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## Article

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AT A GLANCE

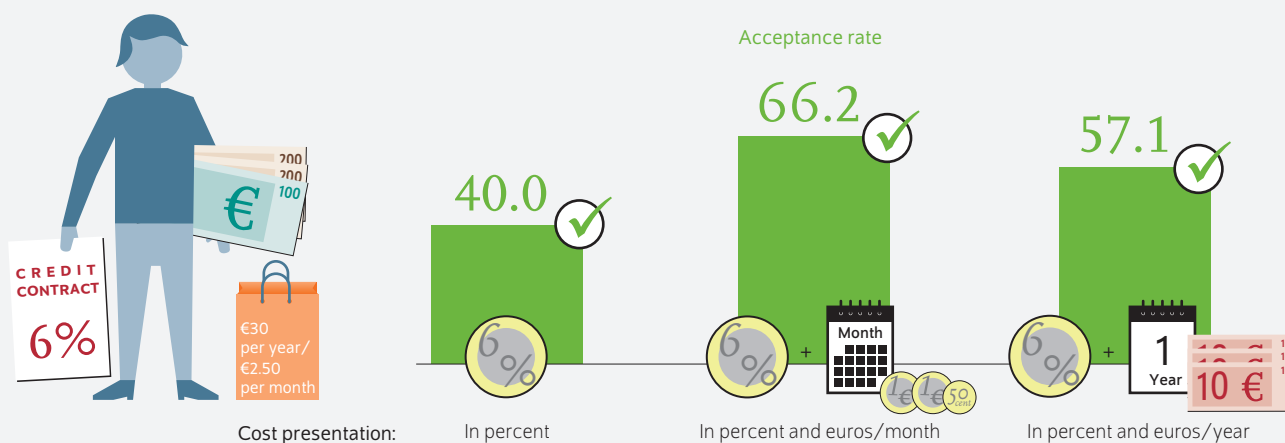
## Consumer debt: Many borrowers unaware of their interest rates; cost display influences likelihood of accepting credit scenario

By Antonia Gipp, Jana Hamdan, and Lukas Menkhoff

- A recent survey shows that nearly 20 percent of adults in Germany use consumer credit, but 44 percent of them do not know the interest rate
- The more financially literate more often know their interest rates, but one third of respondents lack basic financial knowledge
- Women are significantly less likely to know the interest rate and are less financially literate than men
- Willingness to take out credit increases when costs are presented in percent as well as absolute amounts, especially as small monthly amounts
- More financial literacy and transparent cost information is needed, especially for the overdraft facility

### Interest costs presented as small monthly amounts are most likely to tempt consumers to take out credit

Probability of taking out credit in percent by interest cost presentation



Source: Authors' depiction.

Note: Hypothetical, 500-euro consumer loan with an annual percentage rate of six percent

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### FROM THE AUTHORS

*“Loans with small monthly installments are clearly more likely to tempt people into debt. They also carry the risk of individuals underestimating the total burden of a loan and falling into a debt trap. Consumer protection should consider this scenario.”*

— Jana Hamdan —

### MEDIA



Audio Interview with Jana Hamdan (in German)  
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# Consumer debt: Many borrowers unaware of their interest rates; cost display influences likelihood of accepting credit scenario

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## ABSTRACT

The consumer debt of households in Germany totals in the triple-digit billions and is characterized by a wide range of interest rates. Despite the high volume of debt, many people do not know the terms of their consumer credit contracts. This report analyzes new survey data on general knowledge about typical forms of consumer credit, such as the overdraft facility and consumer loans. Women tend to know less about the interests they pay and are less financially literate. Financial literacy correlates with being informed about interest rates, but is independent of the incidence of consumer debt in general. An experiment reveals respondents are fundamentally price sensitive and that cost display influences the decision to take out consumer credit. For example, there is a significantly higher willingness to take out a consumer loan when the costs are presented per month in euros compared to per year. Consumer protection in financial services should examine these effects, consider them in an evidence-based manner where appropriate, and adjust information disclosure requirements, especially for the overdraft facility. The research findings also support implementing more financial literacy initiatives, especially for women.

Consumer loans are widespread in Germany: Four out of ten bank customers at least sometimes make use of their checking account's overdraft facility.<sup>1</sup> Many customers have also taken out a consumer loan to purchase goods or services at one point in time. Accordingly, most people in Germany have taken out consumer credit at least once (meaning either a consumer loan and/or by using their checking account's overdraft facility).

A lack of awareness can be particularly problematic when it comes to consumer credit, as it can represent a longer-term financial commitment that includes significant accruing interest costs. It is important for individuals to be informed and price sensitive when it comes to consumer credit, in particular from a consumer protection and societal viewpoint. Otherwise, there are risks of additional financial burdens for households, even to the point of over-indebtedness. Moreover, a lack of price sensitivity could reduce competition and innovation in the financial services industry.

This Weekly Report investigates three questions: First—assuming that when purchasing a good or service, the buyer should know the price—what role does a lack of knowledge about interest rates play in consumer credit? Second, do people make different decisions depending on their existing level of financial literacy? Third, how does the presentation of consumer credit costs (and their amount) influence the decision to take out credit?

## Nearly 20 percent have consumer debt

To answer these questions, a team of researchers conducted an online survey of 1,011 adults in Germany via an internet platform in summer 2022 (Box 1). Participants have a similar incidence of consumer credit as the general population (Table 1); one out of five respondents was either currently or recently overdrawn or had one or more active consumer loans. This is similar to the data in the nationally

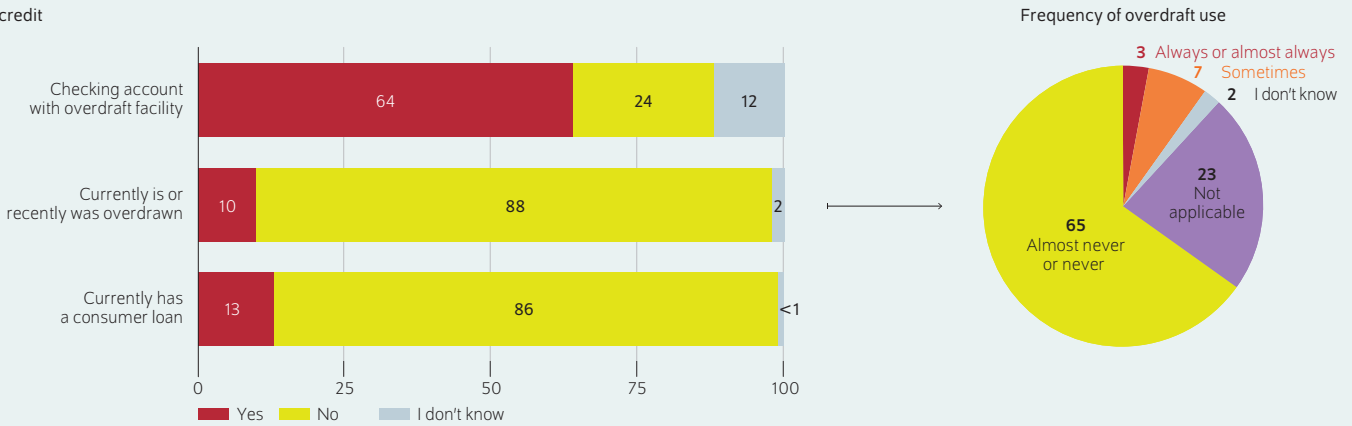
<sup>1</sup> Cf. Ipsos Marktforschung im Auftrag der ING-DiBa, *Umfrage zu Bankgebühren und Dispo-Zinsen* (2016) (in German). Note: In October and November 2015, 1,008 financial decision makers over 18 years old were surveyed (available online; accessed on August 22, 2022. This applies to all other online sources in this report unless stated otherwise).

Figure 1

**Use of overdraft debt and consumer loans**

Share of respondents in percent

Consumer credit



Source: Authors' calculations based on the survey data.

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Every tenth respondent uses their checking account's overdraft facility at a cost.

representative Socio-Economic Panel (SOEP) Innovation Sample,<sup>2</sup> according to which 18 percent of households have consumer credit, either the respondent themselves or another household member.

The participants in the current survey are 51 percent women, 47 percent men, and two percent gender diverse. However, the respondents differ in some other characteristics compared to the representative SOEP sample.<sup>3</sup> For example, the present sample is much younger than the German population (around 30 instead of 50 years old) on average and has a higher level of education. In contrast, the net household income is below the national average. The data therefore primarily includes information on younger, better educated, but not higher-earning internet users in Germany with a similar rate of consumer credit as the German average.

Almost two thirds of the respondents have a checking account with an overdraft facility and ten percent of them are currently or were recently overdrawn (Figure 1).<sup>4</sup> Twelve percent indicated they did not know if they had one. In sum, most respondents have access to an overdraft facility, which around every tenth respondent is using currently. Moreover,

Table 1

**Sample respondent characteristics**  
2022 sample compared to SOEP 2020

	2022 sample		SOEP 2020	
	Average	Observations	Average	Observations
Share of women	51 percent	1,011	51 percent	10,539
Age	29.3	1,011	51.5	10,543
Secondary school degree	84 percent	1,011	66 percent	9,713
University degree	50 percent	1,011	32 percent	10,544
Monthly net household income	2,000 to 2,999 euros	948	3,428 euros	9,542
Consumer loan	19 percent	1,011	18 percent	3,779

Notes: In the current sample, respondents use consumer credit when they indicate that they are currently or have recently been overdrawn and/or have one or several consumer loans.

Source: Authors' calculations based on the survey data and Socio-Economic Panel data (SOEPv37 and SOEP-IS 2020).

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three percent—about 30 percent of those currently overdrawn—report they are always or almost always overdrawn.

Currently, 13 percent of the respondents have an active consumer loan, which is usually a larger sum of debt. This number is similar in a 2017 representative sample of German-speaking internet users 18 years and older.<sup>5</sup>

Respondents report paying an average of 9.23 percent debit interest on overdrafts and 3.34 percent effective interest on consumer loans, both per year; this is very close to the figures

<sup>2</sup> David Richter and Jürgen Schupp, "The SOEP Innovation Sample (SOEP IS)," *Schmollers Jahrbuch: Journal of Applied Social Science Studies/Zeitschrift für Wirtschafts- und Sozialwissenschaften* 135, no. 3 (2015): 389–400.

<sup>3</sup> The SOEP is an annual representative survey of private households in Germany that has surveyed households and its members since 1984. Cf. Jan Goebel et al., "The German Socio-Economic Panel (SOEP)," *Jahrbücher für Nationalökonomie und Statistik* 239, no. 2 (2019): 345–360.

<sup>4</sup> This is in line with other data; for example, this share is comparable with the results of a representative survey conducted by the credit portal Smava in January 2022. Their projection estimates that 9.5 percent of the adult population in Germany is currently overdrawn. Cf. Smava, *6,6 Millionen Deutsche sind nach Weihnachten im Dispo – 17 % mehr als im Januar 2021* (in German; available online).

<sup>5</sup> Verbraucherzentrale Sachsen e.V., *Konsumentenkredite. Befragung über Krediteinstellungen und Krediterfahrungen* (2018) (in German; available online).

reported by other surveys.<sup>6</sup> Most respondents' debit interest rate is six percent, which is below average. However, the range in reported interest rates is very wide, especially upward. Every fifth respondent who uses an overdraft facility pays debit interest of 11 percent or more; every tenth pays over 13 percent (Figure 2). While zero percent financing is most common for consumer loans, 20 percent of such loans have an interest rate of six percent or more (Figure 2).

### Customers often do not know interest rates

Surveys have made it clear that personal loan interest rates can be quite high, especially compared to the deposit rates barely above zero that banks offer customers. Therefore, it is even more surprising that not all consumers are aware of these costs: Seventy-two percent of respondents with a checking account with an overdraft facility do not know the debit interest rate (Figure 3). Of the respondents currently overdrawn, 53 percent are unaware of the debit interest rate. While respondents seem to be more informed when it comes to consumer loans, still one in three do not know the interest rate. Overall, 44 percent of those with a consumer loan do not know the interest rate. However, due to the fact that the respondents' answers are not reviewed for accuracy, it is possible that these figures are an optimistic estimate. The share of those who do not know the interest rate could actually be higher.

It has also been observed in other surveys that people are often unaware of credit conditions. According to the *Finanzwissen in Deutschland* (Financial Literacy in Germany) study, for example, nearly half of the respondents did not know when exactly costs are incurred when overdrafting.<sup>7</sup> Twenty-five percent incorrectly assume that the bank will only charge interest if their account is still overdrawn at the end of the month. Nine percent incorrectly assume that debit interest does not exist.

Is a lack of knowledge about interest rates concentrated in certain socio-demographic groups? A regression analysis shows that the characteristics age, university degree, household income, financial literacy, self-control as a personality trait, and preference for status consumption do not play a (statistically significant) role in answering this question (Figure 4).<sup>8</sup> However, there are gender differences: Women have a nearly 20 percentage point lower likelihood than other genders to know the interest rate for their checking account's overdraft facility or their consumer loan. Put differently: Fifty-five percent of women with consumer credit do not know the interest rate compared to 34 percent of men.

<sup>6</sup> Stiftung Warentest, *Alle Banken im Test – Durchschnittszins bei 9,43 Prozent* (2022) (in German; available online).

<sup>7</sup> Finanztip Stiftung, *Finanzwissen in Deutschland* (2021) (in German; available online).

<sup>8</sup> Self-control and status consumption are measured via established scales. Self-control plays a role in explaining overindebtedness, cf. Jana Hamdan, "Fehlende Selbstkontrolle und geringe finanzielle Bildung als Ursachen von Konsumschulden," *DIW Wochenbericht*, no. 25 (2021) (in German; available online).

#### Box 1

##### Data collection

This study is based on an online survey of 1,019 people that took place from July 18, 2022, to August 9, 2022. The survey was preceded by a pilot survey with 30 participants.

This study uses a gender-balanced sample of people who are fluent in German, reside in Germany, and are registered on the Prolific<sup>1</sup> survey platform. In the survey, the respondents provided socio-demographic as well as socio-economic information and participated in an experiment in which loan offers are presented in various forms. Furthermore, the participants were asked to provide self-assessments on risk tolerance, self-control, and their proclivity for status consumption using standard scales. The survey included three standard questions on three topics (interest, inflation, and risk diversification) that were developed by researchers Annamaria Lusardi and Olivia Mitchell and are used internationally (Box 2).

An "attention check" was integrated into the survey to review if the questions were truly read and answered and not just clicked through. Only eight participants failed the attention check and were excluded. As a result, the remaining sample for the analysis included 1,011 people. Participation in the survey, which took around eight minutes for the median, was remunerated with about 11 euros per hour.

<sup>1</sup> Prolific Academic Ltd is an international survey platform for scientists. Using this platform, participants worldwide can participate in studies and answer questions, thereby earning money.

The effect of financial literacy is not statistically significant in this multivariate regression analysis, in part because men are more financially literate than women.

### Improving financial literacy improves financial behavior

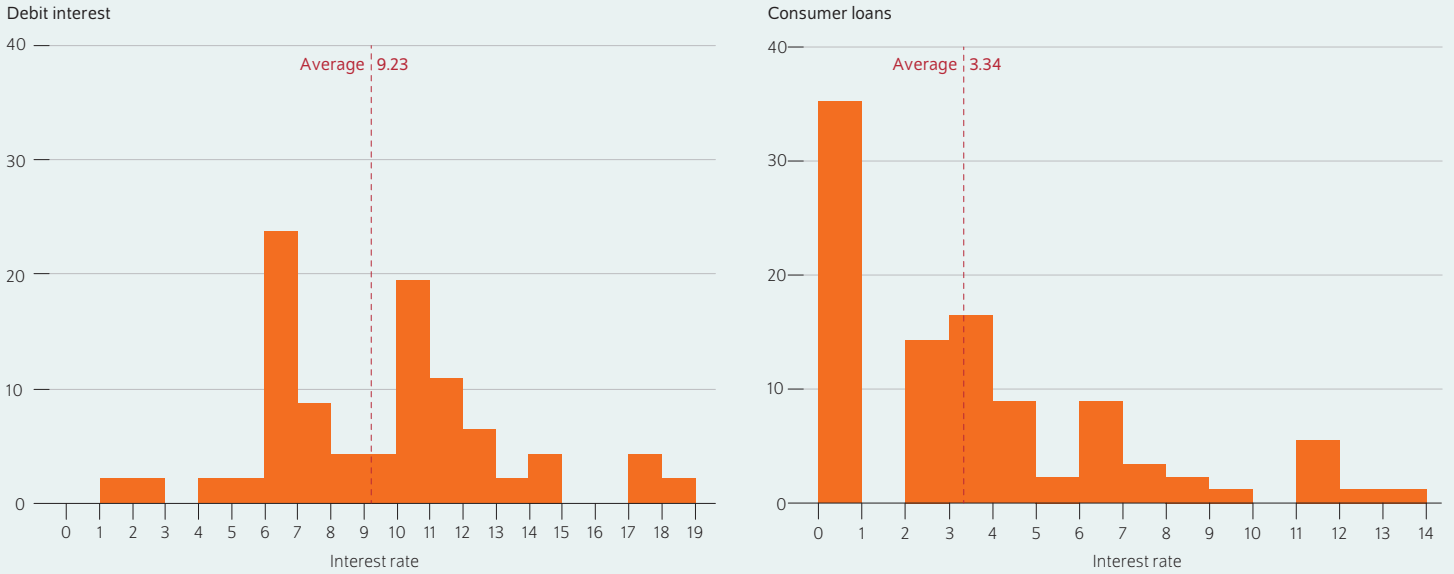
Studies have shown that financial literacy generally improves financial behavior, in particular budgeting and saving. However, this relationship is often weak in borrowing behavior.<sup>9</sup> How financially literate are the respondents in the online survey, and what are the correlations with knowledge of the interest rate and consumer credit?

To find out, respondents were asked three standard financial literacy questions targeting the concepts of interest rates, inflation, and diversification (Box 2). Sixty-seven percent answered all three questions correctly, 25 percent two out of three questions, and seven percent one out of three questions. In addition, two percent answered zero questions correctly.

<sup>9</sup> Cf. Tim Kaiser and Lukas Menkhoff, "Financial education measures are effective: Germany should develop a national strategy for financial education," *DIW Weekly Report*, no. 38 (2021): 643–650 (in German; available online).

Figure 2

**Distribution of debit interest rates (left) and consumer loan rates (right)**  
Share of respondents who use their overdraft facility or have a consumer loan, in percent



Notes: The distribution of interest rates shown is based on 46 observations for overdraft facilities and 92 observations for consumer loans; the individuals involved know the debit interest rate and effective interest rate, respectively, in percent per year.

Source: Authors' calculations based on the survey data.

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Some respondents accept an above-average interest rate for both the overdraft facility and consumer loans.

Overall, nearly one third of the respondents lack knowledge about basic financial topics. This share is somewhat smaller than in other representative samples, such as the SOEP-IS 2020. In the SOEP-IS sample, 44 percent of 682 respondents did not answer all three questions correctly.

Men, older people, and more highly educated people with higher incomes answered the questions correctly most frequently (Figure 5). These correlations are well known, but underscore that the gender gap in financial literacy is large, even in this younger sample.

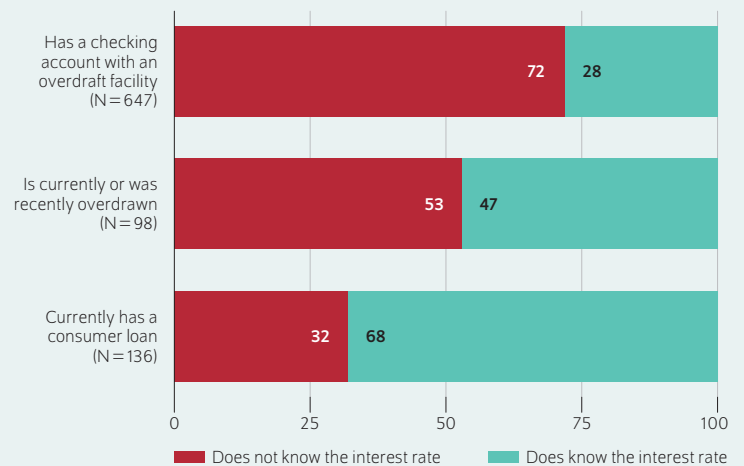
More financially literate people tend to take out consumer loans just as often as the less financially literate but are more frequently aware of the interest rates. Of those who answered all three questions correctly, 61 percent of them are aware of the relevant interest rates, up from 33 percent among those who do not answer any question correctly.<sup>10</sup>

**Literature reveals suboptimal credit understanding**

Current research shows that many people have difficulty evaluating credit costs and that they are influenced by superficial

Figure 3

**Knowledge about interest rates**  
Share of respondents in percent



Notes: These are conditional values, i.e., the interest rate knowledge of respondents who have used the corresponding credit.

Source: Authors' calculations based on the survey data.

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Between one third and half of the respondents who use consumer credit do not know the interest rate.

<sup>10</sup> The number of observations is limited to those with consumer loans.

Figure 4

**Effect of socio-demographic factors and personality characteristics on knowledge of interest rates**

In percentage points, dependent variable: does not know interest rate



Notes: These are marginal likelihood effects in a binary probit model. The sample is restricted to those who are currently or were recently overdrawn or (currently) have one or more consumer loans. Self-control as a personality trait is assessed using 13 statements such as "I am good at resisting temptation" on a scale of 1 to 5. Similarly, proclivity for status consumption is assessed using five statements such as "I am interested in new products with status" on a scale of 1 to 5. A high income means a monthly net household income above the median of 3,000 euros.

Source: Authors' calculations based on the survey data.

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On average, women have a 20-percentage point lower probability of knowing the interest rate of their consumer credit compared to other genders.

characteristics of a credit offer.<sup>11</sup> When selecting a credit card, for example, many consumers do not make the optimal decision,<sup>12</sup> and some distribute their debt inefficiently towards credit cards with high interest rates.<sup>13</sup>

In particular, different studies show that cost disclosure—such as the interest costs being indicated in percent or as an absolute value—can influence credit decisions (which also applies beyond credit).<sup>14</sup> For example, consumers take out payday loans less frequently when the costs are presented to them both in percentage terms and in absolute amounts of money.<sup>15</sup> Moreover, individuals more frequently decide to take out shorter term loans with higher monthly installments and lower total costs when information about total

<sup>11</sup> Pete Lunn, Feidhlim McGowan, and Noel Howard, "Do Some Financial Product Features Negatively Affect Consumer Decisions? A Review of Evidence," *ESRI Research Series 78* (2018) (available online).

<sup>12</sup> Sumit Agarwal et al., "Do Consumers Choose the Right Credit Contracts?" *The Review of Corporate Finance Studies* 4, no. 2 (2015): 239–257 (available online).

<sup>13</sup> Alejandro Ponce, Enrique Seira, and Guillermo Zamarripa, "Borrowing on the Wrong Credit Card? Evidence from Mexico," *American Economic Review* 107, no. 4 (2017): 1335–1361 (available online).

<sup>14</sup> Antonia Gipp, "The Impact of Price Display on Financial Decisions," *DIW Roundup* 140 (available online).

<sup>15</sup> Marianne Bertrand and Adair Morse, "Information Disclosure, Cognitive Biases, and Payday Borrowing," *The Journal of Finance* 66, no. 6 (2011): 1865–1893 (available online).

Box 2

**Three financial literacy questions**

The three standard questions in the survey are:

Suppose you had 100 euros in your savings account. This balance earns interest at two percent per year and you leave it in your account for five years. What is your balance after five years?

- **Over 102 euros**
- Exactly 102
- Less than 102 euros
- I don't know
- Refuse to answer

Imagine that the interest rate on your savings account was one percent per year and inflation was two percent per year. After one year, with the money in this account, would you be able to buy just as much, more, or less than today with the balance of your savings account?

- More
- Just as much
- **Less**
- I don't know
- Refuse to answer

Is the following statement true or false: Buying a single company stock usually provides a safer return than a stock mutual fund.

- True
- **False**
- I don't know
- Refuse to answer

costs is also displayed as an absolute amount.<sup>16</sup> Fittingly, the annual percentage rate information influences borrowing decisions less when additional information on the total cost of the loan is provided.<sup>17</sup> Overall, absolute costs tend to be more decisive or crucial than costs in percentage terms.

**Experiments on other credit options**

Considering the limited financial literacy documented above and the state of the literature, this Weekly Report will next explore to what extent cost disclosure influences the decision to take out a consumer loan. To do so, an experiment that allows for such causal analyses is conducted as part of the online survey.

<sup>16</sup> Pete Lunn, Marek Bohacek, and Alicia Rybicki, *An Experimental Investigation of Personal Loan Choices*, ESRI Research Series (2016) (available online).

<sup>17</sup> Rob Ranyard et al., "The Role of Mental Accounting in Consumer Credit Decision Processes," *Journal of Economic Psychology* 27, no. 4 (2006): 571–588 (available online).

Each of the 1,011 participants was asked if they would take out a consumer loan six times in a row. The hypothetical item to be financed is not described in any detail; it is simply stated that it is a desired item that can only be financed via a loan. For each question, the parameters were randomly changed: the loan amount, the interest rate, and the cost presentation.<sup>18</sup> The results clearly show that the frequency with which the various alternatives are accepted vary by these parameters.

To present the three dimensions descriptively, a market interest rate of six percent per year is assumed initially (Figure 6). As an example, it can be seen that a 100-euro loan with this interest rate is accepted with a probability of 57.4 percent across all forms of cost presentation.

As expected, higher loans were accepted less frequently. The acceptance rate was only 34.6 percent for a 5,000-euro loan, for example. Overall, about half of the hypothetical loans are taken out. Costs are displayed in three ways: First, just the interest rate, which has an acceptance rate of 40 percent for the three smaller amounts and an acceptance rate of 27.5 percent for the 5,000-euro loan. Second, the interest rate and the absolute costs for one month in euros are presented, which increases the probability of acceptance significantly. Third, the interest rate and absolute costs for one year in euros are presented. This has an acceptance level between the first two options.

Lower (three percent) and higher (11 percent) interest rates are also provided as alternatives. The results show that participants are steadily price-sensitive: Consistently and statistically significantly, the more expensive loans are, the more frequently they are rejected (Table 2, column 1). Across all loan and interest rates, the variant including the costs for one month in absolute euros has a probability of acceptance that is 19 percentage points higher on average compared to the percentage-only variant. The effect is only six percentage points when the absolute interest costs per year in euros are displayed. Moreover, the low acceptance rate already observed for larger loan amounts is confirmed in the regression analysis across all interest rates.

The effect of cost presentation is not clearly dependent on the interest rate displayed: Interactions from different cost presentations and a high interest rate compared to a typical market interest rate are not statistically significant (Table 2, column 2).

**Cost presentation is decisive**

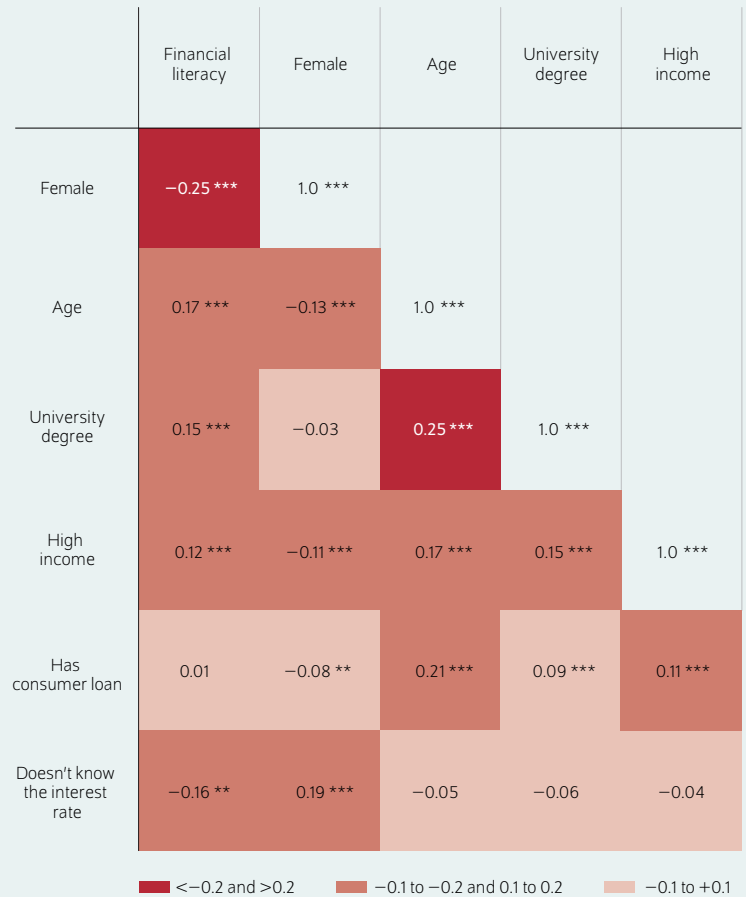
This experiment shows that the way information is presented can play a major role. Decisions regarding an identical consumer loan are very different depending on how the costs are displayed.

But which form of cost presentation leads consumers to make the decision that is actually best for them? In the experiment,

<sup>18</sup> No further information on repayment and the loan term was provided.

Figure 5

**Correlation between financial literacy and characteristics**  
Correlation coefficient<sup>1</sup>



1 The correlation coefficient measures the strength of the correlation between two variables and can take values between -1 and 1. The larger the correlation coefficient, the stronger the correlation between two variables.

Notes: Shown are the Pearson correlation coefficients and the statistical significance. The more asterisks, the more accurate the values: \*\*\*, \*\*, and \* indicate the significance level at the one, five, or ten percent level. A positive correlation coefficient indicates a positive correlation between the variables, a negative coefficient indicates a negative correlation. Furthermore, 1 means that two variables are perfectly correlated, while a value of 0 means no correlation at all. A high income means a monthly net household income above the median of 3,000 euros.

Source: Authors' calculations based on the survey data.

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Women are significantly less likely to be very financially literate, while people with a university degree are more likely to be financially literate.

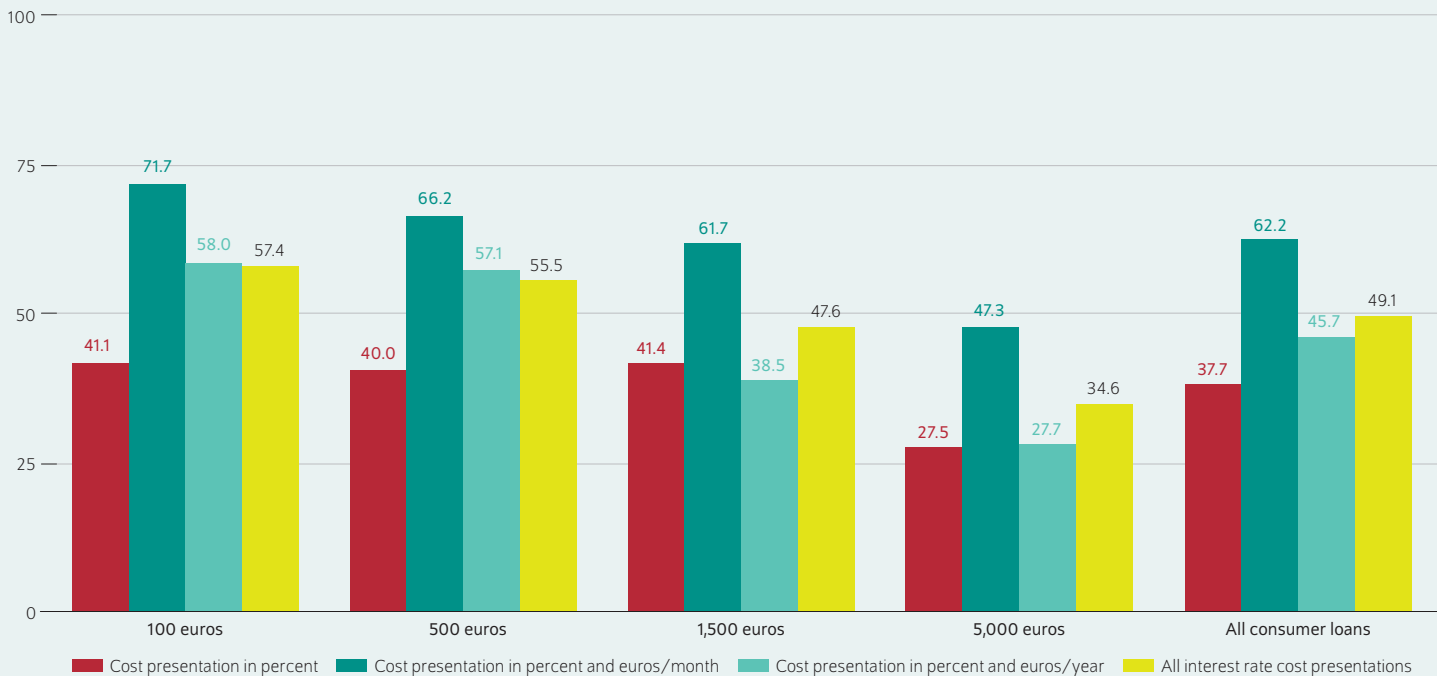
displaying monthly interest costs increases loan acceptance enormously, giving the impression that the actual costs are underestimated. The willingness to accept a loan decreases when the annual cost is displayed, which comprehensively reflects the actual costs for a one-year term. However, stating the interest only, which in most cases results in the lowest acceptance rate, may discourage some participants because they are not as good at estimating the costs involved. Ultimately, there is some evidence to suggest that expressing the cost in terms of the interest rate plus the absolute interest cost in euros per year is most likely to lead to the optimal decision for consumers.



Figure 6

**Borrowing behavior at market interest rates depending on cost presentation**

Probability that respondents would take out a loan with an interest rate of six percent per year, in percent



Note: Here, scenarios were queried from a consumer loan that was not defined in more detail and could be used to finance a purchase.

Source: Authors' calculations based on the survey data.

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Respondents are most likely to take out consumer credit when absolute monthly costs are presented in addition to percentages.

This is confirmed when observing the decisions by education level. Participants with a university degree reject more expensive loans more often compared to participants without a secondary school diploma (Table 3). In fact, university graduates are also more likely to accept a loan if the presentation includes the annual interest costs. A similar picture emerges when looking at the groups by financial literacy level.

Nonetheless, it remains somewhat surprising that in this experiment, unlike in related studies,<sup>19</sup> providing additional information beyond the percentage interest rate leads to a higher loan acceptance rate.

**Inconsistent consumer protection requirements for overdraft facilities and consumer loans**

The aim of consumer protection with regard to consumer credit is to prevent people from hastily taking out credit that they either cannot afford or do not understand the consequences of, especially in terms of cost. For this reason, consumer protection has also worked to ensure that credit terms

are presented in an easily understandable fashion. For example, it has been long established that the interest rate must be calculated in a specific way so that information from different providers is comparable.

Recently, quite extensive disclosures on consumer credit have become required, including the absolute cost of interest payments (and other costs) in particular (Box 3). Thus, of the three cost presentation forms mentioned above, exclusively displaying interest is only permissible for overdraft facilities—the most popular form of consumer credit among Germans. For consumer loans, on the other hand, the requirements demand more information than offered in the three cost presentations in the experiment above. Specifically, the total cost of the loan must be presented, while only the interest payments in absolute values are presented in the experiment. Furthermore, the interest rate and the total costs must be explained using a representative example, unlike in the experiment.

From the credit provider's perspective, the obvious move is to make costs look low. Thus, similar to the experiment here, low monthly installments are often emphasized instead of the total interest costs in euros.

<sup>19</sup> However, these studies differ not only in context, but also significantly in parameters: other types of credit, interest rates, and additional information are considered and varied.

Table 2

**Correlation between taking out credit and interest presentation**

Deviation from the reference group in percentage points

	All interest rates	6 percent vs. 11 percent interest
Interest displayed only in percent	Reference group	Reference group
Interest displayed in percent and euros/month	19 ***	25 ***
Interest displayed in percent and euros/year	6 ***	7 ***
Consumer loan of 100 euros	Reference group	Reference group
Consumer loan of 500 euros	-3 **	-6 ***
Consumer loan of 1,500 euros	-9 ***	-12 ***
Consumer loan of 5,000 euros	-19 ***	-23 ***
3 percent interest per annum	Reference group	
6 percent interest per annum	-23 ***	Reference group
11 percent interest per annum	-47 ***	-24 ***
Interaction of interest in percent and euros/month and 11 percent interest per annum		3
Interaction of interest in percent and euros/year and 11 percent interest per annum		-0
Individuals	1,011	1,009
Observations	6,066	3,990

Notes: These are marginal effects in a binary probit model. All respondents considered six scenarios and chose either *yes*, *no*, or *I don't know*. Therefore, there are 6,066 choices included in the analysis here. The asterisks following the values denote the significance level. The more asterisks, the more accurate the values: \*\*\*, \*\*, and \* indicate the significance level at the one, five, or ten percent level, respectively.

Legend: If a scenario involves a consumer loan with an interest rate of 11 percent per year, the likelihood that the loan will be taken out by an individual decreases by 47 percentage points compared to a scenario for a loan with an interest rate of three percent per year.

Source: Authors' calculations based on the survey data.

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**Conclusion: Increase financial literacy about and transparency of overdraft facilities**

The survey analysis shows that overall, consumers are uninformed about consumer credit. Around 40 percent of those who have taken out such credit do not know the interest rate, meaning they are using a product without knowing its price.

A further issue is how credit costs are perceived depending on how the information is presented. A consumer loan of 1,000 euros with ten percent interest that is paid back in one year costs 100 euros in interest per year, which is around eight euros of interest a month. Although the cost information remains consistent, the consumers' decisions vary greatly depending on how the information is presented. Compared to only providing interest rate information, additionally listing the absolute interest costs leads to a greater willingness to take out credit. The effect is particularly strong when the absolute monthly amount is stated.

Looking at the results, two measures are obvious: First, being more financially literate presumably helps because individuals are then at least better informed about relevant interest rates. In the experiment, a higher level of financial literacy

Box 3

**Consumer credit protection**

The Federal Financial Supervisory Authority (BaFin) enforces consumer protection in the financial market in Germany. Statutory information requirements for credit institutions stipulate that if a credit institution grants customers the right to overdraw their account by a certain amount, then it is also obliged to inform customers about the costs incurred at regular intervals.<sup>1</sup> In this case, this information only includes the debit interest rate applied and the maximum available overdraft amount available.<sup>2</sup>

Prior to entering into a consumer loan agreement, financial institutions are required to provide certain necessary information.<sup>3</sup> For general consumer loan agreements, this information includes the annual percentage rate (APR); the debit interest rate; the amount, number, and due date of the individual installments; and the total amount of the loan (loan amount plus total cost).<sup>4</sup> In addition, the APR and the total amount must be explained using a representative example.<sup>5</sup> The APR indicates the total costs of a loan expressed as an annual percentage of the net loan amount. Total costs include interest payable and all other costs incurred in connection with the loan agreement.<sup>6</sup> In addition, credit institutions are required to disclose the costs that are not included in the APR in the default interest rate.<sup>7</sup> However, these requirements do not apply to contracts with a net loan amount of less than 200 euros or to low-cost contracts with a term of three months or less.<sup>8</sup>

- 1 § 504 German Civil Code, (BGB, *Bürgerliches Gesetzbuch*)
- 2 Art. 247, § 16 of the Introductory Act to the Civil Code, (EGBGB, *Einführungsgesetz zum Bürgerlichen Gesetzbuche*)
- 3 § 491a, para. 3, sentence 1 of the BGB
- 4 Art. 247, § 3, para. 2 of the EGBGB
- 5 Art. 247, § 3, para. 3 of the EGBGB
- 6 § 16 of the Price Indication Ordinance (PAngV)
- 7 Art. 247, § 3, para. 1 of the EGBGB
- 8 § 491, para. 2, sentence 2 of the BGB

correlates with greater price sensitivity. However, even the more financially literate take out loans more often when the interest costs are presented in absolute monthly installments instead of as annual installments or percentage amounts.

Second, it should be examined whether more credit information should be provided when presenting the costs. In particular, making the credit seem cheaper—tested here by indicating absolute monthly installments—should be viewed critically. In the case of the overdraft facility, it should be examined to what extent more transparent cost information can reduce the time consumers spend overdrawn. This is in line with the demands of the European Parliament members, who recently called for further regulation of the overdraft

Table 3

**Acceptance of a hypothetical loan by level of education**

Deviation from the respective reference group in percentage points (regression function estimation)

	Low level of financial literacy	High level of financial literacy	No secondary school degree	Secondary school degree
Interest displayed in percent	Reference group	Reference group	Reference group	Reference group
Interest displayed in percent and euros/month	21 ***	19 ***	16 ***	20 ***
Interest displayed in percent and euros/year	4	6 ***	3	8 ***
Consumer loan of 100 euros	Reference group	Reference group	Reference group	Reference group
Consumer loan of 500 euros	-1	-3	-6	-1
Consumer loan of 1,500 euros	-9	-10 ***	-14 ***	-6 **
Consumer loan of 5,000 euros	-23 ***	-18 ***	-22 ***	-18 ***
3 percent interest per annum	Reference group	Reference group	Reference group	Reference group
6 percent interest per annum	-11 **	-26 ***	-19 ***	-25 ***
11 percent interest per annum	-42 ***	-49 ***	-44 ***	-48 ***
Individuals	88	673	163	510
Observations	528	4,038	978	3,060

Notes: These are marginal likelihood effects in a binary probit model. All respondents considered six scenarios and chose either *yes*, *no*, or *I don't know*. A high level of financial literacy means the respondent answered all three questions correctly. A low level of financial literacy means the respondent answered one or zero of the three financial questions correctly (this applies to nine percent of the sample). The asterisks following the values denote the significance level. The more asterisks, the more accurate the values: \*\*\*, \*\*, and \* indicate the significance level at the one, five, or ten percent level.

Legend: If the interest costs are also presented in absolute monthly installments, the acceptance rate increases by 21 percentage points for people with a low level of financial literacy and by 19 percentage points for those with a high level of financial literacy.

Source: Authors' calculations based on the survey data.

facility. For example, bank customers should be notified and advised as soon as they are regularly going into overdraft or are overdrawn for over a month.<sup>20</sup> If implemented, such measures would at least improve the knowledge about interest rates of those most at risk of over-indebtedness.

<sup>20</sup> Cf. European Parliament, Consumer credits: why updated EU rules are needed (2022) (available online). In particular, see Article 25 in the current draft resolution here.

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## LEGAL AND EDITORIAL DETAILS

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