OeNB REPORTS

FINANCIAL LITERACY, EDUCATION & WELL-BEING

International Survey of Adult Financial Literacy 2023: first results for Austria

OESTERREICHISCHE
NATIONALBANK

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2024/13

International Survey of Adult Financial Literacy 2023: first results for Austria

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This report presents results of the third Austrian Survey of Financial Literacy (ASFL), conducted in 2023 as Austria's contribution to the International Survey of Adult Financial Literacy (ISAFL) coordinated by the Organisation for Economic Co-operation and Development/International Network on Financial Education (OECD/INFE). Among the 40 countries participating in the ISAFL, the average Austrian resident ranks considerably above average in both financial literacy and financial well-being, which places Austria among the top-scoring nations. Despite these encouraging results, we find notable financial knowledge gaps within certain segments of Austria's population. Young women, in particular, exhibit less financial knowledge than young men, and women, in general, report lower financial well-being than men. Although there is a significant positive correlation between financial literacy and financial well-being, we find heterogeneous relationships across income groups. Specifically, for the low-income bracket, financial knowledge appears to be less relevant for financial well-being, while day-to-day financial behaviors seem particularly relevant. Our results suggest that a differentiated view on financial literacy is advisable and that need-based approaches present a promising avenue toward designing effective financial education programs.

Enhancing financial literacy through large, coordinated efforts has become a policy priority for many countries worldwide. While the concept of financial literacy was initially regarded as a skill necessary to make sound financial decisions in one's best interest, the 2008 financial crisis highlighted the crucial role of consumer financial literacy in ensuring financial stability (Pinto, 2016). Recent events such as the COVID-19 pandemic and Russia's invasion of Ukraine have introduced high inflation rates paired with high interest rates, making the cost of living a major concern for a considerable proportion of households. At the same time, the financial sector has been gripped by an even more extensive wave of digital transformation, both through the mainstreaming of digital banking and investing and through technological advancements such as generative artificial intelligence.

The ever-changing economic and financial landscape thus constantly brings about new challenges policymakers need to address. Indeed, pivotal global developments, the increasing complexity of a globalized economy and a highly digitalized financial sector demand the constant evolution of financial literacy and financial education in theory and practice, while still building on a solid basis of timeless financial principles. Advancements in the field, such as the continuous refinement of the concept of financial literacy, new ways of teaching, the recognition of financial well-being as the ultimate goal of financial literacy (e.g. ANZ, 2021; CFPB, 2015; OECD, 2022a) and a heightened focus on digital financial literacy (e.g. Morgan et al., 2019), reflect the constant efforts to meet this demand.

In 2021, Austria adopted its first national financial literacy strategy. Led by the Austrian Ministry of Finance, the initiative follows a nation-wide coordinated approach to bring together public, nonprofit and private stakeholders with expertise and interest in financial literacy (OECD, 2021). In these efforts, the Oesterreichische Nationalbank (OeNB) takes a leading role in the respective decision-making bodies, making contributions based on its core competencies, such as monetary policy and price stability, as well as on its expertise in financial literacy research and education. The main goals of the national financial literacy strategy for Austria are preventing overindebtedness especially among the young, promoting long-term planning for sustainable financial well-being as well as improving access to high-quality financial education while constantly considering gender balance, digital transformation and environmental sustainability.

Besides increased efforts to foster financial literacy, special attention is also being given to the evaluation of education programs and their outcomes (OECD, 2022a). Indeed, Austria's financial literacy strategy is characterized by a strong commitment to *evidence-based* policymaking, including evaluation efforts both of the overall national strategy and individual financial education measures. However, improving the financial literacy of a population requires, above all, the accurate identification of strengths and weaknesses by precisely and repeatedly measuring current financial literacy levels.

In this context, the International Survey of Adult Financial Literacy (ISAFL) of the Organisation for Economic Co-operation and Development/International Network on Financial Education (OECD/INFE) and the corresponding Austrian Survey of Financial Literacy (ASFL) represent a unique opportunity to gage financial literacy and related concepts on the national and the international level. This report presents the first results of the ASFL conducted in 2023 among a representative sample of Austrian residents and compares them to the available international results of the 2023 ISAFL.

The main findings of this report can be summarized as follows:

- Among the 40 countries participating in the 2023 ISAFL, Austria achieved financial literacy results that were high above the international average in terms of financial knowledge, financial behavior and financial attitudes.

- Compared with 2019, Austria again posted a statistically significant increase in financial knowledge.

- By international comparison, Austria's resident population exhibited high financial knowledge with regard to basic questions. However, half of the population was found to struggle with understanding compound interest.

- People living in Austria generally appear to be in control of their day-to-day finances. Only little more than half of the population, however, reported setting long-term financial goals. This potential lack of future-orientation is further reflected in financial attitudes, as only about one-half of respondents indicated that long-term plans took priority over short-term gratification.

- High financial literacy is associated with holding a larger number of financial product types. Generally, holding credit or investment products shows a positive correlation with financial literacy. However, for consumer and microfinance loans, the relationship is reversed.

- The financial knowledge score exhibits a gender gap conditional on age, with young women, in particular, obtaining lower scores than young men.

- In digital financial literacy, Austria ranks midfield by international comparison. Interestingly, in Austria, digital financial literacy does not appear to be correlated with the use of sophisticated digital financial services or the overall number of digital financial services used.

- With regard to financial literacy, Austria also ranks high in terms of financial well-being.

- In Austria, age appears to be one of the strongest predictors of financial well-being, with respondents over the age of 74 scoring almost twice as high as respondents under the age of 25.

- Financial well-being exhibits a gender gap, with women indicating lower financial well-being than men.

- Overall, financial literacy is significantly and positively associated with financial well-being.

- While financial knowledge appears to be an important driver of financial well-being for individuals from medium-income households, prudent financial behaviors have a particularly strong effect for people with low incomes.

The remainder of this report is structured as follows: Section 1 provides background information on the ISAFL and ASFL. Sections 2 to 4 are each dedicated to one of the concepts measured by the ASFL/ISAFL in line with the OECD Toolkit, namely *financial literacy*, *digital financial literacy* and *financial well-being*. In each of these sections, we conduct cross-country comparisons as well as detailed analyses of the results specific to Austria. In addition to univariate analyses, we also investigate the relationships between variables of interest across various sociodemographic groups to identify bi- and multivariate associations. Additionally, we include a brief exploration of how a concept is related to important contextual factors besides sociodemographics concerning the personal financial situation, e.g. financial product holding. Finally, we conclude the report by summarizing results and deriving general policy recommendations to foster financial literacy and well-being in Austria. Annex A presents results from additional analyses. The survey questions in English and German can be found in annex B.

1 The OECD/INFE International Survey of Adult Financial Literacy

Given that it is regularly conducted in many countries around the world, the International Survey of Adult Financial Literacy (ISAFL), coordinated by the OECD's International Network of Financial Education (INFE), is one of the most comprehensive efforts to measure financial literacy that is aimed at informing policymaking. Despite certain limitations, the primary benefit of such standardized financial literacy surveys lies in their capacity to enable both cross-country comparisons and longitudinal assessments (within countries) if the surveys are conducted repeatedly.

The ISAFL has been conducted three times since 2014. In 2023, the ISAFL counted 40 participating countries (including Austria) from Europe, Asia, South America and the Middle East (OECD, 2023). It was conducted in 21 of the 27 EU member states and in 20 of the 38 OECD member states. Notably absent are most of the OECD's English-speaking countries, namely Australia, Canada, New Zealand, the United Kingdom and the United States. These countries, among others, typically measure financial literacy in national assessments or other international efforts, frequently relying on the concept of *financial capability* (see, e.g. Financial Consumer Agency of Canada, 2019; Lin et al., 2022; Money Advice Service, 2018) instead of financial literacy, with a varying degree of overlap between the two concepts.

Since its inception, the ISAFL has measured financial literacy as a combination of financial knowledge, financial attitudes and financial behaviors, with a distinct set of questions covering each of these components. While the financial knowledge score indeed relies on a set of knowledge questions with right or wrong answers, the other two scores rely on self-assessment or agreement to statements. These questions have remained largely unchanged since 2014, thus allowing longitudinal comparisons over time. Responding to recent developments in the field, the 2023 ISAFL was the first to also include an independent digital financial literacy score and a financial well-being score (OECD, 2022b, 2023).

The ISAFL joins the ranks of several other efforts to assess financial literacy levels internationally. For example, a recent Eurobarometer survey assessed levels of financial literacy, resilience and inclusion in the 27 EU member states (European Commission, 2023). In 2014, the Standard & Poor's Ratings Services Global Financial Literacy Survey was conducted in 143 countries as part of the Gallup World Poll Survey (Klapper et al., 2015). While goals and content of these international surveys are similar, they differ from the ISAFL in key aspects concerning the participating countries, the operationalization of financial literacy in specific questions and score calculations, as well as sampling and interview methods. Thus, despite strong similarities on the surface, results of these surveys are not directly comparable.

The Austrian Survey of Financial Literacy (ASFL) is Austria's contribution to the ISAFL. It is the only international survey of financial literacy that is conducted regularly in Austria. As in the previous two waves[2], the OeNB was responsible for ASFL data collection and analysis also in 2023 and carried out the survey based on the OECD/INFE Toolkit (OECD, 2022b). The ASFL target population are individuals with a private address in Austria, aged 16 or older, irrespective of their

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[2] Descriptive results and cross-country comparisons for the 2014 and 2019 survey waves were published in OECD (2016) and OECD (2020a). Detailed analyses based on the previous ASFL waves can be found in Silgoner et al. (2015), Cupak et al. (2018) and Fessler et al. (2020).

citizenship. Data for the ASFL 2023 were collected between August 21, 2023, and December 17, 2023, as part of the OeNB Barometer survey.

To ensure representativity by minimizing different types of bias, elaborate sampling and weighting methods were employed, resulting in population weights that combine design, nonresponse and post-stratification weights. An in-depth view of the data collection process of the ASFL 2023 wave including a detailed description of sampling techniques and weighting methods applied can be found in the methodological notes on the OeNB Barometer (Voith and Zieser, 2024).

Using a mixed-mode approach combining personal and online interviews, the ASFL 2023 yielded 1,414 observations in total, consisting of 987 computer-assisted personal interviews (CAPIs) and 427 computer-assisted web interviews (CAWIs). Exclusively for the purpose of cross-country comparison and in line with the guidelines of the OECD/INFE Toolkit, the target population and, consequently, the sample was restricted to individuals aged between 18 and 79, leading to a reduced sample size of 1,317 observations. Apart from cross-country comparisons, i.e. for all detailed analyses of the Austrian sample, the total sample of 1,414 individuals aged 16 and older was used.

2 Financial literacy

The OECD/INFE defines financial literacy as "a combination of financial awareness, knowledge, skills, attitudes, and behaviours required to make sound financial decisions and ultimately achieve individual financial well-being" (2020c, p. 6). In line with this definition, the OECD/INFE Toolkit (OECD, 2022b) used for the ISAFL distinguishes three components of financial literacy: financial knowledge, financial behavior and financial attitude.

To measure these components, each survey participant was asked several specific questions. Responses were used to calculate scores for each participant, with a higher score indicating a stronger degree of financial knowledge, behaviors or attitudes considered necessary or beneficial for long-term financial well-being. The OECD/INFE Toolkit (OECD, 2022b, p. 39–44) explains in detail how scores for the three components are calculated. The exact set of German-language questions used in the ASFL and the original English questions from the OECD/INFE Toolkit can be found in annex B.

Box 1

Measuring financial literacy

Financial literacy

The overall financial literacy score corresponds to the sum of the scores for the three components, i.e. financial knowledge (up to 7 points), financial behavior (up to 9 points) and financial attitude (up to 4 points). Note that this approach implicitly weights each component based on the range of the original score, prioritizing financial behavior and financial knowledge over financial attitude. To facilitate interpretation throughout this report, the financial literacy scores have been normalized to range from 0 to 100 as opposed to 0 to 20.

Financial knowledge

The financial knowledge score relies on a quiz consisting of seven questions (see annex B) covering respondents' basic understanding of fundamental economic concepts like inflation, interest, compound interest and risk

diversification. For each correct answer, one point is awarded, while a wrong answer, "don't know," or "refused" yields no points.[3] As a consequence, the maximum possible score equals 7.[4]

Financial behavior

Ranging from 0 to 9, the financial behavior score reflects nine financially prudent behaviors based on self-reports by respondents. Behaviors are captured not only by single questions but also by combinations of questions or multi-item questions (see annex B). Essentially, three kinds of financial behaviors are considered: 1) keeping track of money flows, e.g. paying bills on time or budgeting; 2) saving and long-term planning, e.g. active saving or setting long-term financial goals; 3) making considered purchases, e.g. shopping around or seeking independent advice. Several logical conditions are applied in the calculation of scores, which are explained in detail in the OECD/INFE Toolkit (OECD, 2022b).

Financial attitude

Compared with the 2015 and 2019 ISAFL waves, in the 2023 wave, the financial attitude score was made up of only two instead of three items on delaying short-term gratification in favor of long-term financial security (see annex B). Specifically, respondents were asked to what extent they agreed or disagreed with the statements "I find it more satisfying to spend money than to save it for the long term" and "I tend to live for today and let tomorrow take care of itself" on a scale from 1 ("Completely agree") to 5 ("Completely disagree"). The average of responses, rescaled to range from 0 to 4, equals the financial attitude score.

As is typical for international measurement exercises, it is difficult for questions and scores to measure complex constructs validly, reliably and fairly across many countries without compromises. It is thus important to point to the potential drawbacks of the measurement approach used in the ISAFL/ASFL to make explicit how conceptual and operational choices affect eventual outcome and to avoid a misinterpretation of results.

First, the questionnaire tests the components of financial literacy only on a basic level, neither requiring expert knowledge nor special skills. This means that a high financial literacy score indicates a basic understanding of fundamental financial concepts as well as the application of financially prudent everyday behaviors as opposed to exceptional abilities. In the financial knowledge score, in particular, this is also reflected in severe ceiling effects, with a large proportion of people living in Austria reaching the maximum of seven points. This may affect the sensitivity of the instrument in detecting differences among population groups. In future ISAFL/ASFL waves, more advanced questions might thus be useful to further discern financial literacy levels.

Second, financial behavior and attitude scores rely entirely on self-reporting. There is thus no external verification of whether respondents actually apply behaviors or have attitudes as indicated. This might be problematic especially as being financially prudent may be considered socially desirable, which may bias reports of such behaviors (for discussions on the social desirability bias, see e.g. Krumpal, 2013; Tourangeau and Yan, 2007). Moreover, financial literacy itself may influence the accuracy of reports on one's own financial situation (see Madeira

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[3] Similarly, all financial literacy scores and the financial well-being score developed by the OECD/INFE were calculated for every respondent by assigning values for nonresponse answers. This approach ensures that no one is excluded from the sample for refusing to answer, and that, consequently, reported means and relative proportions are always computed against the total sample.

[4] All questions are scored independently with the exception of the item on compound interest, which is only qualified as correct if the simple interest calculation was correct. This reduces the probability of guessing correctly, as the ability to calculate simple interest can be considered a condition necessary to understanding compound interest.

and Margaretic, 2022). Responses may also be biased systematically across borders or between cultural or socioeconomic groups (see Lacko et al., 2022; Teh et al., 2023).

Third, it is unclear how the three financial literacy components are intended to interact with each other to constitute financial literacy. In contemporary studies on financial well-being, financial knowledge and financial attitudes are regarded as determinants of financial behaviors (see e.g. ANZ, 2021; Hwang and Park, 2023). In the ISAFL, however, the three components can be regarded as (arbitrarily) weighted formative indicators of the latent construct of financial literacy, where each component focuses on different types of individual characteristics. However, components also appear to capture different content dimensions. For example, the knowledge component appears to focus more strongly on concepts related to investment decisions, whereas the behavior component appears to focus on day-to-day money management.

While we do not conduct in-depth analyses of relations between the three components, we indeed find modest correlations only between financial behavior and financial knowledge ($r = 0.20$) as well as between financial attitude and financial behavior ($r = 0.22$) but not between financial attitude and financial knowledge ($r = 0.06$). We thus report detailed results on all three components as well as on potential differential relationships with financial well-being. For a detailed analysis of the relationships between the financial literacy components of knowledge, attitudes and behavior based on Austrian data from the 2014 ASFL wave, see Fessler et al. (2020).
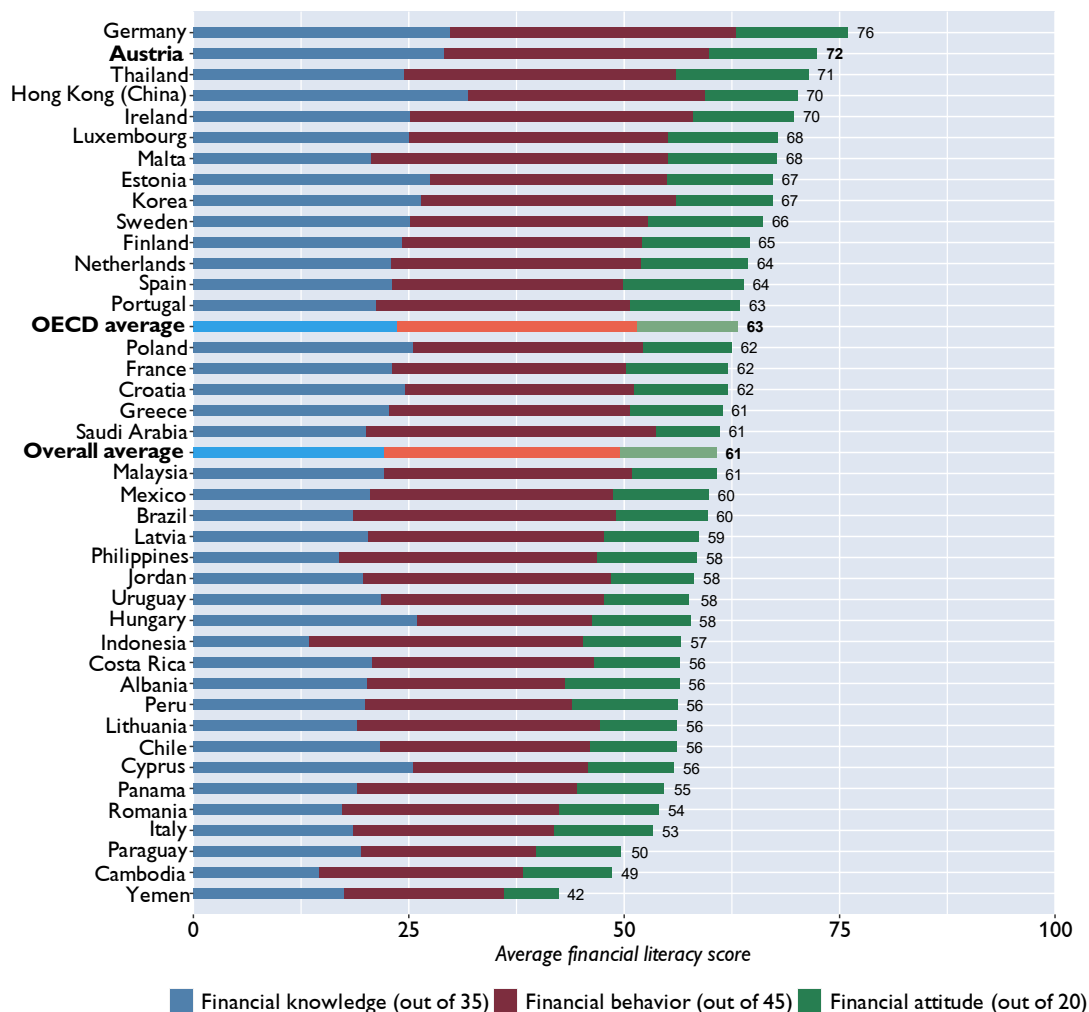
2.1 Cross-country comparison of financial literacy results

In this subsection, we use the financial literacy scores for comparisons across countries that participated in the 2023 ISAFL. The OECD/INFE already performed the same analysis in their official report of the 2023 ISAFL (OECD, 2023). Since the Austrian data could not be submitted to the OECD/INFE early enough, they are not included in the report. We therefore add the Austrian data to the existing cross-country comparisons as reported by the OECD to expand the number of countries and benchmark the Austrian results. For the sake of legibility, we rank countries from the highest to the lowest score for the respective financial literacy indicator. However, although the OECD/INFE Toolkit ensures a certain uniformity in the approach to measuring and data collection, there are substantial differences concerning the sampling period, sampling design, survey mode and other methodological aspects such as weighting that affect the presented values.[5] As the population intended for international comparisons consists of individuals aged 18 to 79, the ASFL sample has been reduced accordingly.

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[5] As noted in OECD (2023), the results for Jordan, Mexico and Saudi Arabia are by design not representative of the entire adult population as they partly relied on convenience sampling methods or the respective survey was only conducted in urban areas. Additionally, the results for Spain and Malaysia are based on surveys conducted in 2021 using the 2018 OECD/INFE Toolkit (OECD, 2018). Also introducing a certain bias, Finland, Jordan, Luxembourg, the Netherlands and Sweden exclusively used online surveys to collect their data, excluding the part of the adult population not using or having access to the internet. Finally, beyond very general guidelines provided in the OECD/INFE Toolkit (2022b), we have no detailed information on the weighting methods applied for each country. This may induce further heterogeneity. As mentioned above, for the ASFL 2023 a detailed description of these relevant methodological aspects can be found in the methodological notes on the OeNB Barometer (Voith and Zieser, 2024).

Chart 1

Overall financial literacy across countries

Country	Score
Germany	76
Austria	**72**
Thailand	71
Hong Kong (China)	70
Ireland	70
Luxembourg	68
Malta	68
Estonia	67
Korea	67
Sweden	66
Finland	65
Netherlands	64
Spain	64
Portugal	63
OECD average	**63**
Poland	62
France	62
Croatia	62
Greece	61
Saudi Arabia	61
Overall average	**61**
Malaysia	61
Mexico	60
Brazil	60
Latvia	59
Philippines	58
Jordan	58
Uruguay	58
Hungary	58
Indonesia	57
Costa Rica	56
Albania	56
Peru	56
Lithuania	56
Chile	56
Cyprus	56
Panama	55
Romania	54
Italy	53
Paraguay	50
Cambodia	49
Yemen	42

Average financial literacy score

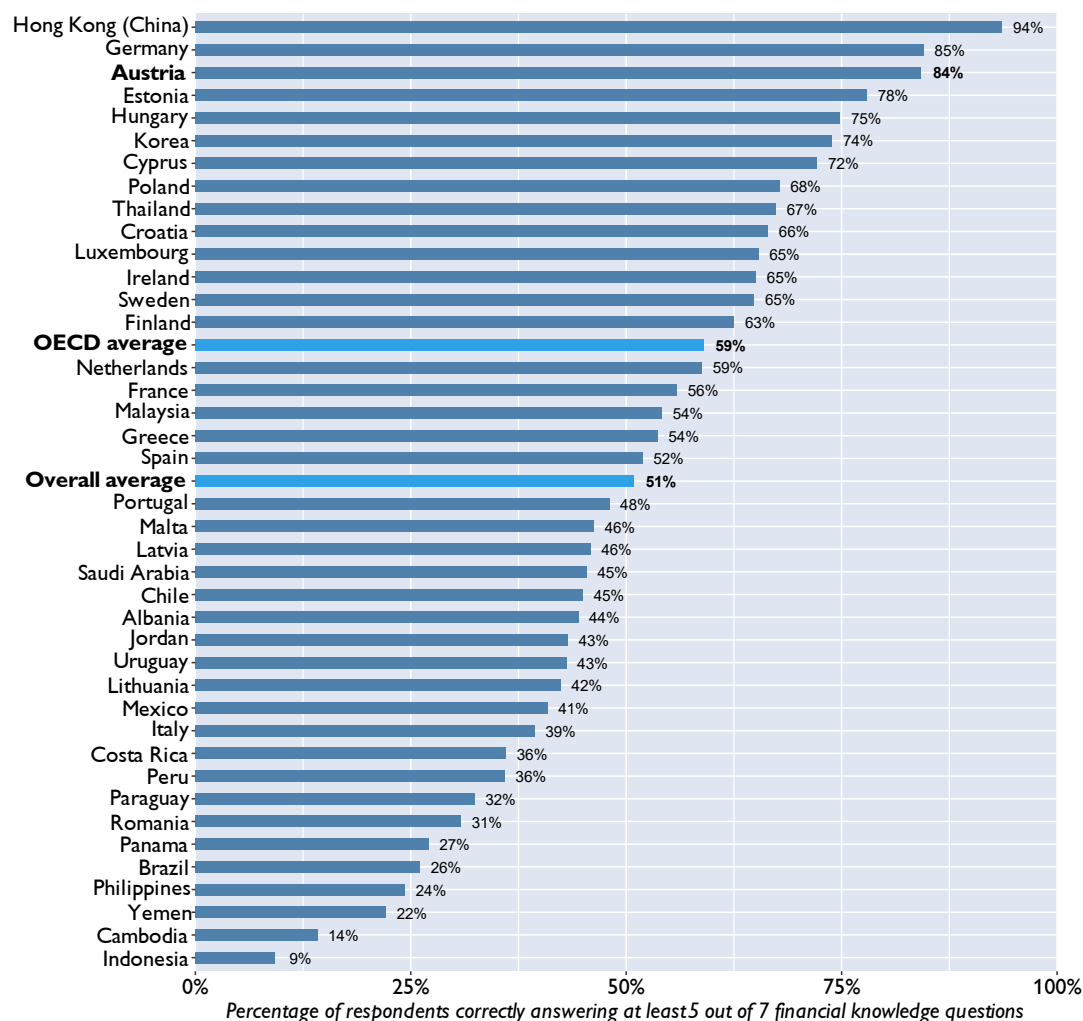■ Financial knowledge (out of 35) ■ Financial behavior (out of 45) ■ Financial attitude (out of 20)

Source: ISAFL 2023, OECD/INFE, and ASFL 2023, OeNB.

Chart 1 shows the average overall financial literacy score consisting of the three component scores for financial knowledge, financial behavior and financial attitude. With an average financial literacy score of 72 out of 100, Austria ranks very high among the 40 participating countries. Only Germany, with an average score of 76, exhibits higher financial literacy levels. Also reaching above 70% of the maximum average score, Thailand, Hong Kong (China) and Ireland are among the top nations as regards financial literacy. Within the EU, there is considerable heterogeneity regarding financial literacy scores: While the populations of most other EU member states also tend to perform well or at least around the OECD average, Lithuania, Cyprus, Romania and Italy lag behind with scores between 53 and 56.
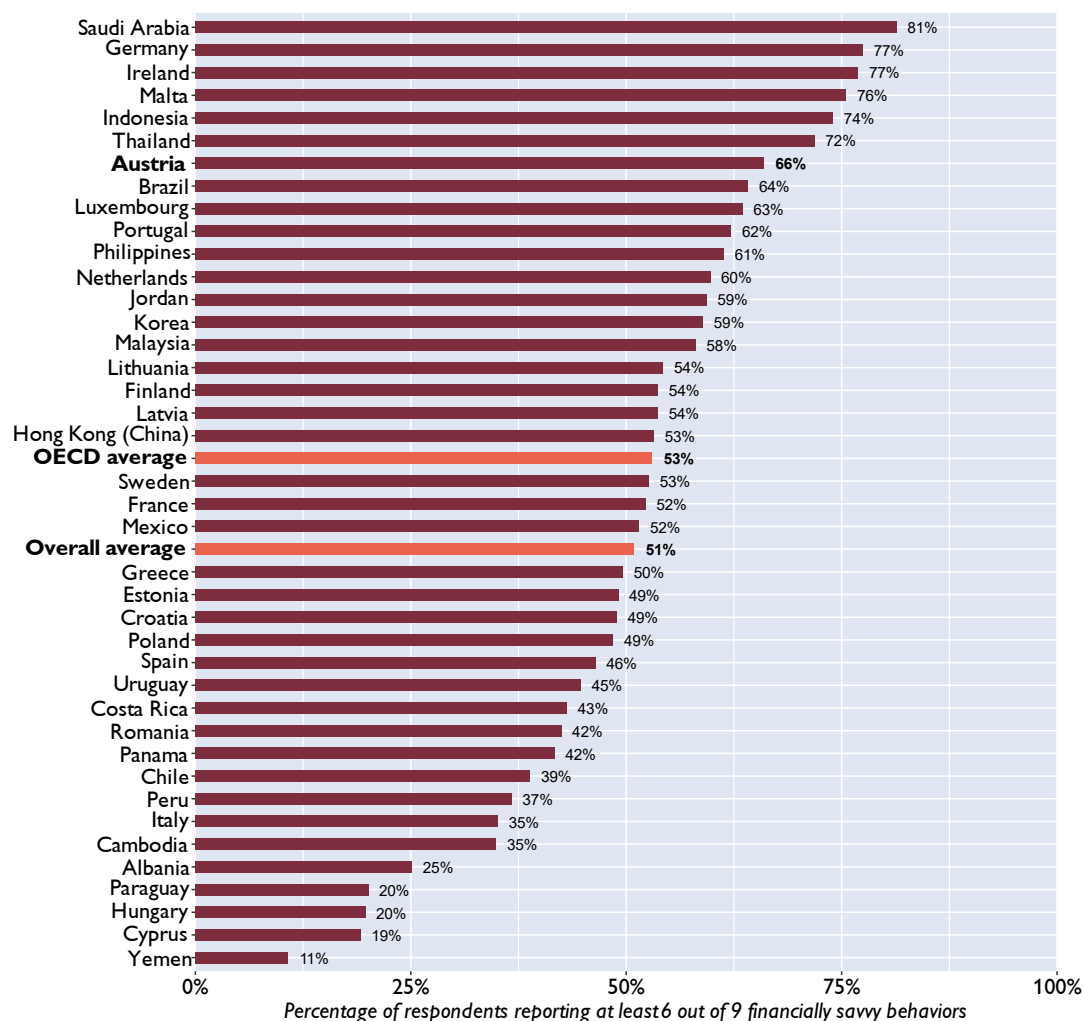
Chart 2

Minimum target for financial knowledge across countries

Country	%
Hong Kong (China)	94%
Germany	85%
Austria	**84%**
Estonia	78%
Hungary	75%
Korea	74%
Cyprus	72%
Poland	68%
Thailand	67%
Croatia	66%
Luxembourg	65%
Ireland	65%
Sweden	65%
Finland	63%
OECD average	**59%**
Netherlands	59%
France	56%
Malaysia	54%
Greece	54%
Spain	52%
Overall average	**51%**
Portugal	48%
Malta	46%
Latvia	46%
Saudi Arabia	45%
Chile	45%
Albania	44%
Jordan	43%
Uruguay	43%
Lithuania	42%
Mexico	41%
Italy	39%
Costa Rica	36%
Peru	36%
Paraguay	32%
Romania	31%
Panama	27%
Brazil	26%
Philippines	24%
Yemen	22%
Cambodia	14%
Indonesia	9%

Percentage of respondents correctly answering at least 5 out of 7 financial knowledge questions

Source: ISAFL 2023, OECD/INFE, and ASFL 2023, OeNB.

Considering the components of financial literacy individually, chart 2 compares financial knowledge across countries, showing the proportion of respondents who answered at least five out of seven financial knowledge question correctly. Overall, we find that countries displaying a high average financial literacy score also have a higher proportion of adults who reach what the OECD/INFE defines as the "minimum target score" for financial knowledge. Therefore, Hong Kong (China), Germany and Austria again are at the top of the field. Still, there are some countries that rank high on the financial literacy score but rank comparatively low in terms of financial knowledge and vice versa, showing a certain disconnect between financial knowledge and the other components. Notably, Hungary and Cyprus, despite a low average financial literacy score, have a comparably high share of people with at least basic financial knowledge.

Chart 3

Minimum target for financial behavior across countries

Country	Percentage
Saudi Arabia	81%
Germany	77%
Ireland	77%
Malta	76%
Indonesia	74%
Thailand	72%
Austria	**66%**
Brazil	64%
Luxembourg	63%
Portugal	62%
Philippines	61%
Netherlands	60%
Jordan	59%
Korea	59%
Malaysia	58%
Lithuania	54%
Finland	54%
Latvia	54%
Hong Kong (China)	53%
OECD average	**53%**
Sweden	53%
France	52%
Mexico	52%
Overall average	**51%**
Greece	50%
Estonia	49%
Croatia	49%
Poland	49%
Spain	46%
Uruguay	45%
Costa Rica	43%
Romania	42%
Panama	42%
Chile	39%
Peru	37%
Italy	35%
Cambodia	35%
Albania	25%
Paraguay	20%
Hungary	20%
Cyprus	19%
Yemen	11%

Percentage of respondents reporting at least 6 out of 9 financially savvy behaviors

Source: ISAFL 2023, OECD/INFE, and ASFL 2023, OeNB.

In a similar way, chart 3 examines financial behavior, where the "minimum target score" is defined as reporting six out of nine financially prudent behaviors that make up the financial behavior score. Again, we find countries that displayed high financial literacy scores leading in this statistic, again with some discrepancy between the rankings, i.e. populations with comparably high financial knowledge do not necessarily apply financially literate behaviors to the same extent. With two out of three persons reporting at least six behaviors, such as saving, budgeting or shopping around, Austria ranks considerably above average.

## 2.2   Financial literacy results in detail

We now turn to the results of the ASFL 2023 and examine financial literacy in Austria in more detail. Since the ASFL was conducted for the third time in 2023 and its measurement approach has remained sufficiently consistent[6], we can make longitudinal comparisons of financial literacy

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[6] Note that the methodology for calculating the financial behavior score was changed slightly between 2014 and 2019, while the financial attitude score was modified for the recent edition of the ISAFL (OECD, 2016, 2020a,

scores and their items to learn how financial literacy levels in Austria developed over the last decade. However, this comparison should be treated with caution as some changes in data collection and weighting were made between the 2023 ASFL wave and previous waves, which is likely to lead to systematic deviations.[7]

Chart 4

Financial literacy in Austria over time
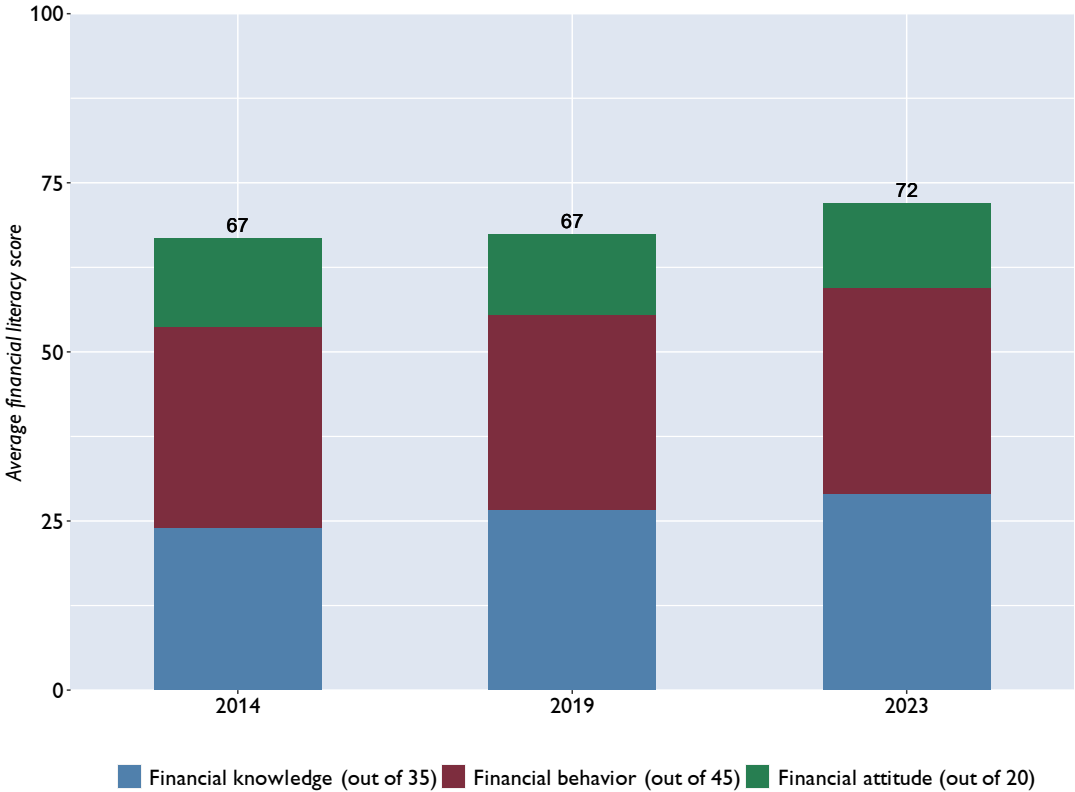
Source: ASFL 2014, ASFL 2019 and ASFL 2023, OeNB.
Note: Minor methodological changes were made between the survey waves. For details, see footnotes 6 and 7 in the main text.

Chart 4 presents the average financial literacy score for Austrian residents aged 16 and older, showing each component for the years 2014, 2019 and 2023. It is evident that financial literacy scores in Austria were at a consistently high level over these years, ranging from 67 in 2015 and

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2023). Moreover, the financial literacy score of the previous waves of the ISAFL ranged from 1 to 21 and was rescaled to range from 0 to 20 in 2023. To ensure the accuracy of comparisons over time and make sure that changes in the scores reflect changes in the data but not in the method, the previous scores were recomputed accordingly and may thus not reflect exactly the scores reported in previous publications.

[7] These methodological changes concern the specific interview mode and weighting procedure used in Austria. Regarding the latter, the 2023 ASFL wave included nonresponse weights to reduce the corresponding bias, a feature that the previous waves lacked. Regarding the former, the 2015 and the 2019 ASFL waves relied exclusively on CAPIs while the 2023 wave included CAWIs that made up 30% of the sample. Indeed, we find statistically significant differences between the CAPI and CAWI subsamples among the three component scores, hinting at potential sampling or mode effects. These biases point to different directions: While CAPI respondents display significantly lower financial attitude (2.4 vs. 2.6) and financial behavior (5.9 vs. 6.7) scores than CAWI respondents, they tend to outperform CAWI respondents in terms of financial knowledge (5.9 vs. 5.5). Overall, with values of 71.0 for CAPI and 74.3 for CAWI, this leads to a slight difference in average financial literacy scores.

2019 to 72 in 2023. For the current wave, we can observe a statistically significant increase in financial literacy compared with 2019, which can largely be attributed to respondents' better performance in financial knowledge.[8] Starting with a value of 4.8 in 2014, the average financial knowledge score for Austria increased to 5.3 in 2019 and reached 5.8 in 2023. The remaining two components, financial behavior and attitude, remained rather stable over the years and show no statistically significant variation once controlled for survey mode and sample composition.

Chart 5

Financial knowledge in Austria over time
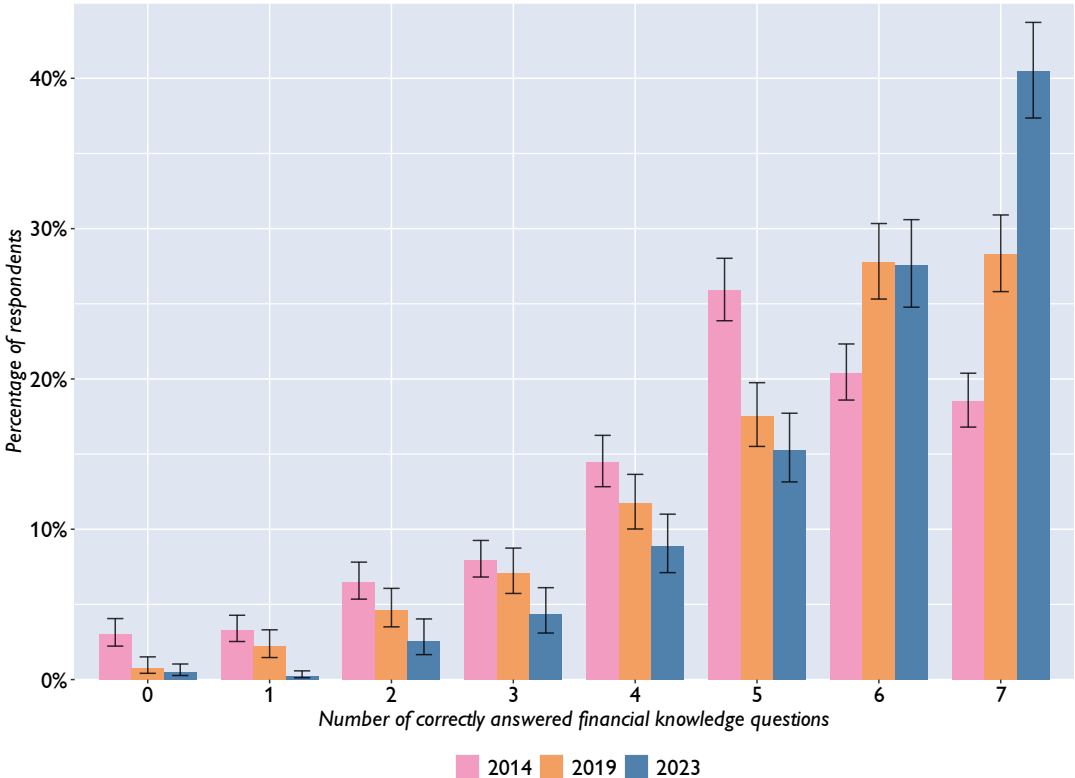
Source: ASFL 2014, ASFL 2019 and ASFL 2023, OeNB.
Note: Minor methodological changes were made between the survey waves. For details, see footnotes 6 and 7 in the main text.

The changes in the distribution of financial knowledge scores between the ASFL 2014, the ASFL 2019 and the ASFL 2023 are depicted in chart 5. Less than 20% of respondents were able to reach the maximum financial knowledge score in 2014, almost 30% did so in 2019, however, and over 40% in 2023. Conversely, the proportion of respondents scoring less than five points, which the OECD/INFE defines as the minimum target, shrank from one-third in 2014 to one-quarter in 2019 and then again to one-sixth in 2023. Additional regression analyses presented in chart A2 in annex A reveal that respondents scored significantly better for all financial knowledge questions than in 2019. The difference becomes even more pronounced when controlling for survey mode and sociodemographic characteristics, which is mainly due to CAPI respondents obtaining higher

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[8] For details concerning the statistical significance of differences in financial literacy scores between the ASFL 2019 and the ASFL 2023, see chart A1 in annex A.

scores than their CAWI counterparts. Therefore, it is highly unlikely that the observed improvement is due to sample composition or mode effects.

The further improvement in financial knowledge among Austrian residents may be attributed to several factors beyond the scope of the survey. Two explanations already discussed by Fessler, Jelovsek and Silgoner (2020) come to mind. First, financial knowledge may have improved due to an increasing salience of economic topics in the news media, exemplified lately by coverage on the euro area inflation rate. Such widespread coverage may have facilitated informal learning about the core characteristics of inflation and may have increased interest in economic and financial topics among the population.

Second, the intensification of policymaking efforts and the proliferation of financial education initiatives in Austria over the last four years might begin to show first effects. The national financial literacy strategy for Austria was implemented in 2021 as a nation-wide coordinated approach to fostering financial literacy. Currently, it comprises about 140 individual measures, more than 30 of which are provided by the OeNB. Taken together, these measures reach tens of thousands of people each year through workshops and e-learning modules. Apart from the fact that it is generally difficult to reliably attribute causal effects in natural settings, the ASLF 2023 itself cannot provide any empirical evidence for either of the above explanations.

Chart 6

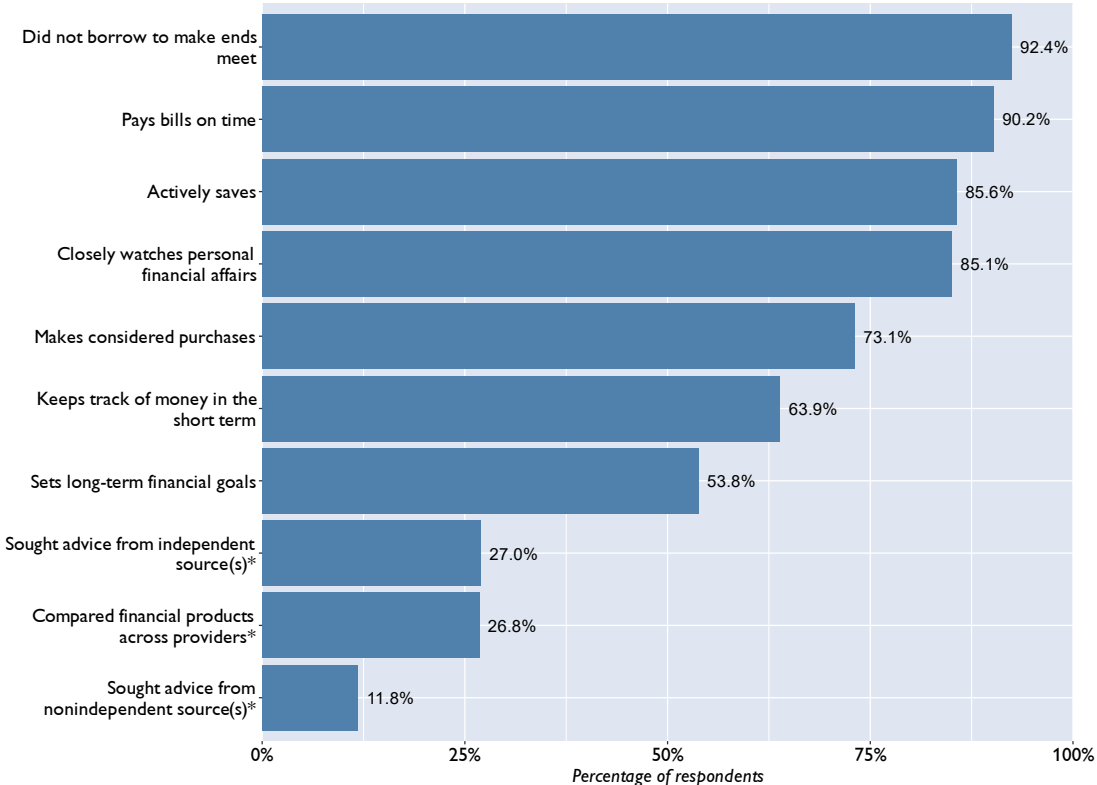**Financial knowledge questions in Austria**
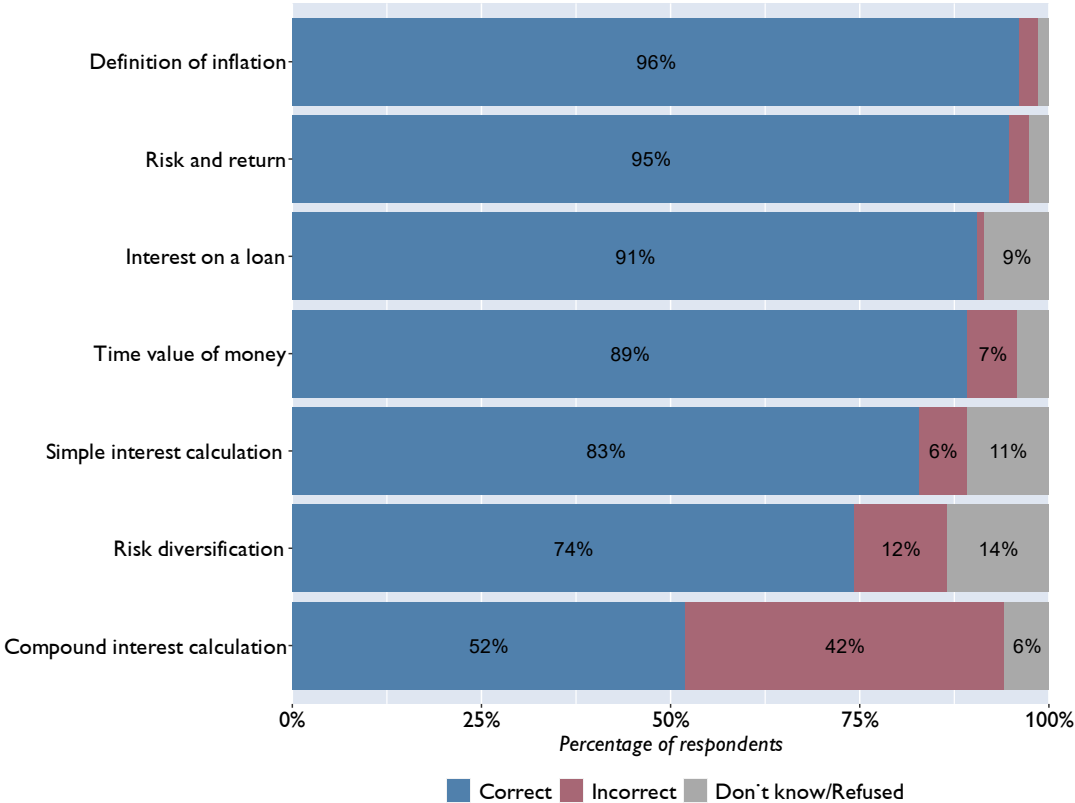
Source: ASFL 2023, OeNB.

Examining how respondents performed in individual knowledge questions that make up the financial knowledge score[9], we find that in 2023 about 95% of people living in Austria are able to answer questions about the definition of inflation and the relationship between risk and return. Around 90% of respondents know the meaning of interest on a loan and the time value of money. More than 80% were able to conduct a simple interest calculation by computing the total value derived from both the principal and the interest rate over a specified period. The two most difficult financial knowledge items, risk diversification and compound interest calculation, were answered correctly by 74% and 52% of respondents, respectively. Interestingly, these two questions may be regarded as knowledge fundamentals for long-term wealth accumulation through investing.

Financial behaviors in Austria

Chart 7

Did not borrow to make ends meet — 92.4%
Pays bills on time — 90.2%
Actively saves — 85.6%
Closely watches personal financial affairs — 85.1%
Makes considered purchases — 73.1%
Keeps track of money in the short term — 63.9%
Sets long-term financial goals — 53.8%
Sought advice from independent source(s)* — 27.0%
Compared financial products across providers* — 26.8%
Sought advice from nonindependent source(s)* — 11.8%

Percentage of respondents

Source: ASFL 2023, OeNB.
Note: Behaviors marked with an asterisk were only scored if respondents had acquired at least one financial product in the past two years. This chart shows ten (instead of nine) financial behaviors to distinguish between respondents who sought advice from independent sources and those who sought advice from nonindependent sources before purchasing a financial product. However, for calculating the financial behavior score, these two indicators are combined: having sought advice from nonindependent sources is scored with one point, while having sought advice from independent sources is scored with two points.

The financial behavior score subsumes different actions or behaviors considered financially savvy. Chart 7 displays, for each of the nine specific behaviors, the proportion of adults who reported such behavior and, therefore, received a point. Generally, most respondents appear in control of their finances and able to meet financial obligations. Indeed, nine in ten people living in Austria reported that they had not borrowed money to make ends meet within the last 12 months, while about the same number also reported that they paid their bills on time. Moreover, 86% of respondents indicated that they had saved money in the past 12 months. As the corresponding

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[9] Note that the score calculation does not differentiate between wrong answers and "don't know" or "refused" (see Box 1).

survey question does not distinguish between different modes of saving or saving amounts, it may cover a wide range of saving amounts and methods, ranging from piggy banks to crypto assets.
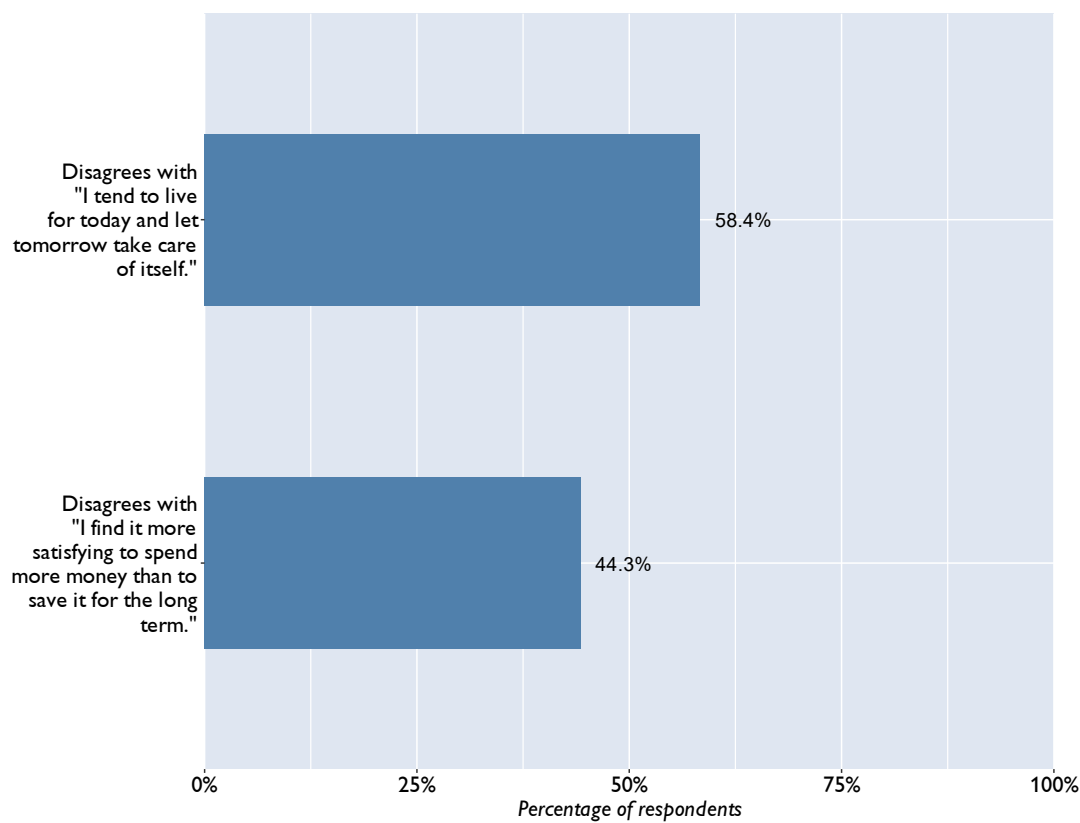
Most respondents also seem to monitor their finances, with 85% agreeing with the statement "I keep a close watch on my personal financial affairs." However, only part of this general awareness appears to translate into concrete action, as only 64% of survey participants reported at least two concrete behaviors demonstrating that they actively kept track of their money. 73% of Austrian residents surveyed indicated that before buying something they carefully considered if they could afford it ("Makes considered purchases"). The relevance of these questions, however, may depend on the necessity to monitor one's finances conditional on disposable income or savings.

Although the setting of long-term financial goals can be considered the basis for both daily behaviors as well as saving and investment strategies, only about half of respondents indicated doing so. In conjunction with high rates of saving, little knowledge on risk diversification and compound interest, limited future-orientation in the attitudes score (see below) and low rates of owning investment products (see section 2.4), this result may indicate a certain reluctance of the Austrian population to engage in more complex financial matters in a future-oriented way.

In addition, chart 7 deceptively suggests that respondents rarely obtain in-depth information before purchasing financial products, as comparing products across providers and seeking prior advice from independent or nonindependent sources are by far the least reported financial behaviors. However, the low scores with respect to these three items can be explained by the fact that the respective questions applied only to those who had bought financial products in the past two years. Consequently, all other respondents had no opportunity to score points here.[10] In fact, of those respondents who had bought new financial products in the past two years, a great majority reported that they had sought prior advice or shopped around.

Generally, the financial literacy score and its components have some limitations that should be kept in mind when interpreting the results. Clearly, the distinction between a mere attitude and an actual behavior is not always apparent, especially when relying entirely on self-reporting socially desirable behaviors. The discrepancy between the proportion of people "closely watching personal financial affairs" and that of people "keeping track of money in the short term" may exemplify this ambiguity. Moreover, rather than being indicative of financially savvy behaviors, some items might strongly be influenced by one's income and asset situation. For example, people with high financial resources might be less reliant on rigorous budgeting in their everyday life and have no need to borrow money in case of an expenditure shock.

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[10] For details on the calculation of the financial behavior score, see OECD/INFE Toolkit (OECD, 2022b).

Chart 8

Financial attitudes in Austria

Disagrees with "I tend to live for today and let tomorrow take care of itself." 58.4%

Disagrees with "I find it more satisfying to spend more money than to save it for the long term." 44.3%

Percentage of respondents

Source: ASFL 2023, OeNB.

Chart 8 presents the results for the two items used to evaluate the financial attitudes of respondents. As disagreement with the listed statements translates into higher scores, chart 8 also gives the shares of respondents with financially beneficial attitudes. In total, 58% appear to have cultivated a certain mindset of preparedness by not just living for today but also thinking about tomorrow, while 44% report a preference of delaying short-term gratification in favor of long-term financial security. Although a large majority of respondents indicated that they actively saved, not all of them appear to do so with a future-oriented attitude or concrete plans.

2.3 Comparison across sociodemographic groups

Comparing financial literacy scores across different sociodemographic characteristics is essential for understanding the nuances and disparities in financial knowledge, behaviors and attitudes across different population segments. Notably, such a comparison may prove valuable for policymakers and financial educators to gain insights into which groups of the population may benefit most from targeted financial education campaigns or interventions. However, low financial literacy among certain demographic groups may not only be regarded as a mandate for stepping up financial education efforts but also hint at systemic barriers and societal challenges that prevent individuals from acquiring or benefiting from certain forms of knowledge or behavior.

Table 1

Group means of financial literacy scores across sociodemographic characteristics

	N	%	Financial knowledge	Financial behavior	Financial attitude	Financial literacy
Age						
16–24 years	66	8.7	5.2***	5.6	2.2**	64.8***
25–34 years	205	18.5	5.9	6.2	2.2***	71.8
35–44 years	199	16.9	5.8	6.4**	2.5	73.7
45–54 years	221	13.9	6.0	6.2	2.7**	74.0**
55–64 years	300	21.1	5.9	6.1	2.7***	73.6*
65–74 years	256	11.7	5.7	5.9*	2.5	70.5
75+ years	167	9.1	5.8	5.8**	2.5	71.0
Gender						
Male	654	48.9	6.1***	6.2	2.4**	73.1**
Female	760	51.1	5.5***	6.1	2.6**	70.9**
Education						
Compulsory education or below	150	12.8	5.2***	5.5***	2.5	65.8***
Apprenticeship, vocational school	707	56.5	5.8	6.0*	2.5	71.2*
Upper secondary, school-leaving certificate	264	15.8	6.0**	6.5***	2.5	75.3***
University, technical college	293	14.9	6.1***	6.6***	2.6	76.6***
Household income						
≤ EUR 1,800	267	14.0	5.6*	5.2***	2.1***	64.9***
EUR 1,800 – EUR 2,700	289	18.3	5.6**	5.9**	2.3*	69.1***
EUR 2,700 – EUR 3,300	171	11.9	5.9	6.0	2.4	71.3
EUR 3,300 – EUR 4,500	240	19.1	5.8	6.4**	2.6*	74.2**
> EUR 4,500	206	18.5	6.2***	6.8***	2.7***	78.8***
Occupation						
Self-employed	114	7.1	5.8	6.0	2.5	71.4
White-collar worker	855	57.7	5.9*	6.3***	2.5	73.4***
Public servant	135	7.6	5.7	6.4	2.7***	73.9
Farmer	22	2.1	5.4	6.1	3.0***	72.3
Blue-collar worker	242	20.4	5.7	5.7***	2.4	69.2***
Homemaker	5	0.4	5.4	5.1	1.8*	61.4*
Family and household status						
Single	584	26.1	5.8	5.6***	2.2***	68.1***
Partnership	498	39.5	6.0***	6.3***	2.5	74.3***
Partnership with child(ren)	208	21.1	5.7	6.6***	2.7***	75.3***
Single with child(ren)	67	5.3	5.1***	5.8	2.6	67.6**
Other	52	7.5	5.5	5.6	2.5	67.9
Municipality						
< 3,000 inhabitants	390	26.8	5.7	6.3*	2.6	73.0
3,000–15,000 inhabitants	475	31.7	5.8	6.2	2.6*	73.0
15,000–100,000 inhabitants	148	10.6	5.7	5.9	2.4	70.2
100,000–1 million inhabitants	101	9.5	5.9	6.3	2.4	72.9
Vienna	300	21.4	5.8	5.8***	2.3***	69.6**
Overall mean			5.8	6.1	2.5	72.0
Possible maximum			7.0	9.0	4.0	100.0

Source: ASFL 2023.

Note: N represents unweighted sample sizes; percentages show weighted proportions. Asterisks indicate significance levels of the difference between the group mean and the mean of the rest of the sample as tested in two-tailed t-tests with *p<0.1, **p<0.05, ***p<0.01.

Table 1 breaks down the average financial literacy scores by age, gender, education, household income, occupation, family and household status, and municipality.[11] The relation of financial literacy and age resembles an inverted L shape, with people in the midst of their professional lives tending to perform best. With a total score of 64.8, the youngest age group shows by far the lowest financial literacy score. Based on the literature, we are confident to largely attribute this gap to an age effect and not a cohort effect: Most likely, young people have not yet acquired sufficient experience in personal finance by buying financial products, pursuing a professional career or managing a household on their own (see e.g. Frijns et al., 2014).

Examining the difference in financial knowledge between male and female respondents, we find the well-documented gender gap.[12] On average men score 0.6 points higher in financial knowledge than women, an absolute difference similar to the one found in the 2019 ASFL wave (Fessler et al., 2020). Thus, despite an overall increase in financial knowledge since 2019, the financial literacy gender gap proves to be persistent.

Chart 9 shows the relation between age and financial knowledge by gender in form of a binned scatterplot, with each point representing the mean of 5% of the respective subsample. For women, we also find the inverted U shape that has been well documented in the literature (e.g., Klapper and Lusardi, 2020). For men, however, there appears to be no systematic variation in financial knowledge over age. This implies that the size of the gender gap changes with age. Young women, in particular, score significantly lower than young men, while around the age of 55, scores are comparatively equal for both groups. The gender gap then tends to widen again among the elderly, which may partly be explained by the higher life expectancy of women as well as a cohort effect, given that personal finances were long considered men's affair.

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[11] Note that for occupation and household income, the overall unweighted sample size is smaller than the full sample as respondents who could not be categorized or did not answer the respective question are excluded. As relative proportions are calculated against the total sample throughout this report, this means that the percentages for the two variables do not sum up to 100%, either.

[12] For a detailed analysis of the gender gap in Austria based on the results of the 2014 ASFL wave, see Greimel-Fuhrmann and Silgoner (2018).

Chart 9

Relationship between age and financial knowledge by gender
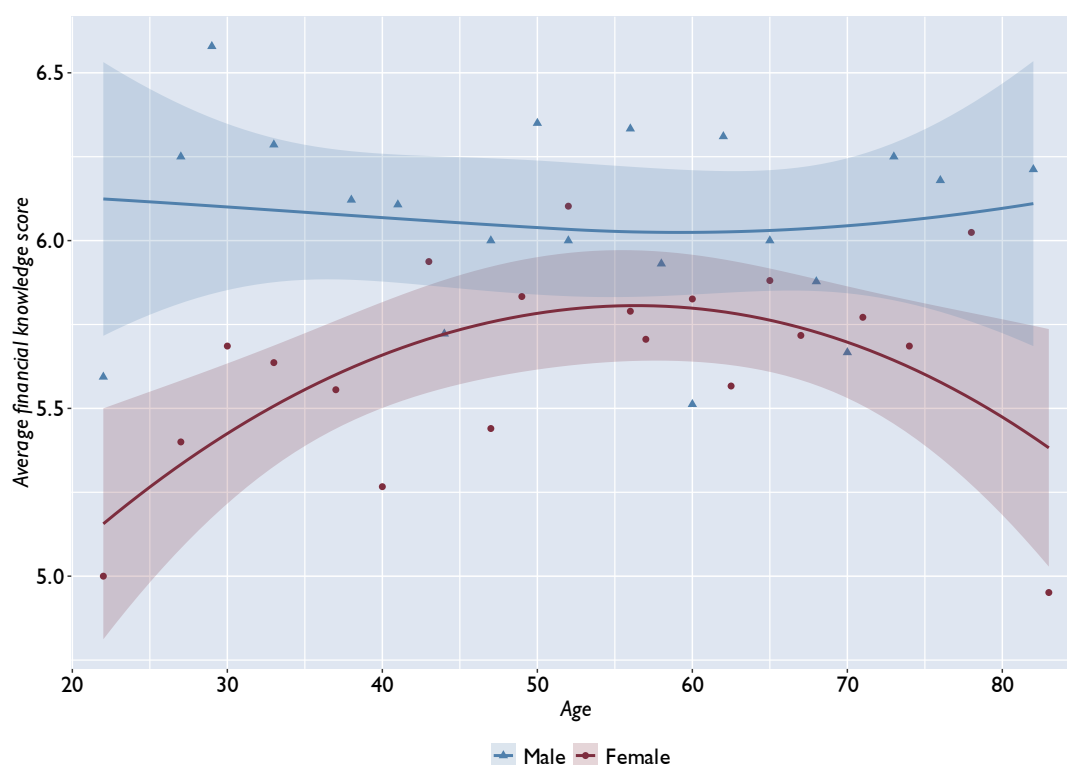
We find that people with higher levels of formal education on average also achieve higher financial literacy scores. The gap in financial literacy levels is largest between respondents without any secondary education and those who have completed education beyond the compulsory level. Tertiary education (university or technical college), however, appears to improve financial literacy levels only slightly.

There is also a strong positive correlation between income and overall financial literacy. Importantly, this cannot serve as evidence for a causal effect of financial literacy on income or vice versa, given many possible confounders and the theoretically unclear direction or reciprocity of a potential direct relationship. On the one hand, high financial literacy levels may enable individuals to make better life decisions from a financial perspective, including e.g. education or job choices. On the other hand, those with higher incomes may have more incentives and occasions to improve their financial literacy, particularly with regard to investment-related knowledge.

In contrast to the previous ASFL waves, we do not find the self-employed to score highest on any of the financial literacy components but rather public servants and white-collar workers. This may, in part, be explained by the operationalization of financial literacy itself, as most questions appear to focus on the consumer side of finances and less on proper accounting and financial management in a business setting. Nevertheless, while these differences are not overly large and are based on a comparatively small subsample, they do show a reversed trend compared with previous ASFL waves (see Fessler et al., 2020; Silgoner et al., 2015).

Lastly, we find slight differences between household types, where respondents living in a household with a partner show higher financial literacy scores overall. Moreover, we find that respondents living with children generally exhibit a slightly higher future-orientation in their attitudes, possibly reflecting the wish to provide for a financially safe future of their children. Single households with children, however, show the lowest financial knowledge score of the family and household status categories which possibly points to a need of targeted education policies to support this particular group. Differences due to municipality size are not pronounced. However, there appears the distinct trend that respondents living in smaller municipalities are more future-oriented in their attitudes than those living in larger ones. As with all (sociodemographic) variables, specific group differences should not be interpreted independently of other potentially relevant variables, and causal interpretations should only be approached with considerable caution.

2.4   Holding of financial products

Financial literacy may prove particularly relevant when it comes to using financial products. Only a financially literate person can form a reasonable judgment on whether, when and how to use certain financial products to foster their long-term financial well-being. Conversely, someone without sufficient knowledge or the wrong attitude or expectations is at risk to substantially worsen their financial situation. Not knowing about the advantages of risk diversification, for example, is likely to lead to suboptimal investment behavior. Taking out certain types of loans may negatively affect well-being (see e.g. Bialowolski and Weziak-Bialowolska, 2021). Moreover, the use of financial products, in particular loans, by a considerable share of persons may also affect financial stability (Guttmann and Plihon, 2010). Therefore, the relationship between financial product holding and financial literacy can be considered important evidence of whether people are capable of using financial products responsibly and to their own benefit.

Table 2

Means of financial literacy scores conditional on holding selected financial products

	N	%	Financial knowledge	Financial behavior	Financial attitude	Financial literacy
Current account	1,342	92.9	5.9***	6.2***	2.5*	73.1***
Savings account	1,136	80.5	5.9***	6.3***	2.6***	73.9***
Insurance	1,080	76.6	5.9***	6.3***	2.5***	74.0***
Credit card	824	56.6	6.1***	6.4***	2.5	75.0***
Building savings product	571	41.2	5.9***	6.5***	2.6***	75.1***
Pension product	349	25.4	6.1***	6.8***	2.8***	78.4***
Mobile payment account	292	22.6	5.9	6.8***	2.4*	75.7***
Investment account	251	16.8	6.3***	7.0***	2.5	79.5***
Stocks	248	16.7	6.2***	7.0***	2.7**	79.6***
Car loan	169	12.2	5.8	6.5**	2.5	73.7
Consumer loan	122	8.7	5.8	5.7*	2.1***	68.3***
Loan secured on property	108	8.9	5.9	7.3***	2.7*	79.6***
Bonds	103	6.9	6.1**	7.1***	2.9***	80.3***
Prepaid debit card	95	7.7	6.0	6.6*	2.4	74.9
Mortgage	79	7.2	6.3***	7.0***	2.8**	80.2***
Crypto assets	67	5.7	6.3***	7.3***	2.2*	78.7***
Unsecured loan	61	5.0	6.0	6.6*	2.3	74.8
ESG product	60	4.6	6.5***	7.9***	2.6	85.1***
Building society loan	52	3.8	5.9	6.4	2.7	75.1
Microfinance loan	32	2.1	5.0***	5.4**	2.2	62.9***
Overall mean			5.8	6.1	2.5	72.0
Possible maximum			7.0	9.0	4.0	100.0

Source: ASFL 2023, OeNB.

Note: N represents unweighted sample sizes; percentages show weighted proportions. Asterisks indicate significance levels of the difference between the group mean and the mean of the rest of the sample as tested in two-tailed t-tests with $^*p<0.1$, $^{**}p<0.05$, $^{***}p<0.01$.

Table 2 shows the means of financial literacy scores conditional on holding a certain type of financial product. Overall, the holding of almost all financial products, including mortgages or secured loans, is associated with an above-average financial literacy score. Only for holders of microfinance and consumer loans, the average financial literacy score is significantly below the overall mean. Consumer loans may allow people to purchase goods or services they could not afford otherwise. This renders these loans particularly tempting to people who are less forward looking in their financial attitude and less mindful in their financial behavior. Concerning the component scores for holders of a consumer loan, we mainly find below-average financial behavior and financial attitude to be responsible for an overall lower score of financial literacy.

Regarding asset categories, comparing the conditional means of those holding traditional low-risk savings products, such as savings accounts and building savings contracts, with the means of those holding investment products, such investment accounts, stocks or bonds, we find substantially higher levels of financial literacy among the latter group. Especially those using more sophisticated financial products tend to have higher knowledge and report more financially savvy behaviors, possibly because such knowledge and behaviors are needed to handle these products responsibly.

Albeit with only a small number of observations in our sample, holders of crypto assets also tend to display above-average financial literacy. Finally, investors in sustainable financial products concerning environmental, social and corporate governance (ESG) issues represent the most financially literate subgroup among product holders.

Relationship between financial products and financial literacy
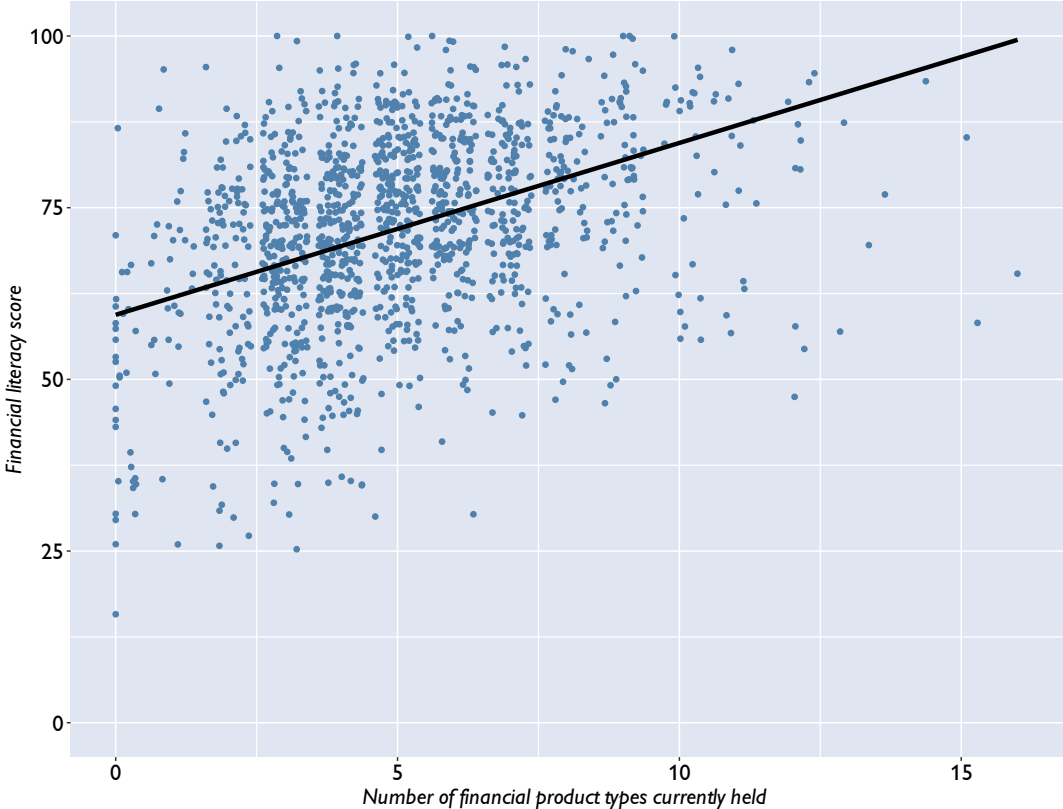
Chart 10

Source: ASFL 2023, OeNB.

Another perspective arises when we look at the relation between the number of financial product types a person holds and the person's financial literacy. Chart 10 shows a scatterplot of the two variables, including a linear regression line. Clearly, the relation is positive, indicating that holding a high number of different financial products is associated with high financial literacy scores. For this relationship, both causal directions can be explained intuitively. On the one hand, people with high financial literacy will make use of a greater variety of financial products to optimize their financial situation. This explanation is in line with banks' and insurers' frequent commitment to financial education, as financially literate persons tend to buy more financial products and, therefore, make good customers. On the other hand, this relationship may point to a "learning-by-doing" effect: Holding more financial products necessitates engaging more with financial matters, which may in turn improve financial knowledge and raise awareness on financial behaviors and attitudes. Naturally, the relationship is likely to be affected by several confounding variables. Again, income and the overall amount of assets are likely to play a major role in this regard, as many financial products require a certain income or amount of assets to be used effectively, e.g. investment products, or to be used at all, e.g. mortgages.

3 Digital financial literacy

In today's increasingly digitalized world, more and more financial services are conducted online and rely on digital technology. To address the new opportunities and risks these recent developments in the financial sector present to consumers, the concept of digital financial literacy has been introduced. Its main purpose lies in bridging the gap between traditional financial literacy and navigating the contemporary digital financial landscape, which requires an additional set of competencies.

Typically, digital financial literacy encompasses the ability to properly and effectively use financial technology services, such as online banking platforms, mobile payment applications, trading apps or budgeting software. Many definitions also include fraud prevention and the protection of personal financial information on the internet (see Koskelainen et al., 2023; Lyons and Kass-Hanna, 2021; Morgan et al., 2019). In view of the increase in digital crimes and comparatively low detection rates, the ability to recognize scams and to remain vigilant when handling financial matters can be regarded as particularly important in avoiding significant financial harm.

Box 2

Measuring digital financial literacy

In the 2023 ISAFL wave, the OECD/INFE Toolkit (OECD, 2022b) for the first time included a set of questions on digital financial literacy and the use of digital financial services. It also provided instructions how to calculate a digital financial literacy score based on ten questions aimed at evaluating respondents' digital financial literacy. Similar to the overall financial literacy score, the digital financial literacy score involves a knowledge (3 points), a behavior (4 points) and an attitude (3 points) component. Thematically, almost all digital financial literacy items revolve around the issues of fraud prevention, data protection and cybersecurity risks. The OECD/INFE notes that all results related to digital financial literacy should be regarded as preliminary since a more comprehensive and robust survey instrument is currently being developed to be used in future ISAFL waves. As for the overall financial literacy score, the digital financial literacy score is rescaled to range from 0 to 100. The OECD/INFE Toolkit (OECD, 2022b, p. 42–44) explains in detail how the digital financial literacy score is calculated. The English survey questions from the OECD/INFE Toolkit and the German translation used in Austria are presented in annex B.

Importantly, the interpretation of the results is contingent upon whether respondents have access to or actively use the internet. On the one hand, internet access or use can be regarded as a prerequisite for the meaningful interpretation of digital financial literacy. However, results from individuals who currently do not have access to or use the internet may also be relevant, as their situation could change at any point in the future.[13] Thus, for countries where the distinction is available, we follow the OECD/INFE and report scores for the overall sample as well as the subsample of people with internet access in the cross-country comparison. The ASFL 2023, however, did not include a question on internet access, asking respondents instead how often they had used the internet in the past three months. This means that for the cross-country comparison, the Austrian results for people having internet access were not available. For the in-depth analysis of the Austrian results, we report separate means and proportions for the subsample of internet users.

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[13] Non-online individuals were excluded from some questions concerning online attitudes and behaviors, which implied that no points were awarded for the respective items. Therefore, by design, the score for the subsample of respondents with internet access or internet users tends to be higher.

One major point of criticism may be the restricted thematic scope of the OECD/INFE digital financial literacy items. With their almost exclusive focus on risks and self-protection, the questions do not yet reflect current concepts of digital financial literacy (e.g. Lyons and Kass-Hanna, 2021) and do not evaluate whether respondents are capable of seizing opportunities provided by digital financial services and using financial technology to their own benefit. Indeed, while digital financial literacy does not appear to be associated with the use of digital financial services (see section 3.4), it is associated with a significantly lower rate of falling victim to phishing attacks or of carelessly providing personal information, but only marginally more so than financial literacy (see table A1 in annex A).
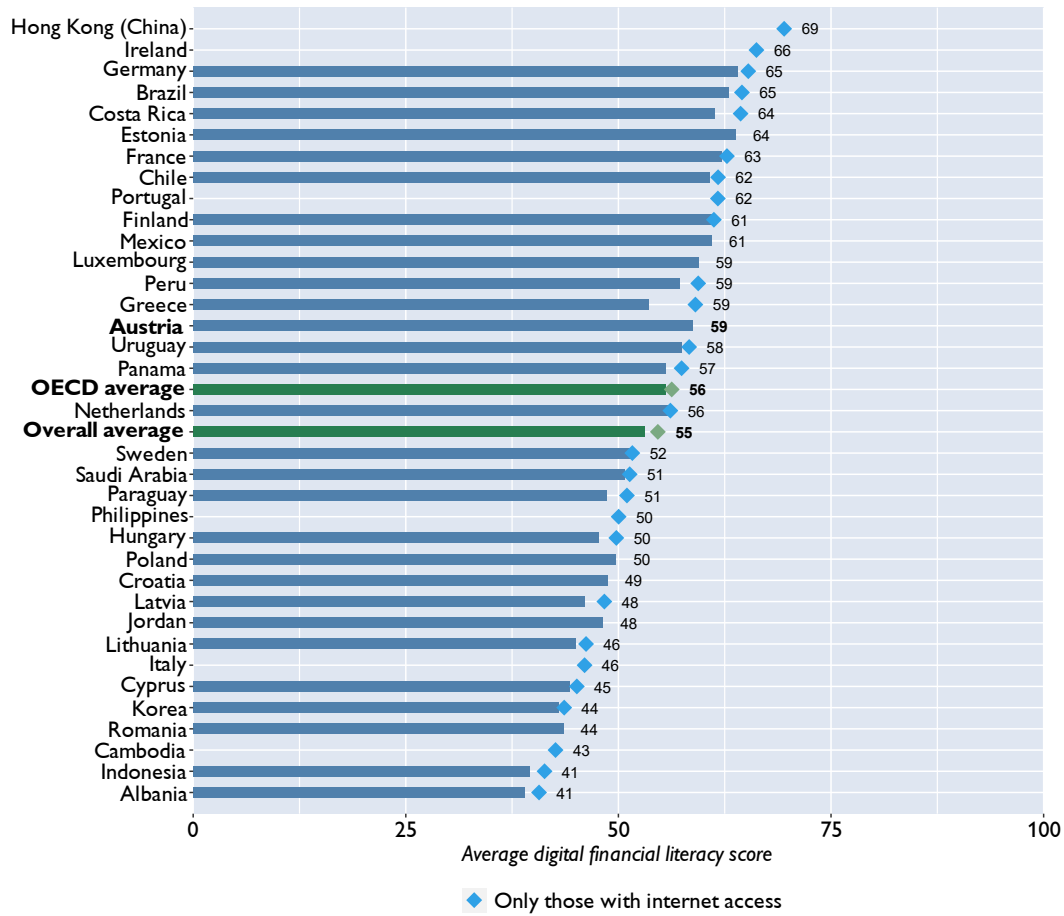
Finally, several questions, especially those reflecting attitudes, are phrased in a way that is likely to provoke socially desirable responses, which might eventually bias the results and prevent interpretable results on the absolute level. Indirect or more nuanced questions may be a potential remedy. Moreover, the distinction between attitudes and self-reported behaviors remains somewhat ambiguous in the current version of the survey. A future version may thus benefit from using items on general attitudes rather than items on attitudes toward certain behaviors.

3.1 Cross-country comparison of digital financial literacy results

Chart 11 shows that with regard to digital financial literacy, Austria ranks slightly above average among the 30 participating nations[14], posting an average score of 58.8 (total sample) out of 100 possible points. The top three leading nations in this field include Hong Kong (China), Ireland and Germany. The EU member states with the lowest digital financial literacy scores are Lithuania, Italy, Cyprus and Romania. While Austria was among the top performers in financial literacy, it only ranks in the upper midrange in terms of digital financial literacy, which suggests significant room for improvement in this area.

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[14] When adding the average digital financial literacy score for Austria to the cross-country comparison provided by the OECD/INFE (2023), the same caveats apply as mentioned in section 2.1. This means that due to the heterogeneity of sampling, survey method and weighting technique, differences between countries may not (exclusively) reflect the actual differences in levels of digital financial literacy.

Chart 11

Digital financial literacy across countries

Country	Score
Hong Kong (China)	69
Ireland	66
Germany	65
Brazil	65
Costa Rica	64
Estonia	64
France	63
Chile	62
Portugal	62
Finland	61
Mexico	61
Luxembourg	59
Peru	59
Greece	59
Austria	**59**
Uruguay	58
Panama	57
OECD average	**56**
Netherlands	56
Overall average	**55**
Sweden	52
Saudi Arabia	51
Paraguay	51
Philippines	50
Hungary	50
Poland	50
Croatia	49
Latvia	48
Jordan	48
Lithuania	46
Italy	46
Cyprus	45
Korea	44
Romania	44
Cambodia	43
Indonesia	41
Albania	41

Average digital financial literacy score
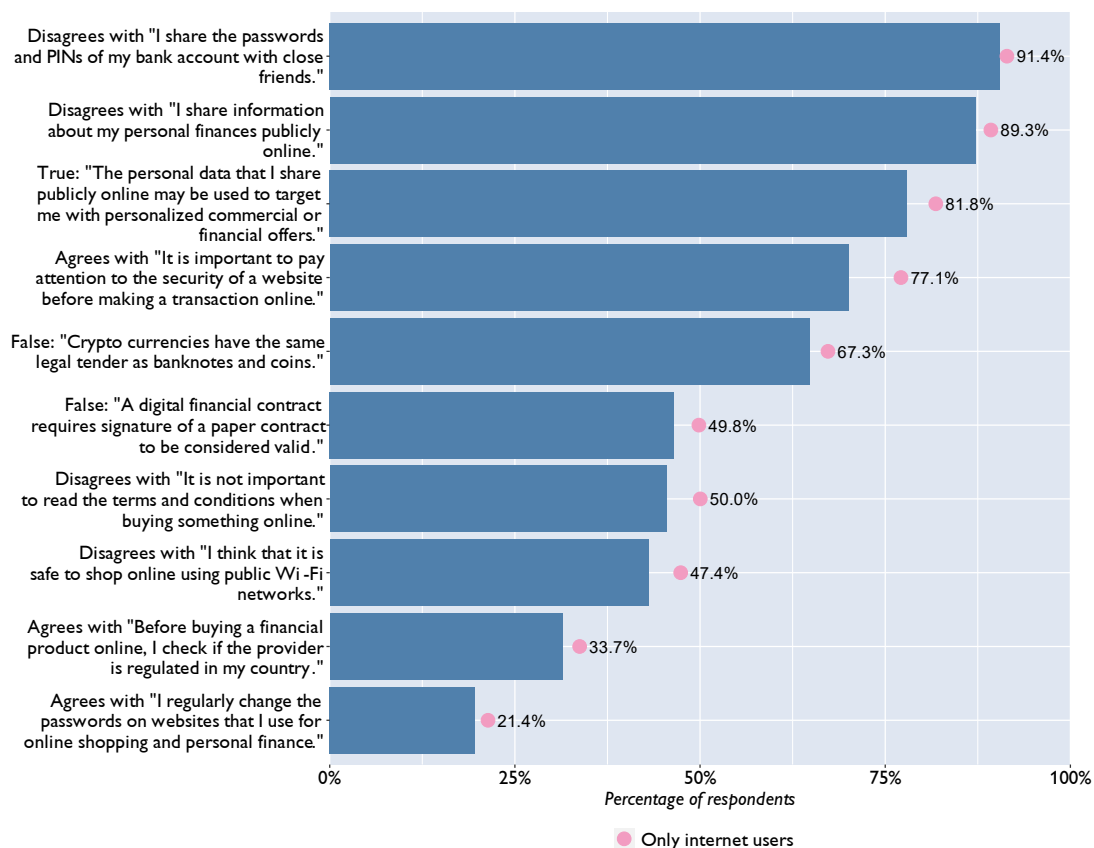
◆ Only those with internet access

Source: ISAFL 2023, OECD/INFE, and ASFL 2023, OeNB.
Note: Countries are ranked from the highest average digital financial literacy score to the lowest based on the highest available value per country from the subsample with internet access or the overall sample. Reported percentages also refer to the highest available value. Bars show means of the total sample; diamonds show means of the subsample with internet access. For some countries, values were only available for either the total sample or the subsample of people with internet access.

3.2 Digital financial literacy results in detail

Chart 12 shows the results of the individual questions that make up the digital financial literacy score for Austria. With regard to protecting their confidential or personal data offline and online, Austrian residents appear to be rather cautious and informed. As to data protection, about 90% do not share information about their finances publicly online and over 80% of internet users know that personal data they share online can be used for personalized commercial or financial offers.

Chart 12

Digital financial literacy items in Austria

	Only internet users
Disagrees with "I share the passwords and PINs of my bank account with close friends."	91.4%
Disagrees with "I share information about my personal finances publicly online."	89.3%
True: "The personal data that I share publicly online may be used to target me with personalized commercial or financial offers."	81.8%
Agrees with "It is important to pay attention to the security of a website before making a transaction online."	77.1%
False: "Crypto currencies have the same legal tender as banknotes and coins."	67.3%
False: "A digital financial contract requires signature of a paper contract to be considered valid."	49.8%
Disagrees with "It is not important to read the terms and conditions when buying something online."	50.0%
Disagrees with "I think that it is safe to shop online using public Wi-Fi networks."	47.4%
Agrees with "Before buying a financial product online, I check if the provider is regulated in my country."	33.7%
Agrees with "I regularly change the passwords on websites that I use for online shopping and personal finance."	21.4%

Percentage of respondents

● Only internet users

Source: ASFL 2023, OeNB.
Note: Reported percentages refer to the subsample of internet users.

The results regarding the survey questions on regulation and legal issues are mixed. Only about one-third of respondents indicated that they checked whether a financial product was regulated in their country before buying it. Moreover, about two-thirds of Austria residents know that crypto assets do not have the same legal tender as banknotes and coins issued by central banks. These results, however, may not be problematic as only a comparatively small number of people in Austria tend to buy financial products online or own crypto assets. Only one-half of Austrian online users find reading terms and conditions important, which may not necessarily reflect negligence but rather high trust in the applicable consumer protection regime. What gives cause for concern, however, is that only half of internet users in Austria appear to be aware of the fact that digital financial contracts do not require the additional signing of a paper contract.

Most respondents consider password and digital security important when dealing with financial transactions. Interestingly, results for the two items on password behavior are found on the opposite ends of the spectrum: While over 90% of respondents would not share passwords and PINs of their bank account with close friends, only one-fifth regularly change the passwords they use for handling their financial affairs. Finally, about half of Austrian internet users report being skeptic toward using public Wi-Fi networks for online shopping.

3.3   Comparison across sociodemographic groups

Examining table 3, we find an inverted U-shape relationship between age and digital financial literacy. Notably, at 39.6 out of 100, people above the age of 74 have a digital financial literacy score that is far below the overall average. As the elderly population generally uses a smaller number of digital financial services, their low level of digital financial literacy may not necessarily put them at greater risk of online fraud. Still, as basic financial affairs are increasingly managed online, eventually the elderly may become more vulnerable to online fraud as well.

Again, as with the findings on financial literacy, the average digital financial literacy scores reveal a statistically significant gender gap. In general, digital financial literacy increases with educational attainment up to the successful completion of secondary school. A tertiary degree does not appear to further improve digital financial literacy. There is a clear positive correlation between household income and the digital financial literacy score. This might indicate that those who can least afford to do so tend to display more risky and less informed online behaviors. Differences in digital financial literacy by job status also reflect the previous insights. Lastly, we find that single households have lower digital financial literacy scores than other household types, while the urban population shows the highest digital financial literacy scores compared to residents of smaller municipalities.

Table 3

Group means of digital financial literacy score across sociodemographic characteristics

	N	%	Digital financial literacy
Age			
16–24 years	66	8.7	56.3
25–34 years	205	18.5	59.0
35–44 years	199	16.9	62.5***
45–54 years	221	13.9	61.2**
55–64 years	300	21.1	60.3**
65–74 years	256	11.7	54.7*
75+ years	167	9.1	39.6***
Gender			
Male	654	48.9	59.7***
Female	760	51.1	55.7***
Education			
Compulsory education or below	150	12.8	47.5***
Apprenticeship, vocational school	707	56.5	56.3**
Upper secondary, school-leaving certificate	264	15.8	64.6***
University, technical college	293	14.9	64.1***
Household income			
≤ EUR 1,800	267	14.0	49.5***
EUR 1,800 – EUR 2,700	289	18.3	53.8***
EUR 2,700 – EUR 3,300	171	11.9	56.2
EUR 3,300 – EUR 4,500	240	19.1	61.8***
> EUR 4,500	206	18.5	64.7***
Occupation			
Self-employed	114	7.1	58.9
White-collar worker	855	57.7	59.1**
Public servant	135	7.6	61.5*
Farmer	22	2.1	46.7**
Blue-collar worker	242	20.4	53.8***
Homemaker	5	0.4	37.1*
Family status			
Single	584	26.1	54.4***
Partnership	498	39.5	58.7
Partnership with child(ren)	208	21.1	59.8
Single with child(ren)	67	5.3	59.8
Other	52	7.5	55.6
Municpality			
< 3,000 inhabitants	390	26.8	56.6
3,000–15,000 inhabitants	475	31.7	57.2
15,000–100,000 inhabitants	148	10.6	57.4
100,000–1 million inhabitants	101	9.5	56.4
Vienna	300	21.4	60.4**
Overall mean			57.7
Possible maximum			100.0

Source: ASFL 2023, OeNB.

Note: N represents unweighted sample sizes; percentages show weighted proportions. Asterisks indicate significance levels of the difference between the group mean and the mean of the rest of the sample as tested in two-tailed t-tests with *p<0.1, **p<0.05, ***p<0.01.

3.4   Use of digital financial services

Digital financial literacy is particularly relevant for those actively engaging with digital financial services. As a result, the OECD/INFE Toolkit includes various questions on the extent to which individuals perform financial tasks online, ranging from basic activities like checking balances or online shopping to more advanced ones such as online trading or crowdfunding. To contextualize the findings on digital financial literacy, two main questions appear useful: How many people use different types of digital financial services? And do users of these services demonstrate higher levels of digital financial literacy compared to nonusers? By providing weighted proportions of individuals who have conducted specific financial tasks, along with conditional means of the digital financial literacy score for the respective subsample, table 4 offers insights that help address these questions.

Table 4

Means of digital financial literacy score conditional on using selected digital financial services

	N	%	Digital financial literacy
Paid bills online	1,076	77.6	61.6***
Checked balance online	1,067	77.0	61.6**
Shopped online	1,059	76.6	61.7***
Transferred money online	782	55.9	61.0
Managed financial products online	718	52.3	62.1*
Paid with mobile phone	427	32.3	60.0
Opened current account online	287	18.8	61.0
Requested credit card online	254	17.7	60.8
Used website/app to aggregate accounts	202	14.0	56.1***
Traded securities online	197	14.3	58.3
Subscribed insurance online	164	11.8	59.2
Consulted automated financial advice	161	11.2	54.3***
Took out credit online	48	3.2	59.1
Borrowed or invested via crowd funding	34	2.3	60.0
Internet user	1,289	90.8	60.9***
Overall mean			57.7
Possible maximum			100.0

Source: ASFL 2023, OeNB.

Note: N represents unweighted sample sizes; percentages show weighted proportions.
Asterisks indicate significance levels of the difference between the group mean and the mean
of the rest of the sample as tested in two-tailed t-tests with *p<0.1, **p<0.05, ***p<0.01.

As table 4 shows, we find three digital financial services that are used by around three-quarters of Austrian residents, namely when checking bank account balances, paying bills and buying goods and services online. Additionally, transferring money and managing financial products online can also be considered widespread, as slightly more than half of the respondents stated that they made use of these options. However, everyday online banking usage does not seem to predict

substantially higher levels of digital financial literacy, as the influence of engaging in the corresponding activities is only slightly greater than that of general internet use.

Only a small proportion of respondents said they had concluded contracts for financial products or services fully online. Overall, the costlier or riskier the activity, e.g. opening a bank account versus taking out a loan, the smaller the share of respondents who said they had done so. About one-third of Austrian residents have already conducted payments with their smartphones. Still, they only reach average digital financial literacy scores. Considering that mobile payments are vulnerable to a number of cybersecurity threats, e.g. malware, phishing or unauthorized access, this finding may give cause for concern.

Interestingly, making use of more sophisticated digital financial services and tools, such as online trading platforms, multi-banking apps or robot-advisors for financial planning, tends to be *negatively* correlated with the digital financial literacy score. This may suggest that those using advanced digital financial services might exhibit less of the knowledge, behaviors and attitudes necessary to effectively protect themselves against the risks of these services. Note that these results may also reflect the influence of risk seeking or familiarity with digital environments, which could be expressed both in terms of less cautious online behavior and the use of unconventional or risky financial products.

Chart 13

Relationship between digital financial services and digital financial literacy
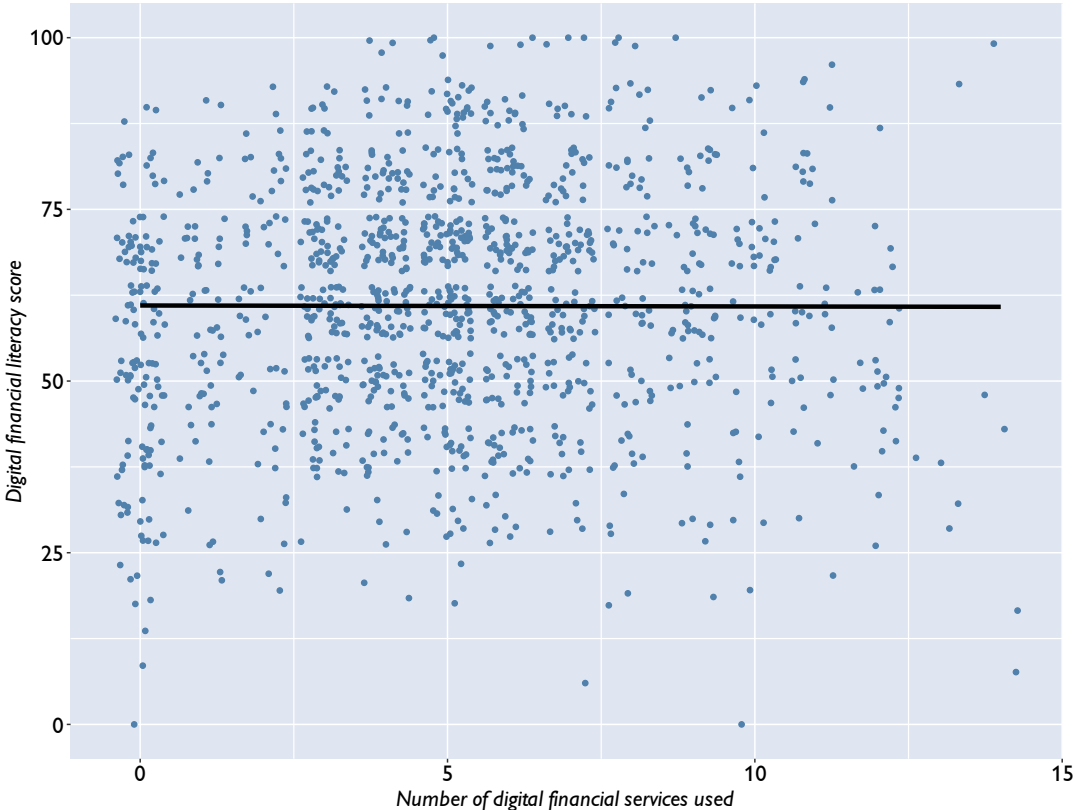
Source: ASFL 2023, OeNB.

In addition, there appears to be no appreciable association between the digital financial literacy score and the overall number of digital financial services used, as visualized by the scatterplot and

regression line in chart 13. Unlike for financial literacy, where holding more (and more sophisticated) financial products is also associated with higher financial literacy scores, using digital financial services shows no correlation with digital financial literacy. The lack of association may be explained by a low construct validity of the digital financial literacy score, which may not (exclusively) measure digital financial literacy. Moreover, the fact that the correlation between financial literacy and digital financial literacy is rather weak ($r = 0.28$) might be another indication that the measure put forward by the OECD/INFE might focus too narrowly on fraud and risk prevention and put too little emphasis on attaining financial goals through digital means.

4 Financial well-being

Financial well-being is commonly considered the ultimate goal of financial literacy, e.g. according to the OECD's definition of financial literacy, and is thus also the goal of financial education. Indeed, financial well-being has received increased attention from policymaking bodies, academia and private stakeholders (e.g. ANZ, 2021; OECD, 2020b, 2022a; Warmath, 2022). Although there is no universally accepted definition of financial well-being, most definitions share the notion that financial well-being essentially represents being able to meet one's current and future financial needs, sometimes including concepts such as financial security, financial freedom or enjoyment of life (see e.g. Brüggen et al., 2017; CFPB, 2015). However, there is some ambiguity in the literature on whether financial well-being should be defined as a purely subjective concept (as in e.g. Riitsalu and Van Raaij, 2022), reflecting only individuals' perceptions, or whether it also includes objective factors such as income (as in e.g. Sorgente and Lanz, 2019).

Although a link between financial literacy and financial well-being is documented in the literature, potential reasons for (a lack of) financial well-being go far beyond financial literacy and include economic factors such as people's income or asset situation, contextual factors such as family status, living conditions, environmental factors such as social norms or national policies, and personality traits. While these factors may interact with financial literacy, they have been found to have substantial explanatory power independently of financial literacy (see ANZ, 2021; Hwang and Park, 2023).

Box 3

Measuring financial well-being

Having already incorporated questions related to financial well-being in previous ISAFL waves, in the 2023 ISAFL report the OECD/INFE for the first time gives instructions regarding a new financial well-being score. While some of the items used in this score are part of the Consumer Financial Protection Bureau's (CFPB) financial well-being toolkit 2019 and were already included in the previous ISAFL wave, the score has been expanded significantly and is now computed on the basis of 12 questions, 4 of which are intended to capture the objective aspects of financial well-being (also referred to as "financial resilience") and 8 questions of which serve to examine subjective aspects of financial well-being. Objective financial well-being reflects whether people are able to sustainably make ends meet, i.e. whether respondents' income covers their living expenses or if they have sufficient financial buffers to compensate for expenditure shocks, e.g. the repair of necessary goods, and income shocks, e.g. job loss. Additionally, one question asks whether a person has money left over at the end of the month, thus functioning as an indicator of respondents' degree of financial freedom. The part of the questionnaire on subjective financial well-being collects information on whether individuals worry about their capacity to meet their needs, feel constrained by their financial situation or can fulfill their wishes and lifestyle expectations. The calculation method is detailed in the OECD/INFE ISAFL report (2023, p. 72). Annex B presents the original English questions from the OECD/INFE Toolkit (OECD, 2022b) and their German translations as used in the Austrian survey.

For each answer pointing toward high financial well-being, respondents are awarded a point on the financial well-being score. Although there are twice as many questions on subjective financial well-being as on financial resilience, in the final score, both dimensions are given equal weight. This is achieved by rescaling each component to range from 0 to 50 and then adding them up to arrive at the final score, allowing a maximum score of 100 points.

Using an index composed of several items to measure financial well-being has the advantage of capturing more nuances of potentially complex financial situations. A potential blind spot of the score is the role of different social security systems that influence the relative importance of savings in case of certain financial shocks. Especially for the question on coping with an income shock, there remains considerable ambiguity on whether respondents should consider unemployment benefits, which differ in height from country to country and may considerably affect financial vulnerability (see Rapp and Humer, 2023). Moreover, the item asking about agreement with the statement "I have too much debt right now" is intended to measure subjective financial well-being but is strongly influenced by the objective fact of having debt at all. Furthermore, for people whose income surpasses their necessary expenses, the question evaluating whether a person has "money left over at the end of the month" might be more closely linked to prudent financial behavior instead of financial well-being. Moreover, the same item is ambiguous, as "money left over" could refer to both excess income that can be saved or a net positive balance, i.e. savings or financial assets.

4.1   Cross-country comparison of financial well-being results

Combining the results presented in the OECD/INFE report with the data for Austria, chart 14 shows the average financial well-being score for each of the 38 countries that collected the required data. Scoring 63 out of 100 points, Austria ranks among the top countries in terms of financial well-being. Far ahead of the rest of the field, Germany ranks first with a financial well-being score of 73. Other countries with top scores include Hong Kong (China), Ireland, Sweden and the Netherlands. Croatia, Romania and Greece display the lowest financial well-being scores in the EU. A comparison of the scores for financial well-being with those for financial literacy already hints at a correlation between the two, i.e. countries with high (low) scores in financial literacy also tend to have high (low) scores in financial well-being. As mentioned in section 2.1, it cannot be ruled out that sampling, method or weighting effects influence the results of country comparisons to a certain degree.

Chart 14

Financial well-being across countries

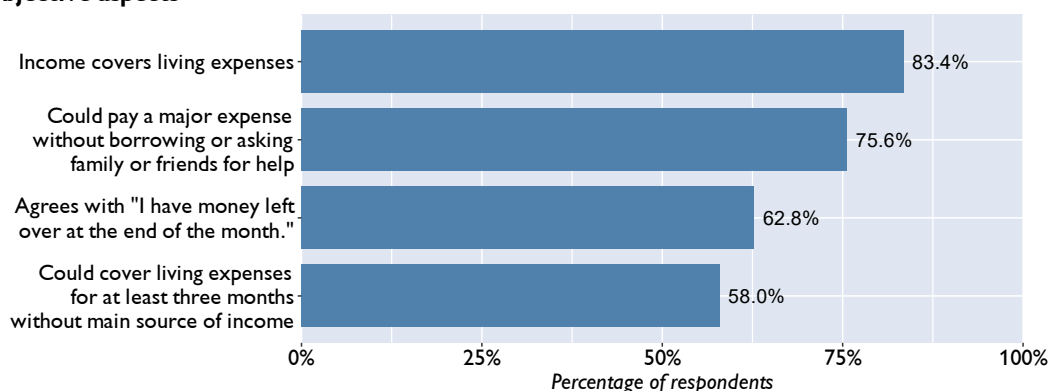|	
■ Financial resilience (out of 50)	■ Subjective financial well-being (out of 50)

Average financial well-being score
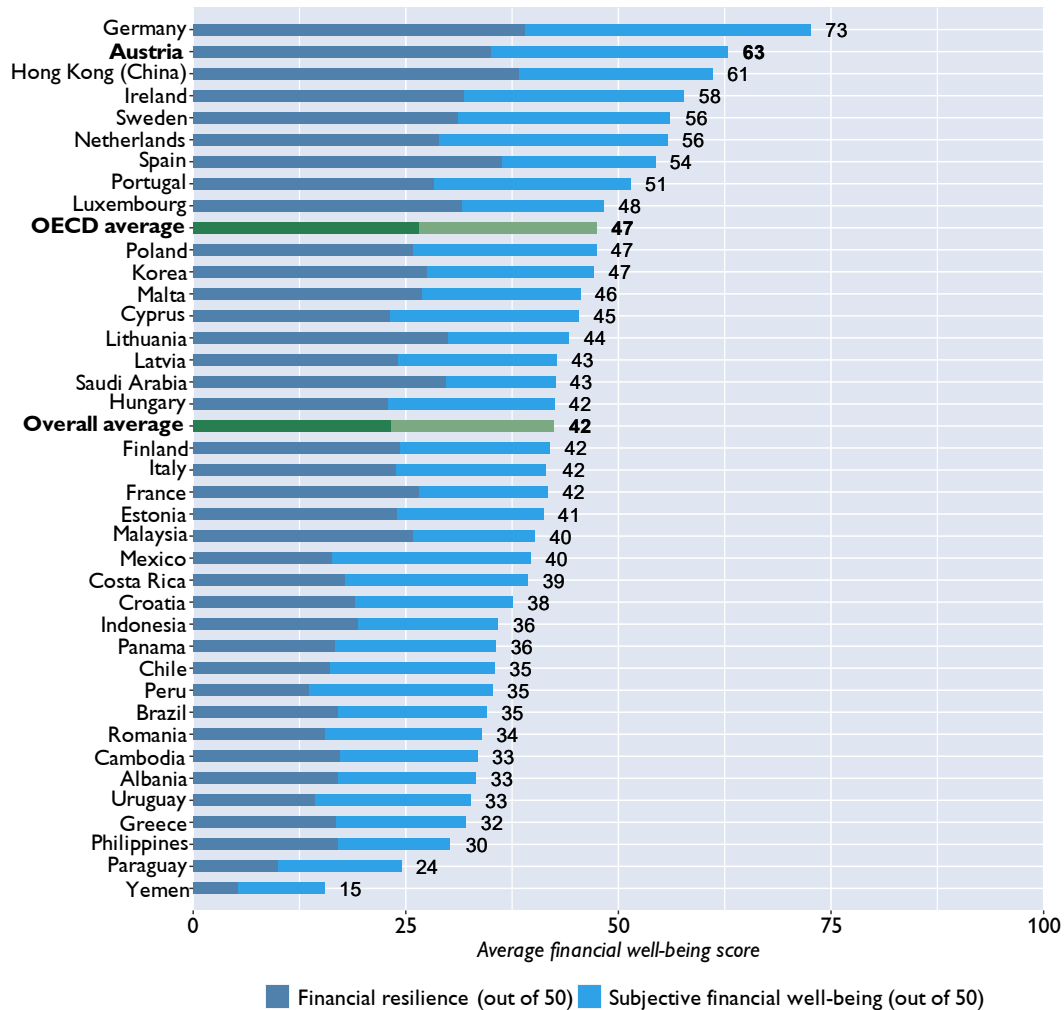
Source: ISAFL 2023, OECD/INFE, and ASFL 2023, OeNB.
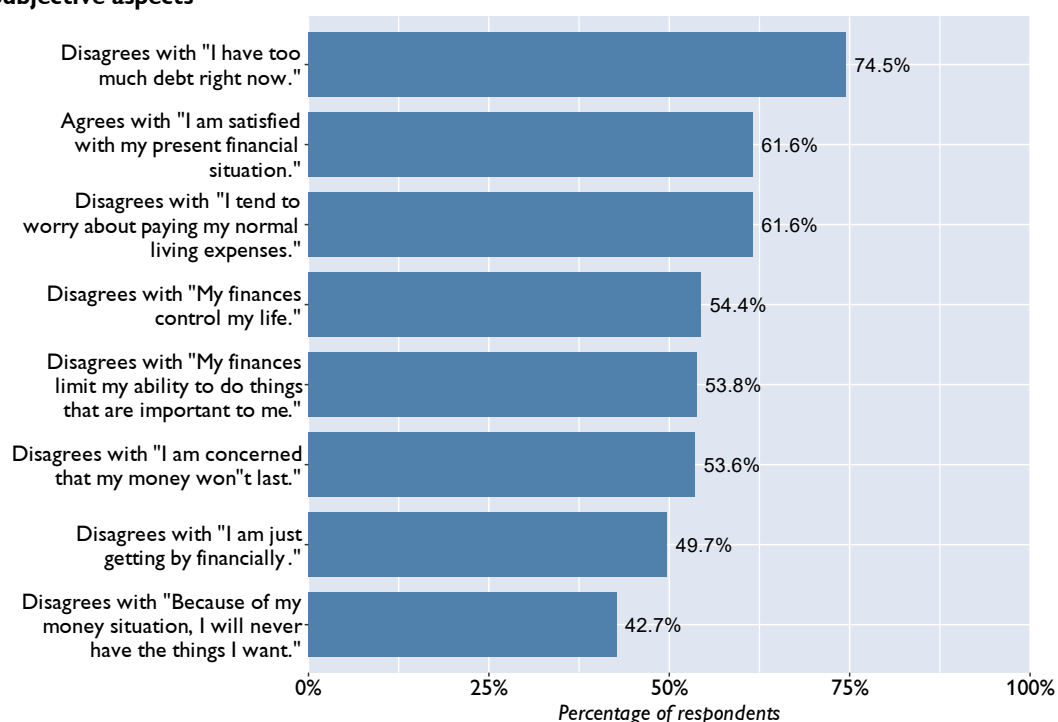
4.2 Financial well-being results in detail

Chart 15 examines in further detail how respondents in Austria answered the questions feeding into the financial well-being score. Turning first to the objective aspects of financial well-being, we find that about 80% of Austrian residents are able to cover their living expenses with their income on a regular basis, while three out of four also have a financial buffer of at least one month's income. For the other two perhaps more demanding items, the shares of people scoring a point are significantly lower. Due to the abovementioned ambiguities of these items, it is difficult to interpret these findings accurately. It thus remains unclear whether roughly 60% of Austrian respondents are able to cover their living expenses for at least three months without their main source of income either with or without relying on social security benefits. This is because it is unclear whether the available social security benefits, which are considerable in Austria, were considered in the response to this question or not.

Chart 15

Financial well-being questions

Objective aspects

Income covers living expenses	83.4%
Could pay a major expense without borrowing or asking family or friends for help	75.6%
Agrees with "I have money left over at the end of the month."	62.8%
Could cover living expenses for at least three months without main source of income	58.0%

Percentage of respondents

Subjective aspects

Disagrees with "I have too much debt right now."	74.5%
Agrees with "I am satisfied with my present financial situation."	61.6%
Disagrees with "I tend to worry about paying my normal living expenses."	61.6%
Disagrees with "My finances control my life."	54.4%
Disagrees with "My finances limit my ability to do things that are important to me."	53.8%
Disagrees with "I am concerned that my money won"t last."	53.6%
Disagrees with "I am just getting by financially ."	49.7%
Disagrees with "Because of my money situation, I will never have the things I want."	42.7%

Percentage of respondents

Source: ASFL 2023, OeNB.

With regard to subjective financial well-being, the related items generally display lower proportions than those measuring the objective dimension, with the exception of the question related to people's perceived debt burden, which is quasi-conditional on having debt at all. The subjective dimension encompasses not only the ability to make ends meet and cope with financial shocks but also the ability to fulfill their wishes and lifestyle expectations. Most items relating to the subjective dimension relatively evenly divide the sample into two halves. While these absolute ratios may not be suitable for direct interpretation, they may point to a distribution of subjective well-being where half of Austrian residents perceive a certain financial freedom to enjoy life while the other half does not feel that their lifestyle expectations are met.

4.3   Comparison across sociodemographic groups

Table 5 shows the means of financial well-being across sociodemographic characteristics. Most notably, financial well-being is found to have a strong positive relationship with age. Comparing the youngest (16 to 24 years) and the oldest age group (75+ years), we find a 38 point difference in means in favor of the elderly. Both cohort and age effects may explain this relationship (see Ihle and Siebert-Meyerhoff, 2017). Age effects are likely to play a prominent role, however. First, a considerable share of persons tend to earn more money as their professional careers progress and to have the opportunity to accumulate a certain amount of wealth through saving. Second, the likelihood of receiving an inheritance increases with age. Third, once people reach retirement age, they are usually entitled to regular pension payments in Austria, which may provide sufficient financial security in many cases. Fourth, lifestyle aspirations and expenses may generally decline with age, as do concerns about the long-term future.

Table 5

Group means of financial well-being score across sociodemographic characteristics

	N	%	Financial resilience	Subjective financial well-being	Financial well-being
Age					
16–24 years	66	8.7	19.5***	22.0***	41.5***
25–34 years	205	18.5	30.7***	23.5***	54.2***
35–44 years	199	16.9	34.2	26.3	60.5
45–54 years	221	13.9	37.5**	29.4	66.9*
55–64 years	300	21.1	38.1***	30.6**	68.7***
65–74 years	256	11.7	39.2***	31.5***	70.7***
75+ years	167	9.1	43.5***	36.0***	79.5***
Gender					
Male	654	48.9	36.3**	29.9***	66.2***
Female	760	51.1	33.7**	26.6***	60.3***
Education					
Compulsory education or below	150	12.8	27.5***	26.1	53.6***
Apprenticeship, vocational school	707	56.5	35.5	28.1	63.6
Upper secondary, school-leaving certificate	264	15.8	36.4	28.9	65.3
University, technical college	293	14.9	37.8**	30.0	67.8**
Household income					
≤ EUR 1,800	267	14.0	27.5***	20.4***	47.9***
EUR 1,800 – EUR 2,700	289	18.3	31.8***	25.5***	57.3***
EUR 2,700 – EUR 3,300	171	11.9	35.4	28.2	63.6
EUR 3,300 – EUR 4,500	240	19.1	37.3*	31.9***	69.2***
> EUR 4,500	206	18.5	42.0***	33.9***	75.9***
Occupation					
Self-employed	114	7.1	36.1	28.9	65.1
White-collar worker	855	57.7	36.2	28.2	64.4
Public servant	135	7.6	39.1**	33.2**	72.3**
Farmer	22	2.1	38.5	33.3	71.8
Blue-collar worker	242	20.4	32.6***	26.5*	59.1**
Homemaker	5	0.4	39.3	30.0	69.3
Family status					
Single	584	26.1	33.1**	25.1***	58.2***
Partnership	498	39.5	40.1***	32.5***	72.5***
Partnership with child(ren)	208	21.1	33.8	27.2	61.0
Single with child(ren)	67	5.3	24.1***	20.6***	44.7***
Other	52	7.5	26.3***	25.8	52.1**
Municpality					
< 3,000 inhabitants	390	26.8	36.2	28.3	64.5
3,000–15,000 inhabitants	475	31.7	36.4*	30.1**	66.5**
15,000–100,000 inhabitants	148	10.6	32.3*	26.0	58.2*
100,000–1 million inhabitants	101	9.5	37.1	32.6**	69.7**
Vienna	300	21.4	31.8***	24.6***	56.3***
Overall mean			35.0	28.2	63.2
Possible maximum			50.0	50.0	100.0

Source: ASFL 2023, OeNB .

Note: N represents unweighted sample sizes; percentages show weighted proportions. Asterisks indicate significance of differences between the group mean and the mean of the rest of the sample as tested in two-tailed t-tests with *p<0.1, **p<0.05, ***p<0.01.
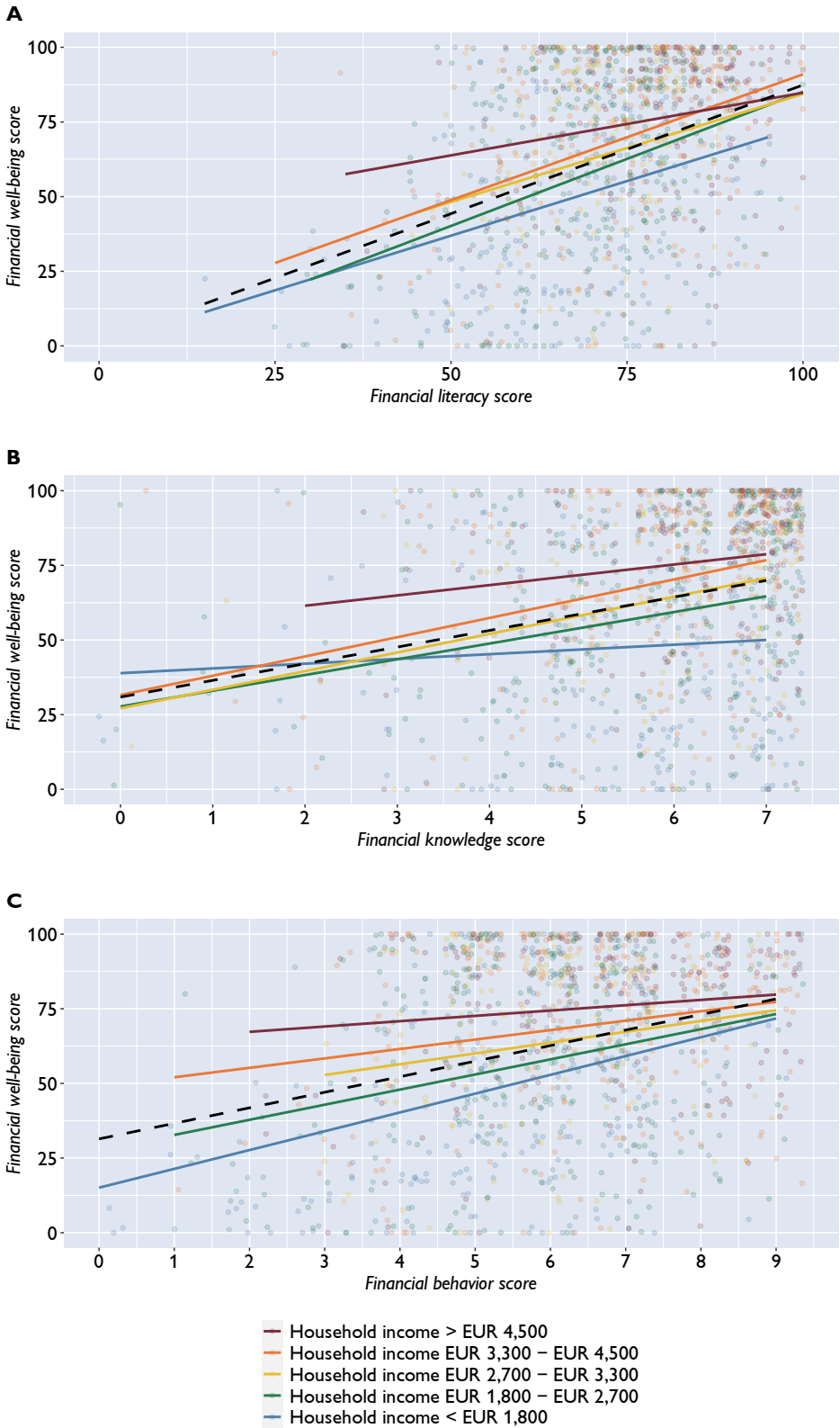
As with the previous scores, we also observe a significant gender gap in financial well-being. Several potential mediators might explain this relationship. Above all, men in Austria earn higher incomes, on average, and are more often employed full time than women (Statistics Austria, 2023). Another possible explanation is that the gender gap observed in financial literacy partly translates into the gender gap in financial well-being, as financial literacy scores are indeed associated with financial well-being, as detailed in the following section. More rigorous analyses of the gender gap in financial well-being and financial literacy exceed the scope of this report.

Educational attainment is positively associated with financial well-being. However, financial well-being results only differ substantially between those who have only completed compulsory education and those who have completed some form of more advanced education. The fact that these differences are not more pronounced may be related to financial well-being acting as a relative indicator that may be strongly affected by lifestyle expectations and social comparison within peer groups, both of which may differ depending on educational attainment. Nevertheless, a high household income above EUR 3,000 reliably predicts above-average financial well-being scores. Regarding job status, public servants display the highest financial well-being with a mean score about seven points higher than that for the self-employed, about eight points higher than that for white-collar workers and about 13 points higher than that for blue-collar workers. As expected, financial well-being is lowest for single households with children, possibly because these households face a higher burden of financial obligations. The subgroup of people living in a city with more than one million inhabitants, in this case Vienna, shows the lowest levels of financial well-being, possibly because of different demographics and the higher costs of living in Austria's capital city.

4.4 Correlations between financial well-being and financial literacy

Since financial literacy is frequently defined as a predictor of financial well-being, we expect the two respective scores to correlate significantly and substantively. Chart 16 shows scatterplots and regression lines (dashed lines) between financial well-being and financial literacy scores as well as between financial well-being and the component scores for financial knowledge and financial behavior. In all cases, there is a statistically significant positive correlation between the two variables. As indicated by the dashed lines in chart 16, financial literacy ($r = 0.40$, panel A), financial knowledge ($r = 0.26$, panel B) and financial behavior ($r = 0.30$, panel C) appear to reliably predict financial well-being for the total sample. Examining the scatterplot between financial literacy and financial well-being (panel A) more closely, we find that the top left-hand quadrant, which indicates high financial well-being, but low financial knowledge, contains hardly any observations. This means there are remarkably few individuals with high financial well-being who show low financial literacy, while respondents with low financial well-being are more equally distributed along the range of financial literacy scores. This, in conclusion, may serve as evidence that financial literacy is a necessary but not a sufficient condition for financial well-being.

Chart 16

Relationship between financial literacy and financial well-being

A

B

C

Household income > EUR 4,500
Household income EUR 3,300 − EUR 4,500
Household income EUR 2,700 − EUR 3,300
Household income EUR 1,800 − EUR 2,700
Household income < EUR 1,800

Source: ASFL 2023, OeNB.
Note: The dashed regression line represents the relationship between financial well-being and financial literacy (A), financial knowledge (B) and financial behavior (C), respectively, for the total sample; the solid regression lines do so for each household income group.

Given that our analysis relies on cross-sectional data, it is important to note that we cannot infer causality or determine the direction of possible causal effects. On the one hand, financial literacy may increase financial well-being through improving financial behavior and decision-making. On the other, financial literacy and financial well-being are likely to be heavily influenced by people's income or asset situation. Indeed, financial means may provide the main incentive to improve one's financial knowledge to effectively maximize returns through more sophisticated financial products. In contrast, people with low income and without any substantial assets might be "rationally ignorant" toward certain types of financial knowledge and behavior from which they cannot benefit anyway (Lusardi et al., 2017; Son and Park, 2019).

While we acknowledge these limitations, we still examine income as a potential moderator of the association between financial literacy and financial well-being. Chart 16 (solid lines) shows the relationship of financial literacy, financial knowledge and financial behavior with financial well-being for different household income groups, respectively. We find that the relationship between financial literacy and financial well-being (panel A) is of similar strength for low and middle income groups, while it tends to be weaker for the highest income group.[15] This might suggest that for individuals with very high incomes, financial literacy is a less critical factor for financial well-being in the sense that the positive effect of high income might superimpose the positive effect of financial literacy. Alternatively, the weak relationship between financial literacy and financial well-being observed in the highest income group could be attributable to the only basic financial literacy level measured in the survey. As it is, too many respondents in the highest income group achieved high financial literacy scores, which resulted in insufficient variation. In addition, such a ceiling effect might also play a role, in a similar way, with respect to financial well-being, for which high scores do not require particularly high levels of wealth.

As is evident, the overall variance of the financial knowledge score may be considered mainly indicative of differences in the financial knowledge that is necessary for investment decisions, namely knowledge on compound interest and on risk diversification. The financial behavior score, on the other hand, may be interpreted predominantly as prudent day-to-day money management. The corresponding linear regression lines in chart 16 illustrate the relationship of these two components of financial literacy with financial well-being conditional on household income.

Chart 16 (panel B) shows a positive correlation between financial knowledge and financial well-being. However, this correlation is very weak and, in fact, statistically insignificant for households with a monthly household income below EUR 1,800 and for those with a household income above EUR 4,500.[16] For the latter group, the explanations mentioned above are likely to apply as well. For low-income households, in contrast, this finding might indicate an inability to translate financial knowledge into financial well-being to the same extent as middle income households, perhaps because the financial resources available are insufficient to be effectively used for investing. This finding is also in line with the observation that people with low incomes and few assets mostly do not hold stocks, bonds or funds (Fessler et al., 2023).

Conversely, a different trend emerges concerning the relationship between financial behavior and financial well-being. As chart 16 (panel C) shows, financial behavior has a significantly greater

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[15] For details, see the corresponding regression results in table A2 in annex A.

[16] For details, see the corresponding regression results in table A2 in annex A.

predictive power for individuals living in low-income households than for those in high-income households.[17] This result may highlight the potential importance of prudent everyday financial behavior for the financial well-being of individuals with low to middle incomes, especially when contrasted with abstract financial knowledge.

5 Summary and recommendations

In this report, we present the results of the 2023 Austrian Survey of Financial Literacy (ASFL), the Austrian contribution to the 2023 International Survey of Adult Financial Literacy (ISAFL) conducted by the OECD/INFE. Overall, we find encouraging results based on a representative sample of 1,414 respondents residing in Austria. On average, Austrians score high in financial literacy. Of the 40 countries participating in the ISAFL, Austria ranks among the top performers on the overall financial literacy score (composed of scores for financial knowledge, behavior and attitudes) and in terms of financial well-being.

Ranking among the top countries in the international comparison concerning financial knowledge, Austria also showed improvements in financial knowledge compared with the ASFL waves of 2015 and 2019. Respondents had difficulties mainly with understanding compound interest and, to a lesser degree, with the concept of risk diversification. Concerning financial behavior, Austria ranks considerably above average, with most respondents exhibiting high control of their day-to-day finances, but only about half of them setting themselves long-term financial goals. A certain lack of future-orientation is also reflected in financial attitudes.

In Austria, the compound score of financial literacy shows a positive association with the number of financial products used. Utilization of all product categories correlates positively with financial literacy, with the notable exceptions of microfinance and consumer loans. This finding supports the assumption that financial literacy as operationalized in the ISAFL and ASFL is a relevant metric for financial sophistication.

Financial literacy scores in Austria are also associated with socioeconomic characteristics. Education up to the level of completed secondary education appears to have primary influence. Notably, we also find a significant gender gap conditional on age. Younger women, in particular, score lower in financial knowledge than younger men, whereas around the age of 55, the gender gap appears to be negligible. For men, in contrast, age appears to be much less relevant for financial literacy. Overall, this highlights the need for targeted education measures to foster financial literacy and inclusion particularly in younger women.

On the newly developed digital financial literacy score, Austria only ranks slightly above average. The instrument used is still considered preliminary by the OECD/INFE and may focus too narrowly on fraud and risk prevention. Indeed, in Austria, the digital financial literacy score is not associated with the number of digital financial services used, casting doubt on its construct validity. Digital financial literacy may thus require a broader definition that incorporates skills to navigate and make use of digital financial services to one's own benefit.

The ultimate goal of financial literacy is financial well-being. Average financial well-being in Austria appears to be equally high, by international comparison, as financial literacy. Concerning sociodemographic variables, we find a positive relationship between income and financial well-

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[17] For details, see the corresponding regression results in table A2 in annex A.

being. Notably, we find large differences between age groups in this context, with respondents below the age of 24 reaching only about half the financial well-being score of respondents aged 75+. Moreover, women also tend to show lower financial well-being than men. Apart from differences in financial literacy, these gaps in financial well-being may be explained by differences in socioeconomic and sociocultural factors related to respondents' employment status, the distribution of care work and their asset situation.

Financial well-being is positively correlated with the overall financial literacy score. However, we find that financial literacy appears to be a necessary but not a sufficient condition for high financial well-being, as we find numerous observations combining high financial literacy and low financial well-being, but hardly any observations with the opposite combination. This shows that financial well-being is determined by individual financial competences on the one hand and personal economic conditions and context factors on the other (see e.g. ANZ, 2021; Warmath, 2022). Financial literacy should thus be considered an important prerequisite of financial well-being but not a silver-bullet against financial vulnerability or hardship (see Voith and Mauser, 2024).

Moreover, the components of financial literacy show differential relationships with financial well-being across income groups. Financial knowledge appears to be most beneficial for people with medium incomes, while high scores in financial behavior seem mainly relevant for those with lower incomes. Consequently, the financial literacy construct may benefit from being differentiated more explicitly into skills necessary for day-to-day financial management on the one hand and skills related to long-term planning and investment on the other. Such differentiation might serve as a basis for need-based education measures that are relevant in people's current financial situation. This recommendation is related to the call for "just-in-time" financial education that aims to equip individuals with skills when they become relevant in specific financial situations (see Fernandes et al., 2014; Gibson et al., 2021), such as taking out loans, opening a brokerage account or repaying loans.

Nevertheless, these results cannot account for the dynamics of financial circumstances in people's lives, where needs may change both gradually and abruptly. In practical terms, need-based approaches can hardly prepare for changing financial circumstances in general. Financial educators thus need to strike a balance between imparting foundational knowledge that may appear irrelevant at the time and providing need-based solutions tailored to financial circumstances or potentially pivotal financial decisions at a suitable time and place.

Lastly, Austrian residents have shown a notable lack of long-term orientation and optimism regarding their financial situation, as expressed in attitudes, behaviors, the holding of financial products and financial well-being. Financial attitudes and behaviors might thus be key to strengthening people's agency and self-efficacy in financial matters. Potential may be found in encouraging more people to set themselves long-term financial goals. In this context, however, the influence of economic opportunity as a major determinant of saving and long-term thinking should not be ignored, as only people with sufficient financial resources have the chance to save significant amounts on a regular basis (see Fessler et al., 2023).

While the results presented in this report can be considered representative of Austria's resident population, they are subject to several limitations. The measurement approach used in the ISAFL and ASFL reflects a pragmatic approach to gage financial literacy and related variables internationally and may thus be subject to limitations typical for international measurement exercises. In particular, the instrument may not be equally valid across different countries and

cultures, results may be biased due to the self-reported character of the data, and different sampling and mode effects may further affect the validity of results. Moreover, we cannot make any claims on causality. Indeed, socioeconomic and context variables, financial literacy and its components and financial well-being are all likely to have complex and reciprocal relationships. Also, we cannot directly relate our results to financial education measures and their characteristics. In this regard, more research on the effectiveness of financial education in general, and on the aspects of its design in particular is needed.

Overall, we find encouraging evidence of high financial literacy in Austria. By international comparison, Austria's scores are high in financial literacy and financial well-being, and we observe positive trend over time in financial knowledge. This may, at least in part, be attributable to the extensive education efforts already undertaken by public, nonprofit and private actors to improve Austrians' financial literacy, as reflected in the national financial literacy strategy for Austria and its numerous financial education measures. Nevertheless, our analyses reveal gaps in specific areas of financial literacy among certain parts of the population, which may negatively affect their financial well-being. We thus expect that our results and analyses indicate potential avenues for future research and inform financial education measures aimed at further enhancing financial literacy and financial well-being in Austria.

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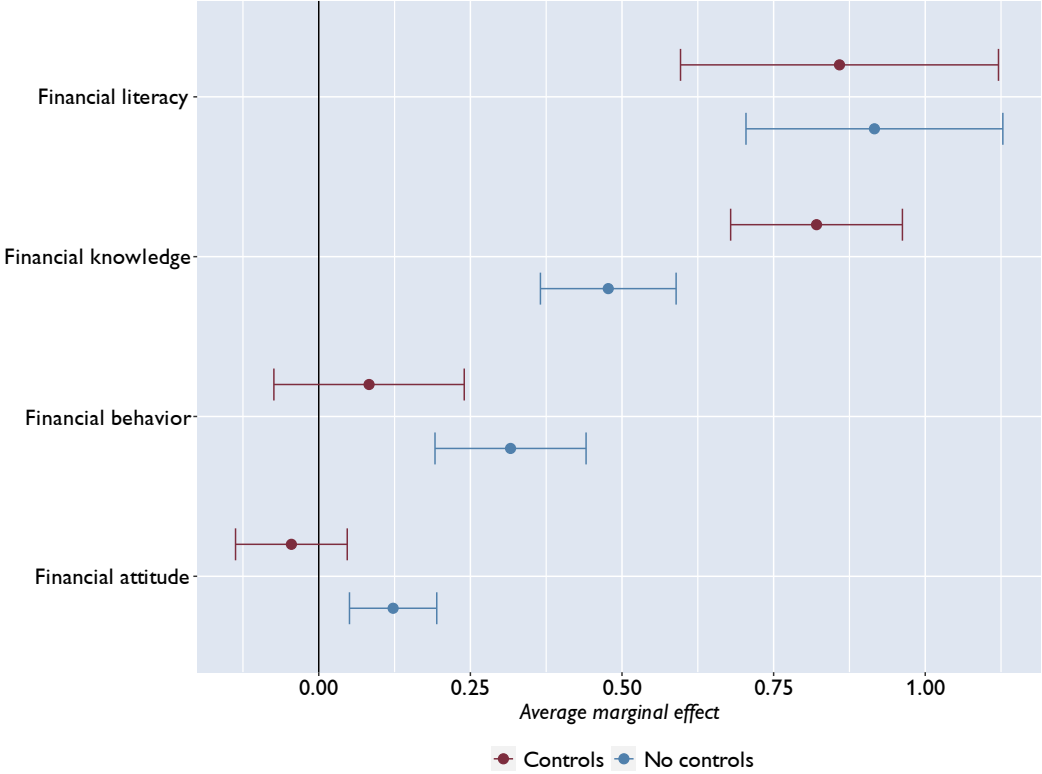
Annex A: additional charts and tables

A.1   Robustness check of changes in financial literacy scores between 2019 and 2023

To make sure that differences in financial literacy scores between the ASFL 2019 and the ASFL 2023 are not attributable to sample or mode effects, statistical significance in financial literacy scores between waves was tested by regression analyses. Having pooled the data for both waves, first, regressions were run using only the wave dummy as explanatory variable. Then, in a next step, control variables for survey mode, age, age squared, gender, education, household size, region and municipality size were added to the model. Survey weights were adjusted to ensure that the total sum of weights was the same for both waves, while maintaining the relative size of weights within each wave. Chart A1 displays the changes in financial literacy scores between the 2019 and 2023 waves with (red) and without (blue) controls. Error bars represent 95% confidence intervals.

Chart A1

Financial literacy scores 2019 vs. 2023

Changes in financial literacy scores with 95% confidence intervals
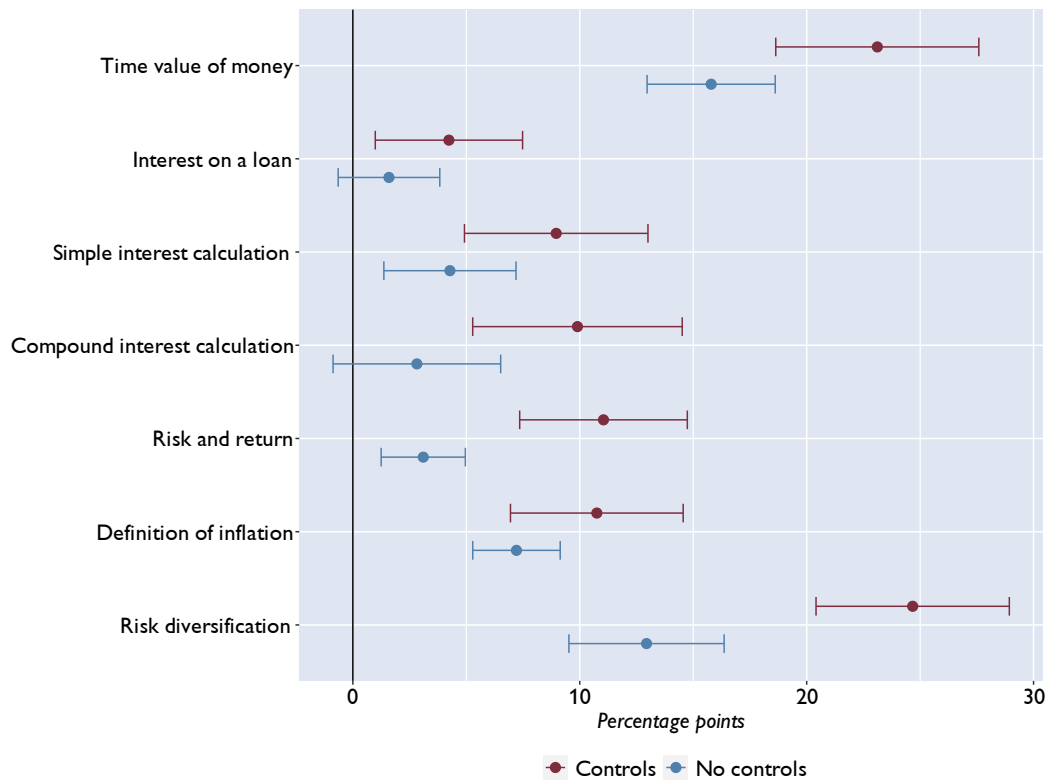

Source: ASFL 2019 and ASFL 2023, OeNB.

A.2   Robustness check of changes in financial knowledge between 2019 and 2023

To show how the probability of correctly answering a financial knowledge question changed between the 2019 and 2023 ASFL waves, we ran logistic regression models for each item used to construct the financial knowledge score. Following the same approach as for the financial literacy scores (see annex A.1), chart A2 shows the changes in the probability of respondents correctly answering a financial knowledge question between the 2019 and 2023 ASFL waves with (red) and without (blue) controls.

Financial knowledge questions 2019 vs. 2023

Changes in probability of answering a question correctly with 95% confidence intervals

Source: ASFL 2019 and ASFL 2023, OeNB.

A.3　Financial literacy and financial security issues

Means of (digital) financial literacy score conditional on having experienced various financial security issues

	N	%	Financial literacy	Digital financial literacy
Received bad financial advice by bank advisor	132	9.2	74.0	60.6
Noted unknown transaction on bank statement	114	7.2	72.7	59.8
Got insurance declined	101	7.4	72.1	57.6
Complained about high charges for money transfer	71	5.1	67.4*	54.2
Got credit declined	69	5.4	62.1***	54.4
Experienced financial loss in private environment	68	5.1	71.7	54.8
Discovered credit card use without authorization	36	2.4	71.4	56.1
Made formal complaint about financial services	27	2.0	72.2	58.5
Fell victim to a pyramid scheme	25	2.2	68.9	58.3
Carelessly provided personal financial information	21	1.5	63.8*	50.4*
Got bank account declined	17	1.9	62.0*	52.5
Lost money due to phishing scams	16	1.6	58.6**	45.9***
Spotted counterfeit banknotes	9	0.9	69.1	54.0
Overall mean			72.0	57.7
Possible maximum			100.0	100.0

Source: ASFL 2023, OeNB .

Note: N represents unweighted sample sizes; percentages show weighted proportions. Asterisks indicate significance of differences between the group mean and the mean of the rest of the sample as tested in two-tailed t-tests with *p < 0.1, **p<0.05, ***p<0.01.

A.4 Regression of financial well-being on financial literacy and household income

Table A2

OLS regressions of financial well-being on financial literacy components and household income

	(1)	(2)	(3)
Financial literacy score (stdzd.)	10.01***		
Financial knowledge score (stdzd.)		2.19	
Financial behavior score (stdzd.)			10.46***
Household income (reference category: ≤ EUR 1,800)			
EUR 1,800 − EUR 2,700	6.90**	10.34***	5.10*
EUR 2,700 − EUR 3,300	11.10***	15.33***	10.62***
EUR 3,300 − EUR 4,500	14.33***	21.08***	14.78***
> EUR 4,500	20.07***	26.56***	21.24***
FLS (stdzd.) × household income			
FLS (stdzd.) × EUR 1,800 − EUR 2,700	2.28		
FLS (stdzd.) × EUR 2,700 − EUR 3,300	-0.12		
FLS (stdzd.) × EUR 3,300 − EUR 4,500	1.52		
FLS (stdzd.) × > EUR 4,500	-4.27*		
FKS (stdzd.) × household income			
FKS (stdzd.) × EUR 1,800 − EUR 2,700		5.08**	
FKS (stdzd.) × EUR 2,700 − EUR 3,300		6.40**	
FKS (stdzd.) × EUR 3,300 − EUR 4,500		6.70**	
FKS (stdzd.) × > EUR 4,500		2.57	
FBS (stdzd.) × household income			
FBS (stdzd.) × EUR 1,800 − EUR 2,700			-2.06
FBS (stdzd.) × EUR 2,700 − EUR 3,300			-4.46
FBS (stdzd.) × EUR 3,300 − EUR 4,500			-5.21**
FBS (stdzd.) × > EUR 4,500			-7.50***
Constant	52.93***	48.17***	53.28***
Observations	1,173	1,173	1,173
R squared	0.20	0.15	0.15
Adjusted R squared	0.20	0.14	0.15

Source: ASFL 2023, OeNB.

Note: FLS = financial literacy score, FKS = financial knowledge score, FBS = financial behavior score; "stdzd." indicates that the respective values have been standardized, i.e. adjusted to have a mean of 0 and a standard deviation of 1. Asterisks denote significance levels with *$p < 0.1$, **$p<0.05$, ***$p<0.01$.

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Annex B: survey questions

B.1　Financial knowledge

German translation for the Austrian survey	English original from the OECD/INFE Toolkit

QK2
(not used for score calculation)

Fünf Brüder bekommen 1.000 EUR geschenkt. Wenn sie das Geld gleichmäßig teilen müssen, wie viel erhält dann jeder?	Imagine that five \<brothers\> are given a gift of \<\$\>1,000 in total. If the \<brothers\> have to share the money equally how much does each one get?

QK3

Wenn die Brüder ein Jahr warten müssen, bevor sie ihren Anteil an den 1.000 EUR erhalten (und die Inflationsrate beträgt 2 %), können sie sich dann mit ihrem Anteil:	Now imagine that the \<brothers\> have to wait for one year to get their share of the \<\$\> 1,000 and inflation stays at \<x\> percent. In one year's time will they be able to buy:

Answer options

Mehr kaufen, als sie es heute können	More with their share of the money than they could today
Genauso viel kaufen	The same amount
Oder weniger kaufen, als sie es heute können	Less than they could buy today
[Nicht vorlesen] Es hängt davon ab, was sie sich kaufen wollen	[Spontaneous] It depends on the types of things that they want to buy
Weiß nicht	Don't know
Keine Angabe	Refused
Irrelevante Angabe	Irrelevant answer

QK4

Sie leihen einem:r Freund:in abends 25 EUR und er:sie gibt Ihnen am nächsten Tag 25 EUR zurück. Wie viele Zinsen hat er:sie auf diesen Kredit gezahlt?	You lend \$25 to a \<friend/acquaintance\> one evening and he gives you \$25 back the next day. How much interest has he paid on this loan?

Sie legen 100 EUR auf einem gebührenfreien Sparkonto mit einem garantierten Zinssatz von 2 % pro Jahr an. Sie zahlen kein weiteres Geld auf dieses Konto ein und Sie heben auch keines ab. Wie hoch wäre der Kontostand einschließlich Zinsen am Ende des ersten Jahres?

Imagine that someone puts $100 into a <no fee, tax free> savings account with a guaranteed interest rate of 2% per year. They don't make any further payments into this account and they don't withdraw any money. How much would be in the account at the end of the first year, once the interest payment is made?

Und wie hoch wäre der Kontostand nach fünf Jahren? [Falls erforderlich ergänzen: Denken Sie daran, das Konto ist gebührenfrei]

And how much would be in the account at the end of five years [add if necessary: remembering there are no fees or tax deductions]? Would it be:

Answer options

Mehr als 110 EUR

More than $110

Genau 110 EUR

Exactly $110

Weniger als 110 EUR

Less than $110

Oder ist die Antwort anhand der verfügbaren Informationen unmöglich?

Impossible to tell from the information given

Weiß nicht

Don't know

Keine Angabe

Refused

Irrelevante Angabe

Irrelevant answer

Welche der folgenden Aussagen sind Ihrer Meinung nach richtig und welche falsch? Wenn Sie es nicht wissen, sagen Sie es einfach.

I would like to know whether you think the following statements are true or false.

Answer options of item battery

Ja

Yes

Nein

No

Weiß nicht	Don't know
Trifft nicht zu	Not applicable
Keine Angabe	Refused

Items

_1: Eine Geldanlage, die einen hohen Gewinn verspricht, ist wahrscheinlich sehr risikoreich	_1: An investment with a high return is likely to be high risk.
_2: Eine hohe Inflation bedeutet, dass die Lebenshaltungskosten rasch steigen	_2: High inflation means that the cost of living is increasing rapidly.
_3: Normalerweise lässt sich das Anlagerisiko am Aktienmarkt verringern, indem man eine Vielzahl verschiedener Aktien kauft	_3: It is usually possible to reduce the risk of investing in the stock market by buying a wide range of stocks and shares.

B.2   Financial behavior

Translation for Austria	OECD/INFE original

QF1_a

Treffen Sie täglich Entscheidungen über die Verwendung Ihrer Geldmittel?	Do you make day-to-day decisions about your own money?

Answer options

Ja	Yes
Nein	No
Weiß nicht	Don't know
Keine Angabe	Refused

QF1

Wer ist in Ihrem Haushalt für die tägliche Verwaltung der Geldmittel zuständig?	And who is responsible for making day-to-day decisions about money in your household?

Answer options

Ich treffe die entsprechenden Entscheidungen selbst	You make these decisions by yourself
Ich treffe die entsprechenden Entscheidungen mit einer anderen Person gemeinsam	You make these decisions with someone else, or
Eine andere Person trifft die entsprechenden Entscheidungen	Someone else makes these decisions
Weiß nicht	Don't know
Keine Angabe	Refused

QF2

Welche der nachfolgenden Möglichkeiten nutzen Sie für sich selbst oder Ihren Haushalt?	Do you do any of the following for yourself or your household?

Answer options of item battery

Ja	Yes
Nein	No
Keine Angabe	Refused

Items

_1: Ich erstelle einen Plan für die Verwaltung meiner Einnahmen und Ausgaben	_1: Make a plan to manage your income and expenses
_2: Ich dokumentiere meine Ausgaben	_2: Keep a note of your spending
_3: Ich verwalte das Geld für tägliche Ausgaben getrennt von Mitteln, die ich für die Bezahlung von Rechnungen brauche	_3: Keep money for bills separate from day-to-day spending money
_4: Ich notiere bevorstehende Ausgaben, damit ich es nicht verabsäume, sie zu begleichen	_4: Make a note of upcoming bills to make sure you don't miss them
_5: Ich verwende eine Banking-App oder andere Programme zur Geldverwaltung, um meine Ausgaben im Auge zu behalten (z. B. George, 123Banking oder finanzblick)	_5: Use a banking app or money management tool to keep track of your outgoings

_6: Ich verwende automatische Zahlungsaufträge (=Daueraufträge), um regelmäßige Ausgaben zu begleichen	_6: Arrange automatic payments for regular outgoings

QF3

Haben Sie in den letzten 12 Monaten auf eine der nachfolgenden Arten Geld gespart – unabhängig davon, ob Sie das Geld noch haben? Bitte berücksichtigen Sie dabei nicht Einzahlungen in einen Pensionsfonds, sondern alle anderen Formen des Sparens, wie zum Beispiel das Beiseitelegen von Geld für schlechte Zeiten oder besondere Anlässe.

In the past 12 months have you been personally saving money in any of the following ways, whether or not you still have the money? Please don't take into account any money paid into a pension, but think about all kinds of savings, such as building up a rainy-day fund or putting money aside for a special occasion.

Answer options of item battery

Ja	Yes
Nein	No
Keine Angabe	Refused

Items

_1: Ich spare zuhause oder im Geldbeutel Bargeld an	_1: Saving cash at home or in your wallet
_2: Ich zahle Geld auf ein Spar-/Girokonto ein	_2: Paying money into a <savings/deposit> account
_3: Ich gebe meiner Familie Geld, damit sie es für mich anspart	_3: Giving money to family to save on your behalf
_5: Ich kaufe Anleihen oder Termineinlagen (befristete Einlagen)	_5: Buying bonds or time deposits
_6: Ich investiere in Bitcoin oder ähnliche Kryptoanlagen	_6: Investing in crypto-assets
_7: Ich investiere in Aktien	_7: Investing in stocks and shares
_8: Ich spare auf andere Art (ohne Pensionsfonds) [INT: Beispiele können gegeben werden, einschließlich Überweisungen ins Heimatland für dortiges	_8: Saving or investing in some other way, other than a pension (INTERVIEWER: examples can be given, possibly including

Investment oder Kauf von Gold, Immobilien oder Vieh]

remitting money to be invested in home country, or buying livestock, gold or property)

QF11

Manche Menschen stellen mitunter fest, dass ihr Einkommen nicht ganz zur Deckung ihrer Lebenshaltungskosten reicht. War dies in den vergangenen 12 Monaten bei Ihnen der Fall?

Sometimes people find that their income does not quite cover their living expenses. In the last 12 months, has this happened to you, personally?

Answer options

Ja

Yes

Nicht in den letzten 12 Monaten, aber früher einmal

Not in the last 12 months, but in the past [Austria-specific]

Nein

No

Weiß nicht

Don't know

Trifft nicht zu, hab kein eigenes Einkommen

Not applicable (I don't have any personal income)

Keine Angabe

Refused

QF12

Was haben Sie beim letzten Mal, als dies passiert ist, getan, um über die Runden zu kommen?

What did you do to make ends meet the last time this happened?

Answer options of item battery

Ja

Yes

Nein

No

Items

_3: Kreditaufnahme unter Nutzung vorhandener Kontakte oder Ressourcen

_3: Access credit by using contacts or resources

_3_1: Geld bei Familie, Freunden oder sozialem Umfeld leihen

_3_1: Borrow from family, friends or the community

_3_2: Geld vom Arbeitgeber leihen/Gehaltsvorschuss

_3_2: Borrow from employer/salary advance

_3_3: Verpfändung von Eigentum

_3_3: Pawn something that you own

_3_4: Kreditaufnahme bei meinem Spar- und Kreditverein oder einem informellen Sparverein

_3_4: Take a loan from your savings and loans clubs or other informal savings club

_3_5: Nutzung einer Kreditkarte einer anderen Person

_3_5: Use someone else's credit card

_3_7: Beantragung eines Kredits/einer Entnahme aus einem Pensionsfonds

_3_7: Apply for a loan/withdrawal on pension fund.

_4: Geldaufnahme über existierende Kreditlinien

_4: Borrow from existing credit line

_4_1: Nutzung genehmigter, vereinbarter Überziehungskredite oder Kreditlinien (z. B. Überziehungsrahmen)

_4_1: Use authorised, arranged overdraft or line of credit

_4_2: Verwendung einer Kreditkarte für Bargeldvorschüsse oder zur Bezahlung von Rechnungen/zum Kauf von Nahrungsmitteln

_4_2: Use credit card for a cash advance or to pay bills/buy food

_5: Zusätzliche Kreditaufnahme

_5: Access additional credit line

_5_1: Aufnahme eines Privatkredits bei einem Finanzdienstleister (einschließlich Banken, Kreditgenossenschaften oder Mikrofinanzierern)

_5_1: Take out a personal loan from a financial service provider (including bank, credit union or microfinance)

_5_2: Aufnahme eines Kleinkredits

_5_2: Take out a payday loan

_5_3: Aufnahme bei einem informellen Anbieter:in/Kreditgeber:in

_5_3: Take out a loan from an informal provider/moneylender

_5_4: Aufnahme eines SMS-Kredits

_5_4: Take out an SMS loan

_5_5: Aufnahme eines Online-Sofortkredits

_5_5: Take out an online instant cash loan

_6: Rechnungsverzug/Überschreitung der vereinbarten Kreditrahmen

_6: Fall behind / go beyond arranged amount

_6_1: Nutzung eines nicht genehmigten Überziehungskredits (z. B. Überschreitung des Überziehungsrahmens)	_6_1: Use unauthorised overdraft
_6_2: Verspätete Begleichung von Rechnungen; Nichtbegleichung von Rechnungen	_6_2: Pay bills late; miss payments

QP1

Sagen Sie mir bitte, ob Sie schon einmal von diesen Finanzprodukten gehört haben.	Please can you tell me whether you have heard of any of these types of financial products

Answer options and items see below

QP2

Und nun sagen Sie mir bitte, ob Sie derzeit (alleinige:r oder gemeinsame:r) Eigentümer:in oder Nutzer:in eines solchen Produktes sind?	And now can you tell me whether you [personally or jointly] currently hold any of these types of products

Answer options and items see below

QP3

Welches der folgenden Finanzprodukte haben Sie in den vergangenen zwei Jahren erworben (als alleinige:r oder gemeinsame:r Eigentümer:in) unabhängig davon, ob es sich immer noch in Ihrem Eigentum befindet. Bitte geben Sie keine Produkte an, die automatisch verlängert wurden.	And in the last two years, which of the following types of financial products have you chosen [personally or jointly] whether or not you still hold them… Please do not include products that were renewed automatically

Answer options of item battery

Ja	Yes
Nein	No
Weiß nicht	Don't know
Keine Angabe	Refused

Items

_1: Private pensionsvorsorge

_2: Investmentfonds

_3: Hypothekarkredit

_4: Mit Eigentum besicherter Kredit

_5: Unbesicherter Bankkredit

_6: Kfz-Kredit und Leasing

_7: Credit Card

_8: Girokonto

_9: Sparkonto oder Sparbuch

_10: Mikrofinanzierung

_11: Versicherung

_12: Aktie

_13: Anleihe

_14: Mobile Zahlungsmethoden am Handy (nicht direkt mit einem Bankkonto verbunden) (Google Pay, Blue Code, Samsung Pay, …)

_15: Prepaid-Karte (nicht direkt mit einem Bankkonto verbunden)

_16: Bitcoin, ähnliche Kryptoanlagen oder ICOs (Initial Coin Offerings)

_17: Finanzprodukte, die als nachhaltig oder „grün" gekennzeichnet sind oder den ESG-Kriterien (Umwelt, Soziales und verantwortungsvolle Unternehmensführung) entsprechen

add_1: Bausparvertrag

_1: A pension or retirement product

_2: An investment account such as a unit trust

_3: A mortgage or home-loan

_4: A loan secured on property

_5: An unsecured bank loan

_6: A car loan

_7: Kreditkarte

_8: A current/checking/payment account

_9: A savings account

_10: A microfinance loan

_11: Insurance

_12: Stocks and shares

_13: Bonds

_14: Mobile/cell phone payment account (not directly linked to a bank account)

_15: A prepaid debit card/payment card (not directly linked to a bank account)

_16: Crypto-assets

_17: Financial products labelled as sustainable, or "ESG", or "green"

add_1: A savings plan with a building and loan association [Austria-specific]

add_2: Bauspardarlehen	add_1: A loan granted by a building and loan association [Austria-specific]
add_3: Konsumkredite oder Ratenkäufe	add_1: A consumer loan or installment purchases [Austria-specific]

QP5

Welche der folgenden Aussagen beschreibt am besten Ihre Vorgangsweise bei der Wahl Ihres zuletzt erworbenen Produktes?	And which of the following statements best describes how you made your most recent choice?

Answer options

Ich habe vor meiner Entscheidung mehrere Produkte unterschiedlicher Unternehmen in Betracht gezogen	I considered several options from different companies before making my decision
Ich habe mehrere Produkte eines einzigen Unternehmens in Betracht gezogen	I considered various options from one company
Ich habe keine anderen Produkte in Betracht gezogen	I didn't consider any other options at all
Ich habe mich zwar umgesehen, aber es gab keine anderen Produkte, die in Betracht kamen	I looked around but there were no other options to consider
Weiß nicht	Don't know
Trifft nicht zu	Not applicable
Keine Angabe	Refused

QP7

Durch welche Informationsquellen wurde Ihre Entscheidung am stärksten beeinflusst?	And which of these sources of information do you feel most influenced your decision?

Answer options of item battery

Ja	Yes
Nein	No
Weiß nicht	Don't know

Trifft nicht zu	Not applicable
Keine Angabe	Refused

Items

_1: Spezialisierte Produktvergleiche bzw. Empfehlungen aus Produkttests/-vergleichen (z. B. in Fachzeitschriften)	_1: Specialist product comparisons or best-buy guidance (such as specialist magazine, or a price comparison website)
_2: Online-Preisvergleiche	_2: A price comparison website
_3: Empfehlung eines unabhängigen Finanzberaters/Maklers	_3: A recommendation from an independent financial advisor
_4: Informationen aus Werbung oder Produktbroschüren	_4: Information from an advert or brochure about this specific product
_5: Empfehlung von Freund:innen, Familienangehörigen oder Bekannten	_5: A recommendation from friends, family or acquaintances
_6: Empfehlung von Fremden (z. B. in den sozialen Medien oder von Influencer:innen)	_6: A recommendation from people you do not know (such as social media or "influencers")
_7: Informationen von Angestellten des Finanzproduktanbieters (persönlich, online oder telefonisch)	_7: Information provided by staff of the financial product provider (in person, online or over the phone)
_8: Sonstige Informationsunterlagen	_8: Some other type of information

QS1

Ich lese Ihnen nun einige Aussagen vor. Ich würde gerne von Ihnen wissen, wie sehr Sie den folgenden Aussagen zustimmen. Verwenden Sie bitte eine Skala von 1 bis 5, wobei 1 „Stimmt vollkommen" und 5 „Stimmt überhaupt nicht" bedeutet. [Liste rotieren]	I am now going to read out some statements. I would like to know how much you agree or disagree with each of these statements (as it relates to you). [Rotate List]

Answer options of item battery

Stimme vollkommen zu	Completely agree
Stimme eher zu	Somewhat agree

Weder noch	Neither agree nor disagree
Stimme eher nicht zu	Somewhat disagree
Stimme überhaupt nicht zu	Completely disagree
Weiß nicht	Don't know
Trifft nicht zu	Not applicable
Keine Angabe	Refused

Items

_5: Ich habe meine finanziellen Angelegenheiten sehr genau im Blick.	_5: I keep a close personal watch on my financial affairs.
_8: Ich stecke mir langfristige finanzielle Ziele und versuche, diese auch zu erreichen.	_8: I set long-term financial goals and strive to achieve them.

QS2

Sagen Sie mir bitte, inwiefern die folgenden Aussagen auf Sie zutreffen, wobei auf einer Skala von 1 bis 5 die Ziffer 1 „immer" und die Ziffer 5 „niemals" bedeutet?	And how often would you say this statement applies to you? For each statement could you tell me whether it always, often, sometimes, rarely or never applies to you?

Answer options of item battery

Nie	Never
Manchmal	Sometimes
Oft	Often
Sehr oft	Very often
Weiß nicht	Don't know
Trifft nicht zu	Not applicable
Keine Angabe	Refused

Items

_3: Bevor ich etwas kaufe, überlege ich mir genau, ob ich es mir leisten kann.

_3: Before I buy something I carefully consider whether I can afford it.

_5: Ich zahle meine Rechnungen pünktlich.

_5: I pay my bills on time.

B.3   Financial attitude

Translation for Austria	OECD/INFE original

QS1

Ich lese Ihnen nun einige Aussagen vor. Ich würde gerne von Ihnen wissen, wie sehr Sie den folgenden Aussagen zustimmen. Verwenden Sie bitte eine Skala von 1 bis 5, wobei 1 „Stimmt vollkommen" und 5 „Stimmt überhaupt nicht" bedeutet.

I am now going to read out some statements. I would like to know how much you agree or disagree with each of these statements (as it relates to you).

Answer options of item battery

Stimme vollkommen zu	Completely agree
Stimme eher zu	Somewhat agree
Weder noch	Neither agree nor disagree
Stimme eher nicht zu	Somewhat disagree
Stimme überhaupt nicht zu	Completely disagree
Weiß nicht	Don't know
Trifft nicht zu	Not applicable
Keine Angabe	Refused

Items

_1: Ich gebe lieber Geld aus, als es für später zu sparen.

_1: I find it more satisfying to spend money rather than save it for the long term.

QS3

Ich lese nun einige Aussagen vor und würde gerne von Ihnen wissen, wie gut diese Aussagen

I would also like to how well this statement describes you or your situation. For each

Sie persönlich bzw. Ihre Gedanken oder Ihre Situation beschreiben. Verwenden Sie dafür bitte eine Skala von 1 „Stimmt vollkommen" bis 5 „Stimmt überhaupt nicht".

statement could you let me know whether it describes your situation or thoughts completely, very well, somewhat, very little or not at all.

Answer options of item battery

Stimme vollkommen zu	Completely agree
Stimme eher zu	Somewhat agree
Weder noch	Neither agree nor disagree
Stimme eher nicht zu	Somewhat disagree
Stimme überhaupt nicht zu	Completely disagree
Weiß nicht	Don't know
Trifft nicht zu	Not applicable
Keine Angabe	Refused

Items

_11: Ich lebe eher für den Augenblick und denke nicht an morgen.

_11: I tend to live for today and let tomorrow take care of itself.

B.4   Digital financial literacy

Translation for Austria	OECD/INFE original

QK7 (Knowledge)

Welche der folgenden Aussagen sind Ihrer Meinung nach richtig und welche falsch? Wenn Sie es nicht wissen, sagen Sie es einfach.

I would like to know whether you think the following statements are true or false.

Answer options of item battery

Ja	Yes
Nein	No
Weiß nicht	Don't know

| Trifft nicht zu | Not applicable |
| Keine Angabe | Refused |

Items

_4: Damit ein digitaler Finanzvertrag rechtskräftig ist, muss man ihn zusätzlich auf Papier unterzeichnen

_4: A digital financial contract requires signature of a paper contract to be considered valid.

_5: Persönliche Daten, die ich ins Internet stelle, können dazu verwendet werden, mir gezielt personalisierte Werbung oder finanzielle Angebote zu unterbreiten

_5: The personal data that I share publicly online may be used to target me with personalised commercial or financial offers.

_6: Krypto-Währungen sind genau wie Banknoten und Münzen gesetzliche Zahlungsmittel in Österreich

_6: Cryptocurrencies have the same legal tender as banknotes and coins.

QS2 (Behaviour)

Sagen Sie mir bitte, inwiefern die folgenden Aussagen auf Sie zutreffen, wobei auf einer Skala von 1 bis 5 die Ziffer 1 „immer" und die Ziffer 5 „niemals" bedeutet?

And how often would you say this statement applies to you? For each statement could you tell me whether it always, often, sometimes, rarely or never applies to you?

Answer options of item battery

Nie	Never
Manchmal	Sometimes
Oft	Often
Sehr oft	Very often
Weiß nicht	Don't know
Trifft nicht zu	Not applicable
Keine Angabe	Refused

Items

_6: Ich teile meinen engen Freund:innen meine Passwörter und die PIN-Nummer für mein Bankkonto mit.

_6: I share the passwords and PINs of my bank account with my close friends.

_7: Bevor ich online ein Finanzprodukt kaufe, prüfe ich, ob der Anbieter von einer österreichischen Aufsichtsbehörde reguliert wird.

_7: Before buying a financial product online I check if the provider is regulated in my country.

_8: Ich teile Informationen über meine persönliche finanzielle Situation online (z. B. in den sozialen Medien).

_8: I share information about my personal finances publicly online (e.g. on social media).

QS3 (Behaviour)

Ich lese nun einige Aussagen vor und würde gerne von Ihnen wissen, wie gut diese Aussagen Sie persönlich bzw. Ihre Gedanken oder Ihre Situation beschreiben. Verwenden Sie dafür bitte eine Skala von 1 „Stimmt vollkommen" bis 5 „Stimmt überhaupt nicht".

I would also like to how well this statement describes you or your situation. For each statement could you let me know whether it describes your situation or thoughts completely, very well, somewhat, very little or not at all.

Answer options of item battery

Stimme vollkommen zu	Completely agree
Stimme eher zu	Somewhat agree
Weder noch	Neither agree nor disagree
Stimme eher nicht zu	Somewhat disagree
Stimme überhaupt nicht zu	Completely disagree
Weiß nicht	Don't know
Trifft nicht zu	Not applicable
Keine Angabe	Refused

Items

_13: Ich ändere regelmäßig die Passwörter für Webseiten, die ich für Online-Einkäufe und meine persönlichen Finanzgeschäfte nutze.

_13: I regularly change the passwords on websites that I use for online shopping and personal finances.

Ich lese Ihnen nun einige Aussagen vor. Ich würde gerne von Ihnen wissen, wie sehr Sie den folgenden Aussagen zustimmen.	I am now going to read out some statements. I would like to know how much you agree or disagree with each of these statements (as it relates to you).

Answer options of item battery

Stimme vollkommen zu	Completely agree
Stimme eher zu	Somewhat agree
Weder noch	Neither agree nor disagree
Stimme eher nicht zu	Somewhat disagree
Stimme überhaupt nicht zu	Completely disagree
Weiß nicht	Don't know
Trifft nicht zu	Not applicable
Keine Angabe	Refused

Items

_1: Ich halte Online-Einkäufe über ein öffentliches Wi-Fi-Netzwerk (z. B. in Cafés, Flughäfen, Einkaufszentren) für sicher.	_1: I think that it is safe to shop online using public Wi-Fi networks (e.g. in cafés, airports, shopping malls).
_2: Es ist wichtig, dass man vor dem Ausführen einer Online-Transaktion prüft, ob die Webseite sicher ist (z. B. https-Seiten, Sicherheitslogo oder -zertifikat).	_2: It is important to pay attention to the security of a website before making a transaction online (e.g. https sites, safety logo or certificate).
_3: Ich denke nicht, dass es bei Online-Einkäufen wichtig ist, sich die allgemeinen Geschäftsbedingungen eines Verkäufers durchzulesen.	_3: I think it is not important to read the terms and conditions when buying something online.

B.5   Financial well-being

Translation for Austria	OECD/INFE original

Wenn Sie heute eine größere Zahlung in Höhe Ihres monatlichen Einkommens tätigen müssten, wären Sie in der Lage, diese Zahlung zu begleichen, ohne sich Geld auszuborgen oder Familienangehörige oder Freunde um Hilfe zu bitten? [Falls erforderlich ergänzen: Wenn Sie derzeit kein Einkommen haben, denken Sie bitte an eine unerwartete Zahlung in Höhe jener Geldsumme, die Sie typischerweise innerhalb eines Monats ausgeben.]

And if you, personally, faced a major expense today – equivalent to your own monthly income – would you be able to pay it without borrowing the money or asking family or friends to help? [Add if necessary, if you do not currently have an income, please think about an unexpected expense equivalent to the amount of money you typically spend in a month.]

Answer options

Ja	Yes
Nein	No
Weiß nicht	Don't know
Trifft nicht zu (Ich habe kein eigenes Einkommen)	Not applicable (I don't have any personal income)
Keine Angabe	Refused

QF11

Manche Menschen stellen mitunter fest, dass ihr Einkommen nicht ganz zur Deckung ihrer Lebenshaltungskosten reicht. War dies in den vergangenen 12 Monaten bei Ihnen der Fall?

(AKS ALL) Sometimes people find that their income does not quite cover their living expenses. In the last 12 months, has this happened to you, personally?

Answer options

Ja	Yes
Nicht in den letzten 12 Monaten, aber früher einmal	Not in the last 12 months, but in the past [Austria-specific addition]
Nein	No
Weiß nicht	Don't know

Trifft nicht zu, habe kein eigenes Einkommen	Not applicable (I don't have any personal income)
Keine Angabe	Refused

Wenn Sie Ihre Haupteinnahmequelle verlieren würden, wie lange könnten Sie Ihre Lebenshaltungskosten noch decken, ohne sich Geld zu leihen oder umzuziehen?	If you lost your source of income today, how long could you continue to cover your living expenses without borrowing any money or moving house?

Answer options

Weniger als eine Woche	Less than a week
Mindestens eine Woche, aber weniger als einen Monat	At least a week, but not one month
Mindestens einen Monat, aber weniger als drei Monate	At least one month, but not three months
Mindestens drei Monate, aber weniger als sechs Monate	At least three months, but not six months
Mehr als sechs Monate	More than six months
Weiß nicht	Don't know
Keine Angabe	Refused

QS1

Ich lese Ihnen nun einige Aussagen vor. Ich würde gerne von Ihnen wissen, wie sehr Sie den folgenden Aussagen zustimmen. Verwenden Sie bitte eine Skala von 1 bis 5, wobei 1 „Stimmt vollkommen" und 5 „Stimmt überhaupt nicht" bedeutet. [Liste rotieren]	I am now going to read out some statements. I would like to know how much you agree or disagree with each of these statements (as it relates to you). [Rotate List]

Answer options of item battery

Stimme vollkommen zu	Completely agree
Stimme eher zu	Somewhat agree

Weder noch	Neither agree nor disagree
Stimme eher nicht zu	Somewhat disagree
Stimme überhaupt nicht zu	Completely disagree
Weiß nicht	Don't know
Trifft nicht zu	Not applicable
Keine Angabe	Refused

Items

_4: Ich bin mit meiner derzeitigen finanziellen Situation zufrieden.

_4: I am satisfied with my present financial situation.

_7: Meine finanzielle Situation hindert mich daran, die Dinge zu tun, die mir wichtig sind.

_7: My financial situation limits my ability to do the things that are important to me.

_10: Meine Schulden sind derzeit zu hoch.

_10: I have too much debt right now.

QS2

Sagen Sie mir bitte, inwiefern die folgenden Aussagen auf Sie zutreffen, wobei auf einer Skala von 1 bis 5 die Ziffer 1 „immer" und die Ziffer 5 „niemals" bedeutet?

And how often would you say this statement applies to you? For each statement could you tell me whether it always, often, sometimes, rarely or never applies to you?

Answer options of item battery

Nie	Never
Manchmal	Sometimes
Oft	Often
Sehr oft	Very often
Weiß nicht	Don't know
Trifft nicht zu	Not applicable
Keine Angabe	Refused

_1: Ich mache mir Sorgen darüber, wie ich meine regulären Lebenshaltungskosten decken kann.

_1: I tend to worry about paying my normal living expenses.

_2: Meine Finanzen beherrschen mein Leben.

_2: My finances control my life.

_3: Bevor ich etwas kaufe, überlege ich mir genau, ob ich es mir leisten kann.

_3: Before I buy something I carefully consider whether I can afford it.

_4: Am Ende des Monats habe ich noch Geld übrig.

_4: I have money left over at the end of the month.

QS3

Ich lese nun einige Aussagen vor und würde gerne von Ihnen wissen, wie gut diese Aussagen Sie persönlich bzw. Ihre Gedanken oder Ihre Situation beschreiben. Verwenden Sie dafür bitte eine Skala von 1 „Stimmt vollkommen" bis 5 „Stimmt überhaupt nicht".

I would also like to how well this statement describes you or your situation. For each statement could you let me know whether it describes your situation or thoughts completely, very well, somewhat, very little or not at all.

Answer options of item battery

Stimme vollkommen zu — Completely agree

Stimme eher zu — Somewhat agree

Weder noch — Neither agree nor disagree

Stimme eher nicht zu — Somewhat disagree

Stimme überhaupt nicht zu — Completely disagree

Weiß nicht — Don't know

Trifft nicht zu — Not applicable

Keine Angabe — Refused

Items

_3: Aufgrund meiner finanziellen Lage werde ich nie all die Dinge haben, die ich mir im Leben wünsche.

_3: Because of my money situation, I feel like I will never have the things I want in life.

_9: Ich mache mir oft Sorgen darüber, dass mein Geld nicht ausreichen wird.

_9: I am concerned that my money won't last.

_10: Ich komme finanziell gerade so über die Runden.

_10: I am just getting by financially.

B.6 Financial security issues

QP10

Wenn Sie nun ganz allgemein an Finanzprodukte und Finanzdienstleistungen denken, haben Sie in den letzten 2 Jahren eine oder mehrere der folgenden Erfahrungen gemacht?

Thinking about financial products and services in general, in the last 2 years, have you experienced any of the following issues?

Answer options of item battery

Ja	Yes
Nein	No
Weiß nicht	Don't know
Trifft nicht zu	Not applicable
Keine Angabe	Refused

Items

_1: Sind Sie einem Rat gefolgt, in ein Finanzprodukt zu investieren, das sich im Nachhinein als Betrug herausgestellt hat (z. B. Investment in ein Pyramidenspiel)?

_1: {Have you} accepted advice to invest in a financial product that you later found to be a scam, such as a <pyramid> scheme?

_2: Haben Sie versehentlich Finanzinformationen preisgegeben, indem Sie auf E-Mails oder Telefonanrufe geantwortet haben, die sich im Nachhinein als Betrug herausgestellt haben?

_2: {Have you} accidently provided personal financial information (such as passwords or card numbers) in response to an email, phone call or social media message that you later found out was not genuine?

_3: Haben Sie festgestellt, dass jemand Ihre Bankomat- oder Kreditkarteninformationen ohne Ihre Genehmigung verwendet hat, um damit Waren zu bezahlen?

_3: {Have you} discovered that someone has used your <card> details to pay for goods without your authorisation?

_4: Haben Sie in den letzten 2 Jahren eine Transaktion auf Ihrem Kontoauszug oder Ihrer Kreditkartenabrechnung beanstandet, die Ihnen unbekannt war?

_4: {Have you} queried a transaction listed on your bank or credit card statement that you did not recognise?

_5: Haben Sie eine formelle Beschwerde gegen die Dienstleistungen eingelegt, die Sie von einer Bank oder einem Finanzinstitut in Anspruch genommen haben?

_5: {Have you} made a formal complaint about the service you have received from a bank or other financial institution?

_6: Wollten Sie ein Bankkonto eröffnen und Ihr Antrag wurde aus irgendeinem Grund abgelehnt?

_6: {Have you} tried to open a bank account and been refused for any reason?

_7: Wurde Ihnen der Anspruch auf eine Versicherungsleistung verwehrt, von der Sie sich Deckung erwartet hatten?

_7: {Have you} been refused a claim on an insurance product that you expected to cover you?

_8: Wurde schon einmal ein von Ihnen beantragter Kredit abgelehnt?

_8: {Have you} been denied credit for which you had applied?

_9: Haben Sie bei einem Anbieter von Geldtransferdiensten Beschwerde wegen hoher Gebühren beim Senden und Empfangen von Geld eingelegt?

_9: {Have you} complained to a remittance provider about high charges when sending or receiving money?

_10: Haben Sie Geld infolge von Hackerangriffen oder Phishing-E-Mails verloren?

_10: {Have you} lost money as a result of hackers or phishing scams?

_11: Haben Sie aufgrund von gefälschten Banknoten Geld verloren?

_11: Have you lost money as a result of counterfeit banknotes? [Austria-specific]

_12: Haben Sie den Eindruck, dass ein:e Bankberater:in oder Finanzdienstleister:in Sie bei den Finanzentscheidungen schlecht oder falsch beraten hat? (z. B. unpassende Anlage- oder Kreditformen)

_12: Do you feel that you have been informed insufficiently or misled by your financial advisor or financial service provider concerning financial decisions? (e.g. unsuitable types of investment or loan) [Austria-specific]

_13: Haben Sie durch jemanden in Ihrem privaten Umfeld einen erheblichen finanziellen Schaden erlitten?

_13: Have you suffered considerable financial loss due to someone in your private environment? [Austria-specific]