio

% of the sum of disposable income and the change in household's net equity in pension fund reserves



Source: OeNB.

Note: Interest rate: New business with agreed maturity over one year and up to two years. Real interest rate calculated using contemporaneous HICP inflation. Saving ratio: Projected values for 2015 according to OeNB December 2015 economic forecast.

effect. Furthermore, saving out of an avarice motive seems to be independent of the interest rate. Finally, the existence of the precautionary motive, the down payment motive and the enterprise motive indicates that other factors, such as capital market imperfections, are more important for saving than interest rate developments.³ Overall, this discussion suggests that interest rates are only one of many factors that affect savings behavior and that interest rate developments are not likely to be the decisive factor.

Chart 1 gives an overview of the evolution of the interest rate on savings accounts and of the aggregate saving ratio. Interest rate statistics show that the nominal interest rate on savings accounts declined between 2012 and 2015 (chart 1, left panel).⁴ However, the real interest rate fell initially and then increased while staying negative.⁵ The saving ratio (chart 1, right panel) dropped initially, and then more or less stabilized, reflecting the development of HICP inflation. The chart suggests that the impact of interest changes on

³ For a survey on how the interest rate elasticity of savings differs by saving motive, see also Elmendorf (1996). Empirical results for Austria based on an error correction model using macrodata by Dirschmid and Glatzer (2004) suggest that Austrian households react to an increase in interest rates by saving a larger fraction of their income. In particular, an increase in the real interest rate by 1 percentage point will raise the savings rate by 0.69 percentage point in the short run and by 1.16 percentage points in the long run.

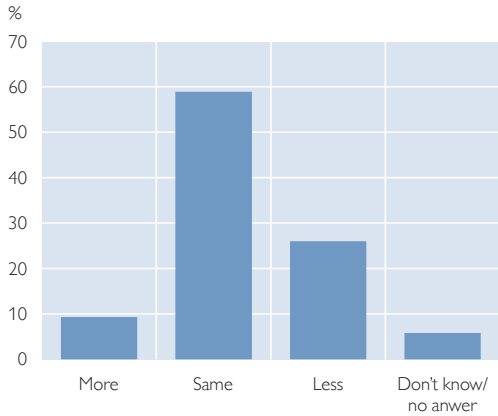
⁴ The appropriate observation period is from the second quarter of 2012 to the second quarter of 2015 because the survey was conducted from end-April to early June 2015 and the question on changes in households' savings behavior applied to the three years before the survey or intended changes in the year following the survey. For general information on the survey, see Beer et al. (2015).

⁵ Note that in calculating real interest rates, we used contemporaneous HICP inflation. In theory, the inflation rate or inflation expectations used should coincide with the investment horizon (not known to us).

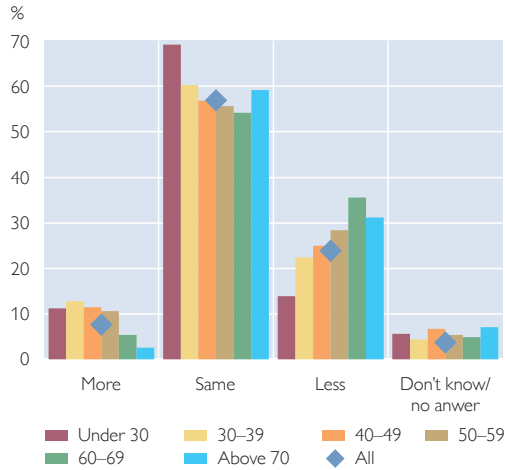
Chart 2

Changes in savings behavior

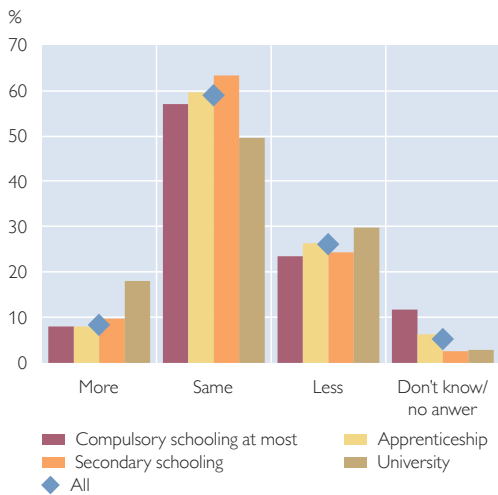
All respondents



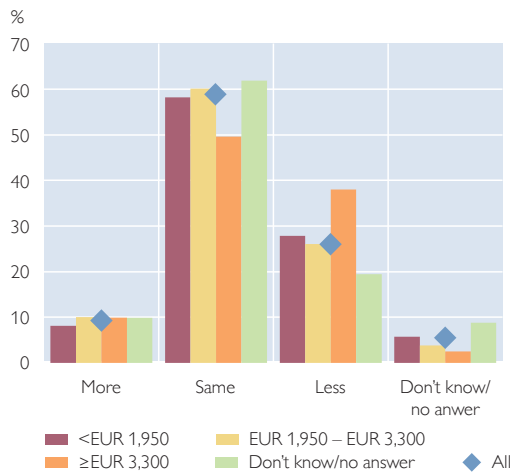
By age



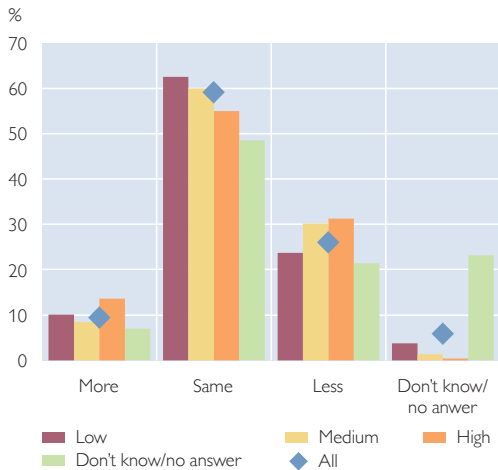
By education



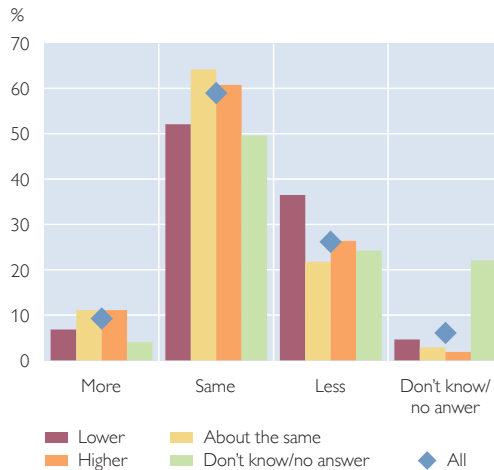
By household income



By assessment of current interest rates on savings accounts



By expectations for future interest rate on savings accounts



Source: Authors' calculations based on the OeNB barometer survey.

Note: Assessment of interest rate on savings accounts: low: less than 0.9%; medium: between 0.9% and 1.5%; high: above 1.5%.

Table 1

Reasons for changes in savings behavior

Why is your household saving more?

| | % |
|----------------------------|----|
| Change in household income | 39 |
| Larger purchases | 32 |
| Personal reasons | 16 |
| Low interest rates | 14 |
| Other | 30 |
| Don't know/no answer | 6 |

Why is your household saving less?

| | % |
|---------------------------------|----|
| Increase in price level | 67 |
| Higher consumption expenditures | 54 |
| Low interest rates | 45 |
| Higher real estate prices/rent | 41 |
| Other | 61 |
| Don't know/no answer | 1 |

Source: Authors' calculations based on the OeNB barometer survey.

Note: Multiple answers possible.

the aggregate saving ratio is not straightforward. Lower nominal interest rates on savings by and large correlate with a drop in the saving ratio, whereas no clear-cut correlation can be established between the evolution of the real interest rate and the development of the saving ratio.

To shed some light on whether Austrian households adapted their savings behavior to the ultra-low interest rate environment at a disaggregated level, we asked households whether they increased, decreased or left unchanged savings in the three years before the survey.⁶ If households changed their savings behavior, we additionally asked them why they did so. Reacting to the

interest rate environment was one of several possible answers.

The majority of households (almost 60%) did not change their savings behavior in the three years before the survey. Only 9% of households reported that they were saving more than three years earlier (chart 2). However, only 14% of these households cited interest rate developments as a reason to save more (table 1); this corresponds to 1.3% of all households.

About 26% of households stated that they were saving less than three years before. This behavior is most pronounced among older households, high-income households (these might be particularly financially literate and return oriented), and households that expect lower interest rates (chart 2). The low interest rate environment plays a more prominent role in the decision to save less than in the decision to save more, with 45% of all households that save less citing this factor (11% of all respondents), possibly because they considered income effects less important than the substitution effect in combination with the wealth effect (high-income households are more likely to hold risky assets). Survey data suggest that households specifying the low interest rate as the reason, or as one reason, to reduce savings are more aware of the low interest rate on savings accounts than households that did not state this reason: A smaller proportion of the former households stated that they did not know how high the current interest rate on savings accounts⁷

⁶ More precisely, we asked households whether they increased (decreased) their savings considerably, somewhat or not at all. In the charts, the answers "considerably" and "somewhat" are consolidated in the categories "more" and "less," respectively.

⁷ To assess the interest rate on savings accounts, we asked survey participants what interest rate they would expect to receive if they newly allocated money to a savings account with an agreed maturity of between one year and up to two years. In the figures displaying results by the assessment of interest rates on savings accounts, we aggregated the answers in the following way (fraction of respondents in parentheses): Low: less than 0.9% (45%); medium: between 0.9% and 1.5% (32%); high: above 1.5% (7%); don't know/no answer (16%).

was or refused to give an answer. Moreover, households specifying low interest rates as the reason for reducing savings assessed the current interest rate level for savings accounts as slightly lower than other households, and they had more modest interest rate expectations.

Nevertheless, other reasons are mainly responsible for the decline in savings (table 1). The high proportion of answers in the category “increase in price level” may seem difficult to reconcile with the low inflation environment that has persisted in Austria for some time, even if one allows for group-specific or individually higher inflation rates because of differences in consumption patterns,⁸ but it may reflect the perception that inflation is higher than actual, statistically measured inflation. Higher consumption expenditures were another important reason for households to save less. The answers “increase in price level” and “higher consumption expenditures” might signal the impact of higher living costs (lower real income). However, survey results do not allow the conclusion to be drawn that households responded to low interest rates by decreasing savings and increasing consumption expenditures. 45% of households that save less because of higher consumption expenditures simultaneously mentioned low interest rates.⁹

Our results are roughly in line with those of Deutsche Bundesbank (2015) for Germany. Deutsche Bundesbank (2015) presents results based on micro-

data from the Panel on Household Finances (PHF) survey that suggest that low interest rates prompted only a minority of households to change their savings behavior in 2014.¹⁰ In particular, 77% of households had not changed their savings behavior, 15% said that they were saving less, 7% were investing differently than before, and only 1% were saving more. By contrast, high-wealth households were more inclined to adapt their savings behavior as a result of low interest rates. Deutsche Bundesbank (2015) concludes that the level of interest rates and interest rate expectations only marginally influenced the savings and investment behavior of households. According to Deutsche Bundesbank (2015), other factors, such as the level of wealth or uncertainty (caused by higher volatility as a result of the crisis or by personal investment experience), are presumably more important.

2 Portfolio composition

Households’ savings decisions involve determining the overall household saving ratio and portfolio composition. These factors are interrelated, as e.g. different investment products offer different (expected) returns, which in turn influence the desired level of savings. The different effect of interest changes on the return of diverse investment products could give households a further incentive to change their portfolio composition in reaction to a change in interest rates. According to

⁸ For example, Statistics Austria calculates a price index that permits calculation of the price development of a weekly bulk purchase (“Miniwarenkorb”). The inflation rate for this basket is usually higher than HICP inflation.

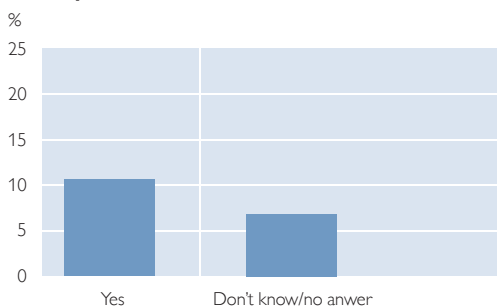
⁹ Furthermore, 6% were not able to, or refused to, answer questions on their savings behavior. Answers on savings behavior (as well as on other questions, see below) suggest that the fraction of “don’t know” is relatively high among those who are financially illiterate (i.e. respondents who answered “don’t know/no answer” on their interest rate assessment and expectations on interest rates). Rational inattention might be another reason why households are not aware of interest rate developments.

¹⁰ In Deutsche Bundesbank (2015), changes in savings behavior means either changes in the level of savings or changes to other types of savings.

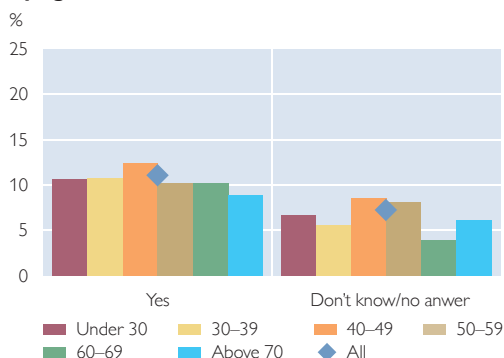
Chart 3

Changes in investment products

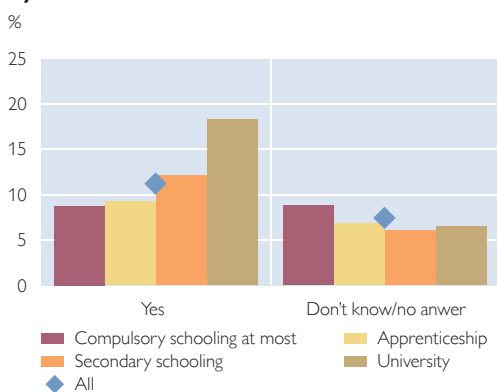
All respondents



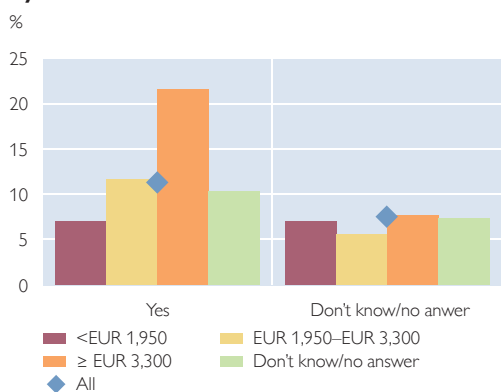
By age



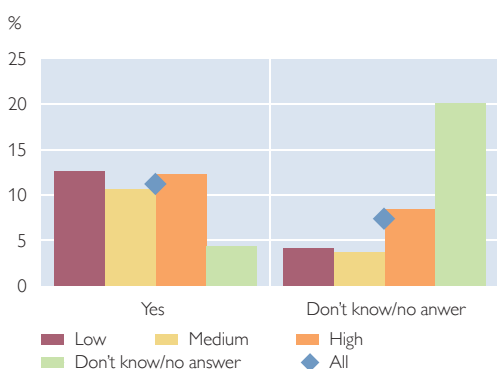
By education



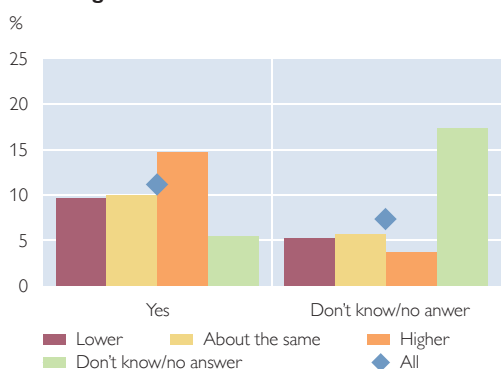
By household income



By assessment of current rates on savings accounts



By expectations for future interest rate on savings accounts



Source: Authors' calculations based on the OeNB barometer survey.

Note: Assessment of interest rate on savings accounts: low: less than 0.9%; medium: between 0.9% and 1.5%; high: above 1.5%.

our survey data, the low interest rate environment had only a modest impact on the portfolio allocation of Austrian households. Overall, low interest rates were a reason for 11% of households to prefer other savings and investment products in spring 2015 than in spring

2012 (chart 3). This fraction is above average for households in which the reference person has tertiary education (22%) and households with high household income (22%), two outcomes that are highly correlated. High-income households might also be wealthier and

might therefore participate more in markets for risky assets. This holding of risky assets makes an adaption of high-income households' portfolios to include even more risky assets more likely. Furthermore, the fraction of households that changed the composition of their portfolio was slightly higher among respondents who expected higher interest rates on savings accounts at the time of the survey.

Table 2 gives an overview of the changed preferences of households by instruments. Deposits with savings and loan associations, holdings in cash and investment in real estate gained the most importance. Savings with savings and loan associations may have become more attractive because interest rates on them were still comparatively high and because a premium is paid on housing savings contracts, albeit a low premium currently, as the premium hinges on the interest rate level. Cash is relatively more attractive in a low interest rate environment because the opportunity costs of holding cash are low; if interest rates should turn negative, holding cash might become even more attractive. 19% of households mention gold as a fairly important investment product; gold resembles cash in that both carry no interest and should react similarly to an interest rate change. Real estate as well as other tangible assets are easier to finance at low interest rates. Households also exhibit a tendency to increase investment in riskier financial products (shares and investment funds).

When gauging the macroeconomic significance of these results, note that only a small fraction of households changed their investment behavior. For instance, even though savings with savings and loan associations gained im-

Table 2
Which products gained importance because of the low interest rate environment?

| | % |
|--------------------------------------------|----|
| Savings with savings and loan associations | 29 |
| Cash | 23 |
| Real estate | 20 |
| Gold | 19 |
| Shares | 18 |
| Other tangible assets | 18 |
| Life insurance reserves | 16 |
| Investment funds | 14 |
| Savings accounts with longer maturities | 13 |
| Bonds | 8 |
| Other | 6 |
| Non-euro cash | 4 |
| Don't know/no answer | 4 |

Source: Authors' calculations based on the OeNB barometer survey.
Note: Multiple answers possible. Only households that changed their investments were taken into account.

portance for 29% of all households that changed their investment behavior, this fraction corresponds to only 3% of all households.

Hence, even though return motives in a low interest rate environment as well as the different development of returns of various asset classes¹¹ suggest that households have some incentives to change their portfolio allocation and to allocate a higher proportion of their financial wealth to risky assets (e.g. shares), we observe only modest changes in households' portfolio allocation. The uncertain macroeconomic environment and the high volatility of stock markets during the crisis may be two of several potential reasons for this reluctance to adapt portfolios and to prefer safer assets. In interpreting the results, one should also heed the low participation of Austrian households in more risky asset classes. As a case in point, according to data from the Household Finance and Consumption Survey (HFCS), only 5.3% of households owned stocks in 2010 (Fessler et

¹¹ See Deutsche Bundesbank (2015) for results on the evolution of returns of different asset classes.

al., 2012). Households are unlikely to invest in instruments they are unfamiliar with just because interest rates are low. Furthermore, since participation in the market for risky assets involves transaction costs, investing in these assets makes sense only for households that are wealthy enough. Moreover, households may be reluctant to boost the share of riskier assets in portfolios because of their bad experience during the crisis. Deposit insurance protecting savers' assets might have also contributed to households' preference for savings accounts. Furthermore, the tax treatment of valuation gains in Austria has deteriorated markedly in recent years. Most likely, other constraints (low financial literacy, a low risk-bearing capacity and risk proneness as well as inertia and the force of habit) also keep households from adapting portfolio allocation to include riskier, more complex products despite higher interest rates or higher expected returns.

For comparison purposes, data from Austria's financial accounts (e.g. OeNB, 2015) suggest that savings accounts repayable on demand gained importance at the expense of fixed term savings accounts between the second quarter of 2012 and the second quarter of 2015. Otherwise, the percentages of most other assets in total financial assets remained relatively stable: The share of debt securities in total financial assets dropped by about 2 percentage points and that of life insurance reserves by 0.75 percentage point. Mutual fund shares gained some ground (1.75 percentage points); the fraction of shares and other equity in total finan-

cial assets remained roughly stable, as did that of savings with savings and loan associations.¹² Hence, at first glance, the financial accounts data appear to resemble the survey answers only to a limited extent. However, the survey data principally only allow for statements about participation, i.e. the fractions of households that e.g. invest in a particular savings product, but not for statements about investment volumes. Hence, even if the change in participation is low, the change in volume could be considerable if a large fraction of wealthy households invested in a product. Conversely, small portfolio shifts might have a negligible effect on financial account data even if they were undertaken by a large number of households.¹³

Most respondents expect the low interest rate environment to persist in the foreseeable future (Beer et al., 2015). Hence, we asked whether Austrian households intended to change their investment and savings behavior in the immediate future and, if so, which products they intended to invest in 12 months into the future.¹⁴ Again, the impact of the interest rate level turned out to be quite limited. Overall, 8% of households confirmed that the low interest rate level would induce them to change savings and investment products in the 12 months following the survey. This number is slightly higher for young households. Otherwise, the same factors as in the case of investment changes already made play a role (the level of education and higher interest rate expectations; see chart 4).

¹² According to annual data from 2012 to 2014.

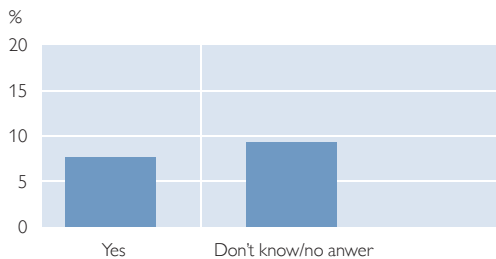
¹³ Furthermore, the survey data do not allow us to determine which savings products became less important.

¹⁴ Until mid-2016.

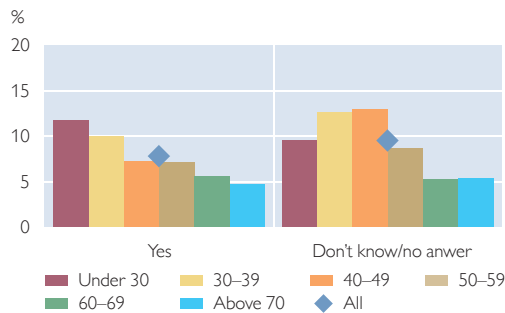
Chart 4

Planned changes in investment products

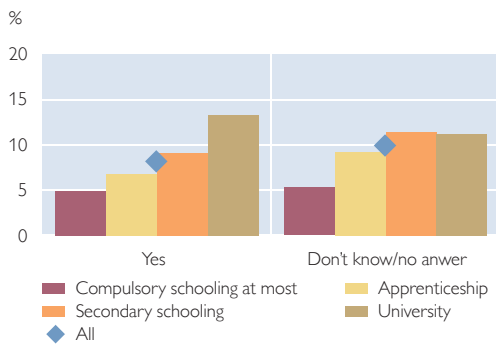
All respondents



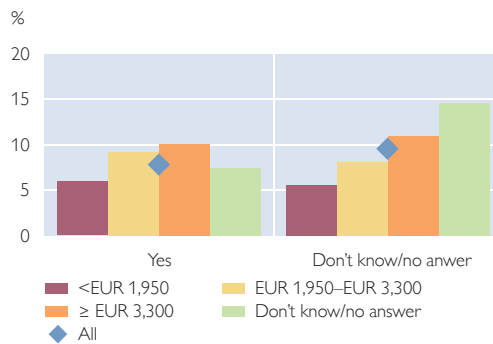
By age



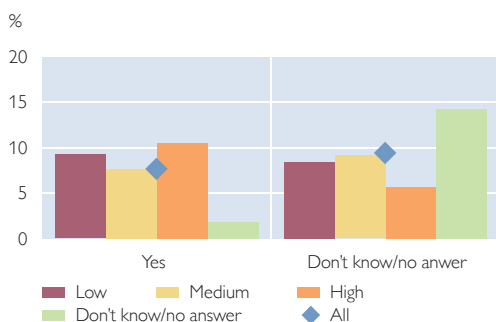
By education



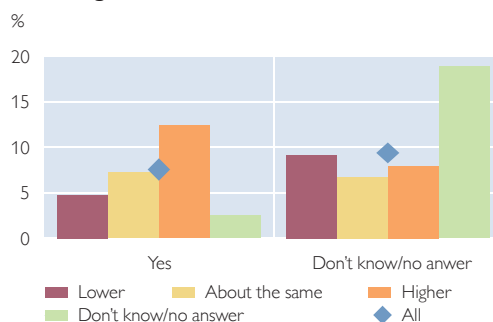
By household income



By assessment of current rates on savings accounts



By expectations for future interest rate on savings accounts



Source: Authors' calculations based on the OeNB barometer survey.

Note: Assessment of interest rate on savings accounts: low: less than 0.9%; medium: between 0.9% and 1.5%; high: above 1.5%.

Households that plan portfolio shifts stated that they would assign a higher share of their savings to gold and savings with savings and loan associations (see table 3). Comparing realized and planned changes in portfolio allocation, gold, real estate and shares are expected to gain popularity. Savings with savings and loan associations will remain in demand, whereas life insurance products will lose attractiveness.

Altogether, the survey results suggest that the low interest rate environment has so far had only a limited impact on the savings behavior and portfolio composition of Austrian households, which is consistent with the finding that interest rates are just one of many explanatory factors in savings decisions and may have generally ambiguous effects on savings.

Table 3

Which products do you intend to invest in?

| | % |
|--------------------------------------------|----|
| Gold | 24 |
| Savings with savings and loan associations | 23 |
| Shares | 23 |
| Real estate | 23 |
| Savings accounts with longer maturities | 16 |
| Other tangible assets | 15 |
| Cash | 15 |
| Investment funds | 12 |
| Bonds | 9 |
| Non-euro cash | 7 |
| Life insurance reserves | 6 |
| Other | 5 |
| Don't know/no answer | 5 |

Source: Authors' calculations based on the OeNB barometer survey.
Note: Multiple answers possible. Only households that intend to change their investments were taken into account.

3 Loans

Households may also react to the ultra-low interest rate environment by changing the composition of their liabilities. When interest rates fall, the substitution effect and the income effect should both favor borrowing: Lower interest rates should unambigu-

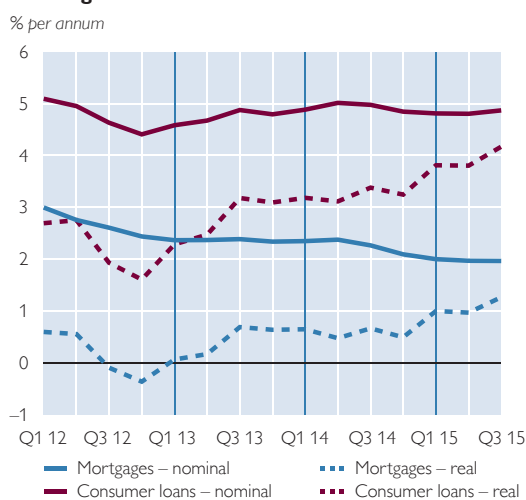
ously lead to higher demand for loans because they prompt households to spend rather than save at low returns (substitution effect) and because they leave more income otherwise needed to pay interest on loans for spending (income effect). However, interest rates are only one factor that determines household loan demand. Unfavorable macroeconomic developments, uncertainty about future developments, low confidence in growth prospects as well as relatively high and/or rising unemployment dampen the demand for loans.

Interest rates on variable rate mortgage loans behave much the same as interest rates on savings accounts: The nominal rate declines but the real rate increases because of the recent drop in inflation (chart 5). In contrast, the nominal interest rate for consumer loans was more stable, resulting in a more pronounced increase of the real rate. The right panel of chart 5 shows that households took out more housing loans in 2015 than in 2012. Conversely,

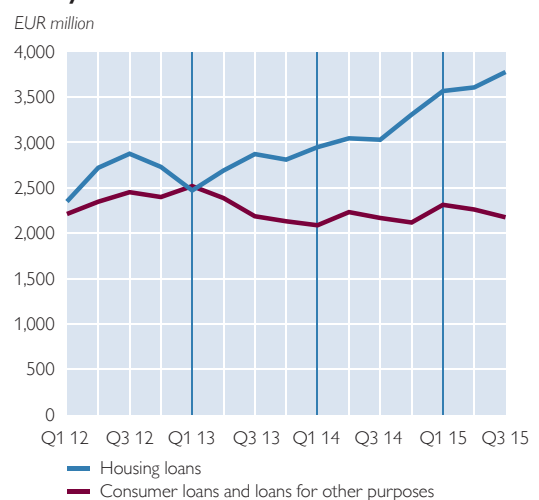
Chart 5

Lending rates and lending volumes

Lending rates



Newly allocated loans



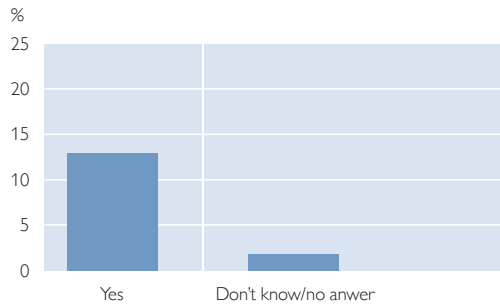
Source: OeNB.

Note: Lending rates: New business with initially agreed maturities of up to one year. Real interest rates calculated with the contemporaneous inflation rate.

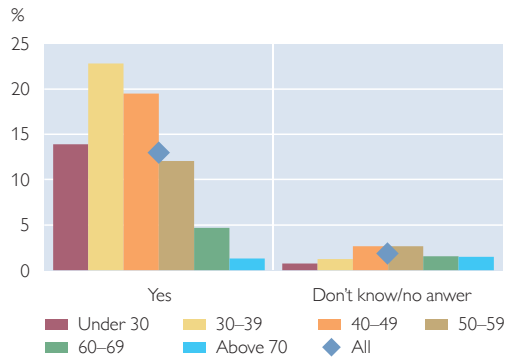
Chart 6

Took out a loan in the three years preceding the survey

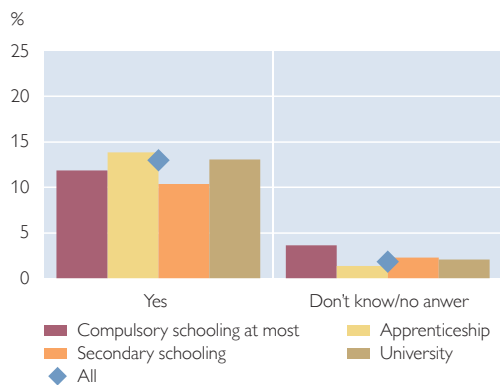
All respondents



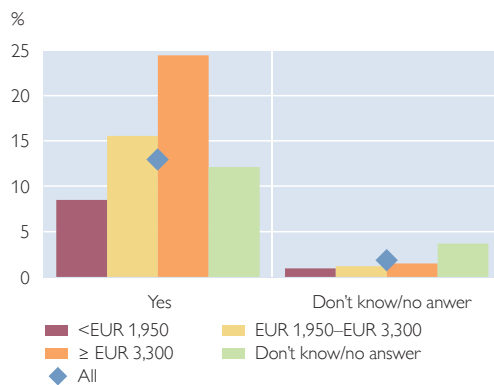
By age



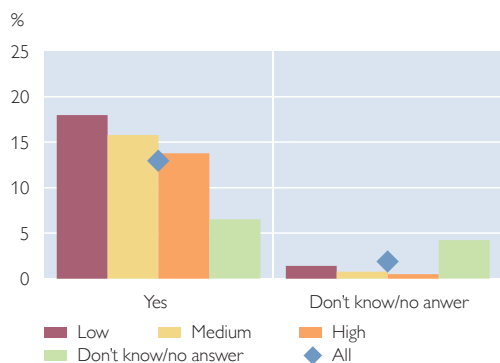
By education



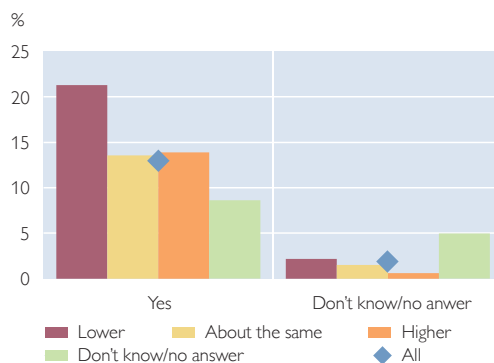
By household income



By assessment of current interest rates on loans



By expectations for future interest rate on loans



Source: Authors' calculations based on OeNB barometer survey.

Note: Assessment of interest rate on loans: low: less than 1.5%; medium: between 1.5% and 3.5%; high: above 3.5%.

the volume of newly allocated consumer loans and loans for other purposes dropped slightly.

Overall, 13% of households indicated that they took out a loan in the three years preceding the survey. The

low interest rate environment played an important role in about 40% of these households' decision to take out a loan. Apart from life-cycle factors (households aged 30 to 39 had the highest propensity, 23%, to take out a loan) and

correlation with household income, we also observe some correlation with interest rate perceptions¹⁵ and expectations. Households that are aware of the low level of current interest rates and those that expect interest rates to decrease are more likely to have taken out a loan. However, only a small fraction of respondents expects interest rates to fall.

Low interest rates should also result in lower interest expenditures for those 23% of households that have an outstanding loan¹⁶ (at least in the case of variable rate loans, which make up the bulk of loan contracts in Austria)¹⁷. 40% of these households indicated that their loan expenditures had declined because of the low interest rate environment. In addition, households can profit from a low interest rate environment by renegotiating their loan or by converting debt and taking out a new loan (changing a fixed rate loan into a variable rate loan or into a lower interest fixed rate loan). However, the costs usually involved in loan renegotiations and debt conversions (e.g. bank fees) reduce the profitability of this option. Survey data suggest that 30% of all indebted households attempted to change the conditions of their loans in this way.¹⁸ 70% of these households indicated that their loan burden had eased.

While the current low interest rate environment makes it easier to pay in-

terest on loans, an eventual future hike in interest rates could pose problems for indebted households with variable rate loans to an extent that could affect the macroeconomy or financial stability. To shed some light on this question, we asked indebted households how they would react if their monthly loan installments increased by EUR 100. The survey data suggest that in such a situation, households would mainly opt to reduce expenditures (table 4). 57% said that they would decrease consumption expenditures, 37% would delay large purchases, and 31% would spend less for holidays. Altogether, three-quarters of indebted households would take at least one of these measures. Another widely suggested reaction is negotiating with the bank. For example, households could try to reduce installments by extending the term of the loan.

At the time the survey was conducted, the impression that it was a relatively favorable time to take out a loan was relatively widespread among the Austrian population. Overall, 44% of households questioned thought that circumstances for taking out a loan were favorable; the number is higher for other loans (55%) than for mortgages (39%). More highly educated households and higher income households were more likely to think that it was a favorable time to take out a loan (chart 7).

¹⁵ We asked survey participants how high they expected the interest rate to be if they took out a variable rate euro-denominated mortgage of EUR 100,000 with a maturity of 20 years. In the results on the assessment of the interest rate on loans, we aggregated the answers in the following way (fraction of respondents in parentheses): low: less than 1.5% (16%); medium: between 1.5% and 3.5% (31%); high: above 3.5% (23%); don't know/no answer (30%).

¹⁶ This number is considerably lower than the fraction of indebted households according to 2010 HFCS data (36%). However, the HFCS figures also include overdrafts and outstanding balances on credit cards (see Fessler et al., 2012).

¹⁷ In Austria, variable rate loans make up the bulk of outstanding loans (about 80% at the end of 2015, compared to just under 30% in the euro area).

¹⁸ See Andersen et al. (2015) on inertia and inattention in refinancing decisions.

Table 4

How would you react if your loan expenses increased by EUR 100?

| | % of indebted households |
|-----------------------------------|--------------------------|
| Decrease consumption expenditures | 57 |
| Negotiate with the bank | 49 |
| Delay large purchases | 37 |
| Spend less for holidays | 31 |
| Work more | 23 |
| Dissave financial assets | 13 |
| Don't know/no answer | 4 |
| Other | 2 |

Source: Authors' calculations based on the OeNB barometer survey.

Note: Multiple answers possible.

At first glance, the lack of a clear-cut correlation of the impression that it was a favorable time to take out a loan with perceptions and expectations of loan interest rates looks counterintuitive. Potentially, respondents had different types of loans in mind when answering this question. If respondents had a fixed rate loan in mind, they might have said now was a good time to take out a loan if they perceived the current rate as low and expected rates to increase. They may also have thought that circumstances were favorable for taking out a variable rate loan if they expected interest rates to fall.

The survey data indicate that about 7% of households eventually intended to take out a loan in the year following the survey. About 3.4% of households intended to take out a loan for real estate purchases and about the same fraction of households for other purposes. The breakdown of households intend-

ing to take out a loan reflects the life-cycle factors we observed for most loan-related variables; moreover, households that assess current interest rates as low and those that expect interest rates to fall are represented more strongly (chart 8).¹⁹ Furthermore, 71% of households that intended to take out a loan said that the current ultra-low interest rate environment played a role in their decision.

Apart from demand factors, supply factors also play a role in enabling households to eventually take out a loan. Specifically, households must not be credit constrained. Our survey shows that overall 56% of households think that they would qualify for a loan. This fraction is lower among the youngest and oldest households in the survey; it amounts to 46% among households that have a reference person that is younger than 30 and to 37% in the group of over 70-year-olds. The lower fraction of older households may reflect a possible reluctance of banks to lend to people above a certain age.²⁰ In the youngest age group, low household income may play a role. Homeowners' higher confidence that they are eligible for a loan is likely to reflect the availability of collateral. The fraction of households that think that they would qualify for a loan amounts to 90% of households that intend to take out a loan.²¹ Among those households that think that they would qualify for a loan almost 12% actually intend to take out a loan.

¹⁹ See also Beer et al. (2015) on interest rate perceptions and expectations of households that want to take out a loan.

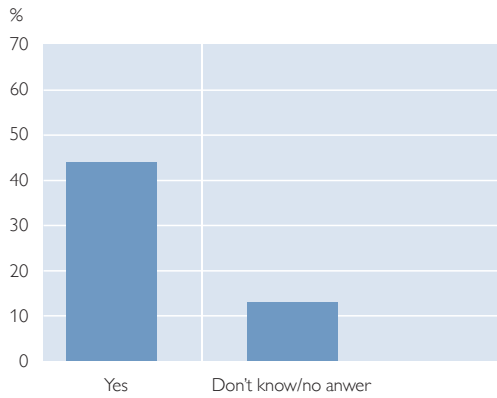
²⁰ The obstacles senior citizens face in taking out a loan have come under scrutiny, e.g. in the media, and it seems that banks' resistance to lending to older people is softening.

²¹ According to HFCS data, in 2010, 21% of households that had applied for a loan within three years (7.4% of all households) were rejected or offered a smaller amount than they applied for (ECB, 2013).

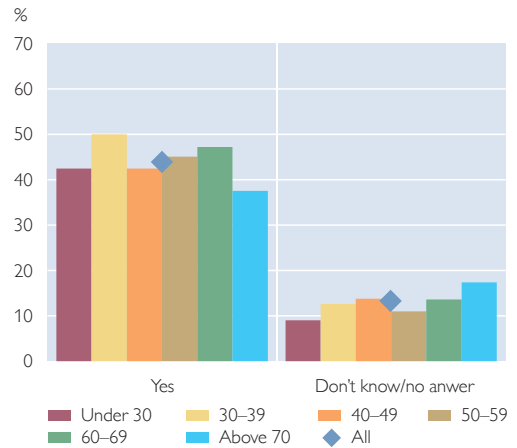
Chart 7

Now is a favorable time to take out a loan

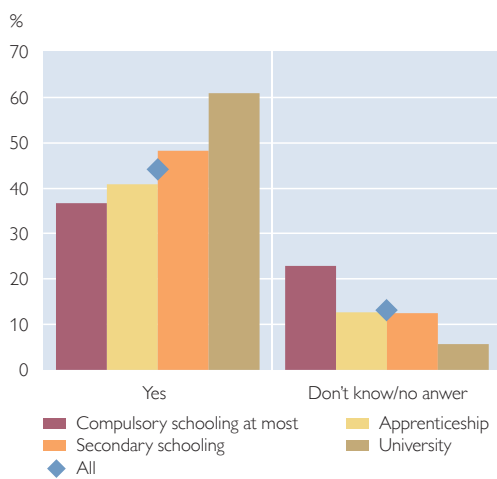
All respondents



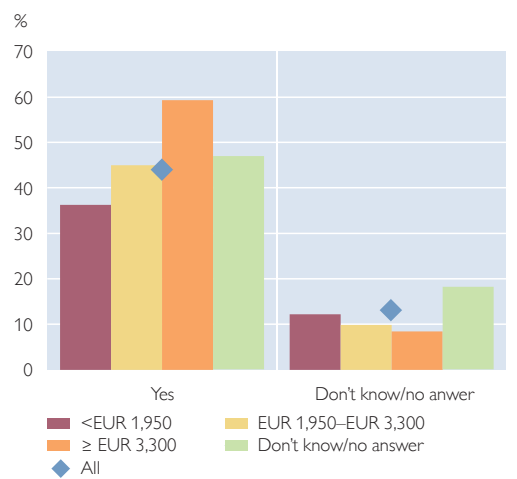
By age



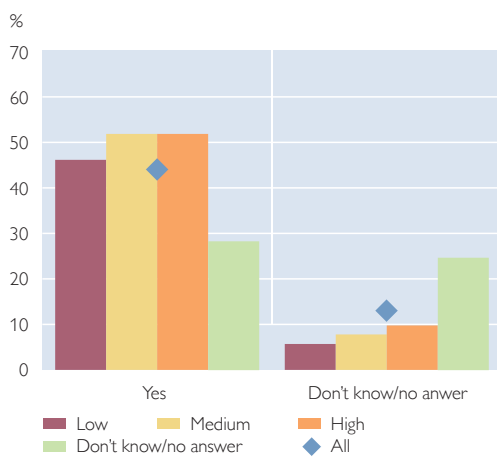
By education



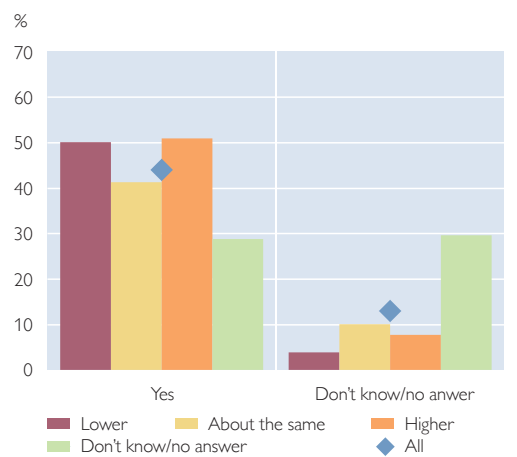
By household income



By assessment of current interest rates on loans



By expectations for future interest rate on loans



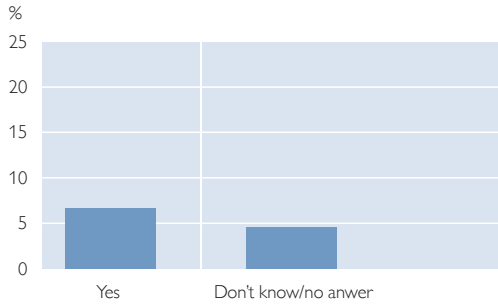
Source: Authors' calculations based on the OeNB barometer survey.

Note: Assessment of interest rate on loans: low: less than 1.5%; medium: between 1.5% and 3.5%; high: above 3.5%.

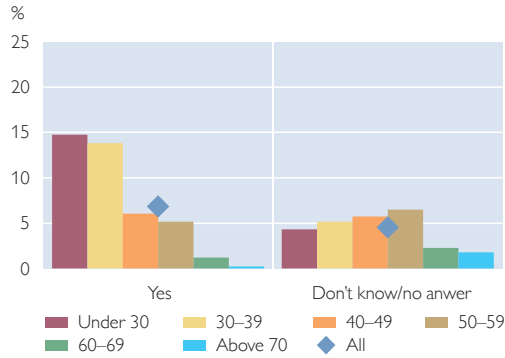
Chart 8

Intention to take out a loan

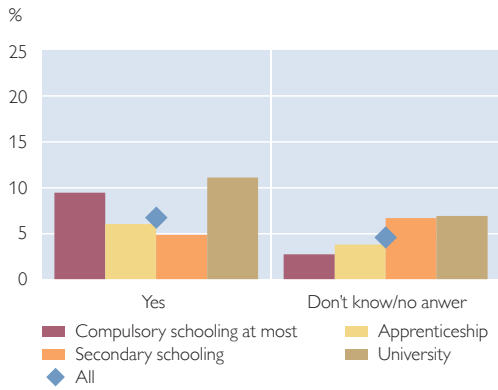
All respondents



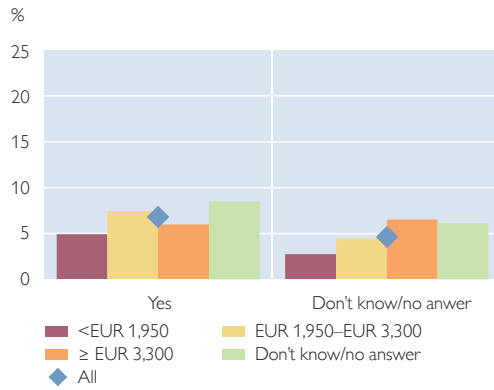
By age



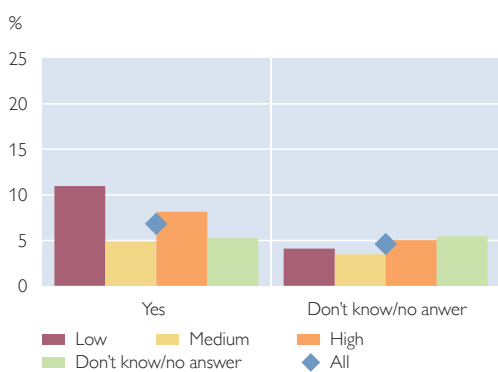
By education



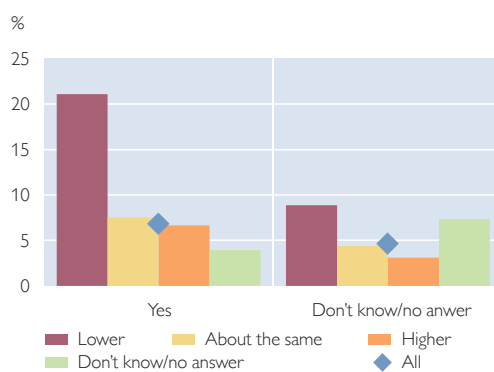
By household income



By assessment of current interest rates on loans



By expectations for future interest rate on loans



Source: Authors' calculations based on the OeNB barometer survey.

Note: Assessment of interest rate on loans: low: less than 1.5%; medium: between 1.5% and 3.5%; high: above 3.5%.

4 Summary and conclusions

In this paper, we analyzed whether the current very low interest rates affect savings, portfolio choice and loan decisions of Austrian households using data from a special OeNB barometer survey conducted in spring 2015.

The theoretical effects of interest rates on savings are ambiguous a priori because income and wealth effects that incentivize more savings if interest rates decrease might offset or even outweigh the intertemporal substitution effect that implies a drop in savings in

times of low interest. Our survey suggests that Austrian households' propensity to save dropped compared to three years before the survey because the fraction of households that indicated that they were saving less is higher than the fraction of households that were saving more. However, closer inspection of the survey results revealed that low interest rates were only one of several relevant factors that prompted households to save less.

The survey data suggest that only a relatively small fraction of Austrian households adjusted their portfolio composition in response to ultra-low interest rates. Among these households, safe haven motives, i.e. the flight to real assets like real estate, gold, and other tangible assets, seem to have played a role. The extent of portfolio rebalancing into riskier assets (e.g. shares) has been limited. Households have used investment funds to shift into riskier investments, though. Households' reluctance to adapt their portfolio composition despite potentially higher returns could be explained by the uncertain macroeconomic environment, the high volatility of stock markets, bad experiences with investment during the crisis as well as other factors such as transaction costs, stickiness of behavior, the changed tax treatment of valuation gains and limitations to financial literacy.

Furthermore, low interest rates would be expected to boost demand for loans. Although a large fraction of Austrian households regards the current circumstances as favorable for taking out a loan, only a relatively small number of surveyed households indicated that they have taken out a loan or in-

tended to do so. Clearly, ultra-low interest rates are not a sufficient condition to prompt, or enable, households to take out a loan just for their own sake. If interest rates were to increase again, resulting in higher loan installments, most indebted households indicate in the survey that they would react by cutting consumption expenditures.

Even though our survey data allow only statements about participation (percentages of respondents) and not about volumes (amounts of savings or investments), the limited empirical support for a reduction in savings and portfolio rebalancing toward riskier assets suggests limits to the effectiveness of ultra-low interest rates in stimulating aggregate demand through the risk-taking and portfolio rebalancing channels, at least as far as households in Austria are concerned. The effectiveness of ultra-low interest rates in any potential loan-financed increase in consumption or (housing) investment by households appears to be limited as well. The data suggest that other factors play a more important role in Austrian households' decision making. This finding, alongside the finding that respondents had limited knowledge of the interest rate level (as discussed in Beer et al., 2015), should be taken into account when assessing the effectiveness of monetary policy. However, the present analysis applies only to the direct impact of low interest rates on households. Ultra-low interest rate will have a direct impact on other sectors of the economy²² and may also have an indirect impact on households e.g. because of changes in the investment behavior of investment funds held by households.

²² For example, financial accounts data show the volume of outstanding loans of nonfinancial corporations to be about twice that of households. Furthermore, companies use other instruments for financing, so that their total financing volume may well be much larger.

References

- Andersen, S., J. Y. Campbell, K. M. Nielsen and T. Ramadorai. 2015.** Inattention and Inertia in Household Finance: Evidence from the Danish Mortgage Market. NBER Working Paper 21386. July 2015.
- Beer, C., E. Gnan and D. Ritzberger-Grünwald. 2015.** Asking about interest rates: survey evidence on Austrian households' interest rate perceptions and expectations. In: Monetary Policy & the Economy Q4 15. OeNB. 31–54.
- Browning, M. and A. Lusardi. 1996.** Household Saving: Micro Theories and Micro Facts. In: Journal of Economic Literature 34(4). 1797–1855.
- Deutsche Bundesbank. 2015.** German households' saving and investment behaviour in light of the low-interest-rate environment. Monthly Report. October 2015.
- Dirschmid, W. and E. Glatzer. 2004.** Determinants of the Household Saving Rate in Austria. In: Monetary Policy & the Economy Q4/04. OeNB. 25–38.
- ECB. 2013.** The Eurosystem Household Finance and Consumption Survey. Statistical Tables.
- Elmendorf, D. W. 1996.** The effect of interest-rate changes on household saving and consumption: a survey. Finance and Economics Discussion Series 96–27. Board of Governors of the Federal Reserve System.
- Fessler, P., P. Mooslechner and M. Schürz. 2012.** In Focus: Eurosystem Household Finance and Consumption Survey 2010. First Results for Austria. In: Monetary Policy & the Economy Q3/12. OeNB. 24–62.
- OeNB. 2015.** Einkommen, Konsum und Vermögen der Haushalte. Sektorale Volkswirtschaftliche Gesamtrechnung 1995–2014. Statistiken Sonderheft. October.

Annex

Table A1

Summary statistics

| | % |
|------------------------------------------------------------------|----|
| Age | |
| <30 | 14 |
| 30–39 | 15 |
| 40–49 | 23 |
| 50–60 | 19 |
| 60–69 | 12 |
| ≥70 | 17 |
| Education | |
| Compulsory schooling or less | 10 |
| Apprenticeship | 62 |
| Secondary schooling | 17 |
| University | 10 |
| Household income | |
| <EUR 1,950 | 36 |
| EUR 1,950–EUR 3,300 | 26 |
| ≥EUR 3,300 | 10 |
| Don't know / no answer | 29 |
| Assessment of current monetary policy rate | |
| Low | 36 |
| Medium | 25 |
| High | 4 |
| Don't know / no answer | 35 |
| Assessment of current interest rate on savings accounts | |
| Low | 45 |
| Medium | 32 |
| High | 7 |
| Don't know / no answer | 16 |
| Assessment of current interest rate on loans | |
| Low | 16 |
| Medium | 31 |
| High | 23 |
| Don't know / no answer | 30 |
| Expectations for the future monetary policy rate | |
| Considerably higher | 7 |
| Somewhat higher | 33 |
| About the same | 32 |
| Lower | 5 |
| Don't know / no answer | 22 |
| Expectations for future interest rate on savings accounts | |
| Considerably higher | 3 |
| Somewhat higher | 26 |
| About the same | 38 |
| Lower | 17 |
| Don't know / no answer | 15 |
| Expectations for future interest rate on loans | |
| Considerably higher | 11 |
| Somewhat higher | 40 |
| About the same | 24 |
| Lower | 3 |
| Don't know / no answer | 22 |

Source: Authors' calculations based on the OeNB barometer survey.