

## Consumers' Perception of Mortgage Repayment Risk in Poland and Methods of Mitigating IT: A Survey Study\*

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### Abstract

Taking out a mortgage disrupts a household's financial balance by introducing a significant expense in the form of monthly payments. Given the potential risks that may arise during the repayment of debt, consumers should be aware of the risks associated with their debt and feel the need to protect themselves against those risks. However, the question arises as to whether consumers are aware of these risks and the available protective measures. Therefore, the aim of this article is to determine the attitude of consumers toward the risk of mortgage repayment and to identify their preferred methods of mitigating it.

This article fills an existing research gap, as previous academic discussions on the risks associated with mortgage loans have, in most cases, addressed the issue from the banks' perspective.

The article employs methods such as a review of both domestic and foreign academic literature, as well as a survey method using a proprietary questionnaire.

Survey showed that most of the borrowers surveyed rate the risk associated with their loan as low or somewhat low. This subjective assessment of risk is justified by the ratio of debt to income—for 72% of respondents, this ratio is less than 30%. The low risk assessment is also justified by: diversification of income sources and a stable source of income. At the same time, despite being aware of the importance of savings as a safety net in case of repayment difficulties, half of the respondents report having low savings, and 18% have none at all.

**Keywords:** consumer, mortgage repayment risk, mitigating methods

### Introduction

One of the key component of household financial decisions is taking out a mortgage loan, which, due to its long-term nature, high value, and uncertainty regarding future financial situation, carry a significant level of risk. Previous scientific studies on the risks associated with mortgage loans have, in most cases, treat this issue from the perspective of banks. Therefore, the risk related to a mortgage agreement is usually equate with the lender's (bank's) risk rather than the borrower's. Nevertheless, financing purchase of a property on a credit also creates various risk for consumers – borrowers – and financial questions with the timely credit repayment can arise at every moment of loan repayment.

This article fills an existing research gap and draw the important issue of protection against risk out from the direction of non-professional participants. In the article, risk is understood as the consumer's inability to repay the loan. Thereby the risk of loan repayment is similar to credit risk, with the proviso that the consequences of this risk are presented from the borrower's perspective.

In relation to the dangers that may arise during the repayment, a consumer (borrower ) should be aware of the risk associated with their indebtedness and feel the need to protect themselves against these risk. To this end, borrowers have at their disposal a range of tools that allow them to minimize risk and limit its negative financial consequences.

The main aim of this article is to determine how borrowers – consumers – view the risk of loan repayment and to identify the preferred methods for mitigating that risk.

To achieve this aim, the following specific objectives have been defines:

- A1:** Determining the level of perceived risk associated with a mortgage;
- A2:** Identifying the factors that determine respondents' attitudes towards risk;
- A3:** Determining borrowers' willingness to sell the mortgaged property in case of difficulties in making current payments;
- A4:** Identifying preferred measures to mitigate the risk of losing the ability to repay a mortgage and its negative consequences.

This study is theoretical and empirical nature. In the theoretical part, the research methods are based on a critical analysis of domestic and foreign literature. The analyses presented in the empirical section are based on quantitative research conducted using an original research instrument – a survey questionnaire.

## **Risk and Risk Mitigation Tools**

Risk has always been an inherent part of human activity. While this concept is not a new category in economic science, it is undoubtedly one of the most important theoretical concepts. The nature of risk and its various definitions are the subject of interest in many academic disciplines, each of which defines risk in its own way. Due to the ambiguity and complexity of the concept of "risk," it is difficult to provide a clear and universal definition. Given the scope of the issue under analysis, the main concepts of risk that are relevant to this paper will be presented in the following sections.

In the literature on the subject, one can find both an approach that recognizes the positive aspect of risk and an approach in which risk is defined as a threat, a loss, a danger, or an unfavorable deviation from a goal. Given the risk of default on a loan, which arises from adverse events in the borrower's life and involves the cessation of loan repayments, it seems reasonable to adopt a negative conception of risk.

From the perspective of decisions made by consumers, the distinction between objective risk and subjective risk appears particularly significant. Objective risk, also known as actual risk, stems from the uncertainty existing in the environment of the decision-maker. It exists independently of the decision-maker's perceptual abilities and is quantifiable. Subjective risk, on the other hand, stems from the decision-maker's attitude toward risk.

R.A. Bauer was the first to introduce the concept of risk into consumer behavior research. The theory of consumer risk is based on the assumption that consumers' actions may lead to outcomes that cannot be predicted with certainty, and some of these outcomes may be negative. In contrast, L. Rudnicki (2000) define consumer risk as "a type of uncertainty that consumers face when they cannot predict many of the significant consequences of their purchasing decisions".

It follows from the cited definitions that consumer risk is a subjective risk, that is, one perceived and defined precisely as the uncertainty a consumer encounters when they cannot predict the outcomes of their decision, some of which may have negative consequences for them. The assessment of both the likelihood of negative consequences of a decision and their magnitude is therefore subjective, and the degree of perceived risk will vary among individual consumers. Two people in objectively identical situations may perceive the existing risk differently and, consequently, behave differently in response to it.

It should also be emphasized that subjective risk exists only when the consumer perceives the danger of making a bad decision (Throp et. al, 2023). The consumer will not react to a risk they do not perceive, regardless of how real and dangerous that risk may be. However, when an individual is aware of the existing risk and is able to make an approximate assessment of it, the risk-mitigation actions taken by that individual will depend on two factors: the ability to take on risk—that is, the individual’s financial capacity (e.g., savings)—and their attitude toward risk. The literature distinguishes three attitudes toward risk (Bywalec, 2012):

- “risk aversion– the decision-maker takes action when the probability of risk (failure) is low and expects compensation in the form of a gain;
- indifference (neutrality) toward risk – when making a decision, the magnitude of risk is irrelevant to the decision-maker;
- risk-seeking – the decision-maker is willing to incur losses in the event of failure, but to receive a high reward in the event of success.”

Attitudes toward risk and self-confidence have a direct impact on how consumers make financial decisions (Weng and Hermansson, 2024), including decisions to take on long-term debt (Fulford et. al, 2021). Risk-seeking, risk-neutral, or risk-averse tendencies determine not only the willingness to take out a mortgage but also the tendency to take on larger loans and the risk of falling into excessive debt, and they influence how the risks associated with repayment are assessed (Cavalletti et. al, 2020).

Given the existence of these risks, it becomes essential to select an appropriate risk management method. Risk management can be carried out through risk control measures or by financing the consequences of risk (Rejda, and McNamara, 2017). The choice of an appropriate method depends on two factors: the frequency of risk occurrence and the magnitude of potential loss.

The above theoretical considerations serve as a reference point for the discussions presented later in this paper, and in particular for the analysis of the perceived risk of mortgage repayment by borrowers – consumers.

## **Research Methodology**

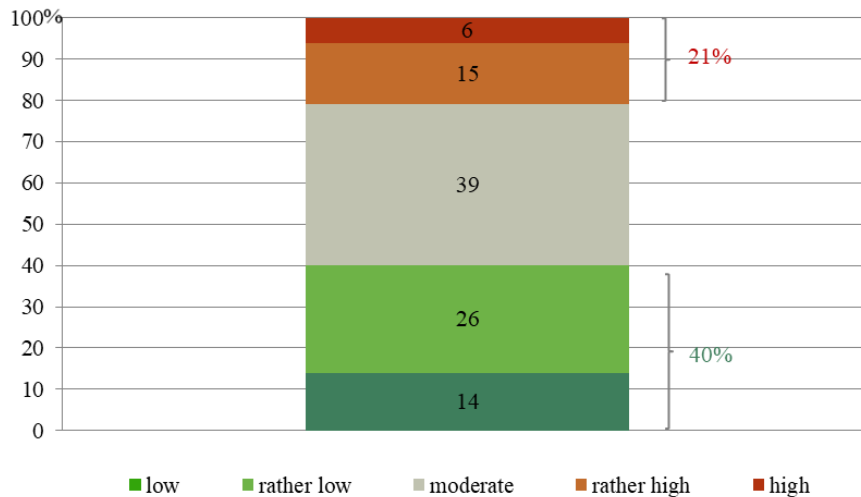
The target population of the initial survey research consisted of consumers—borrowers who were at least 18 years old at the time of the survey and held a mortgage agreement. University staff, master’s students, and postgraduate students were asked to complete the survey questionnaire.

The tool used in the empirical research was a survey questionnaire. The research sample was selected using a purposive sampling method. The method of selecting respondents for the sample was dictated by the research objective formulated in this study. The target group, and thus the research sample, consisted of individuals who held a mortgage during the study period.

The empirical study using a survey questionnaire was conducted using the CAWI (computer-assisted web interview) and PAPI (paper and pen personal interview) methods in 2023. A total of 330 respondents participated in the study. The literature emphasizes that a research sample of at least 300 respondents in non-random sampling meets the requirements for sample size. According to S. Kaczmarczyk (2011), the sufficient sample size in non-random sampling for regional household surveys ranges from 200 to 500 units.

## **Attitudes of Borrowers (Consumers) Toward the Risk of Defaulting on a Mortgage**

In the first stage of the study examined the attitude of the surveyed borrowers toward the risk of being unable to repay a mortgage. To this end, respondents were asked how they assess the risk associated with their mortgage. The distribution of the respondents’ answers is illustrated in Figure 1.

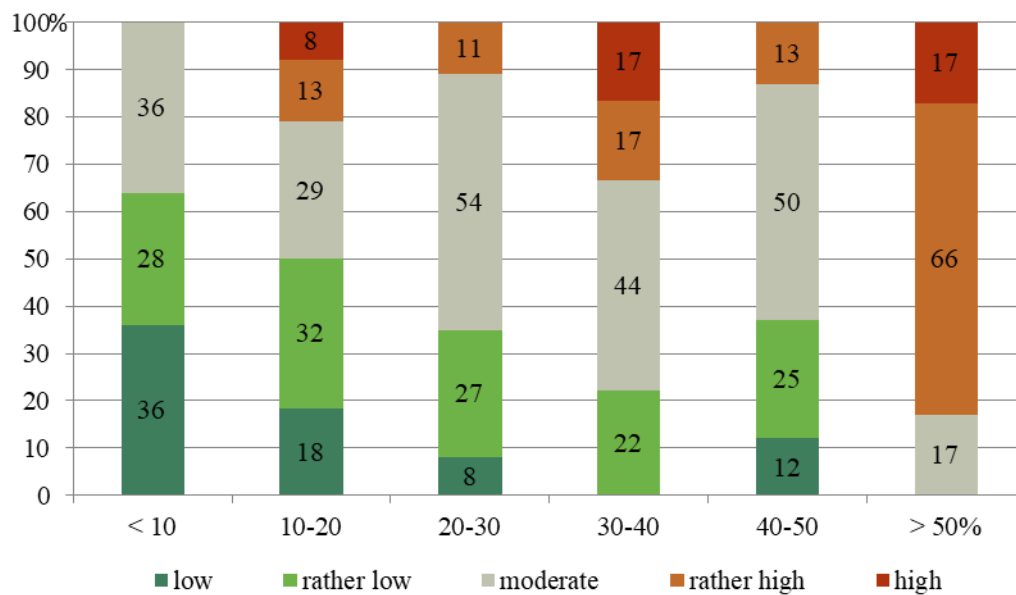


**Fig 1. Subjective assessment of the risk of defaulting on a mortgage, in % (N=330 respondents)**

Source: Compiled by the author based on survey results.

Own research revealed a low level of perceived risk. Only 21% of respondents believe that the risk associated with a mortgage is somewhat high or high. In contrast, those who believe the risk is somewhat low or low accounted for 40% of the sample. The remaining 39% of respondents rated the risk associated with a mortgage as moderate (average).

In identifying the factors determining respondents' attitudes toward risk, it can be noted that risk attitudes vary depending on the DStI ratio (debt to income) (Figure 2). The responses indicate that an increase in the burden of loan repayments on the budget causes respondents' subjective assessment of risk to rise. Conversely, a decrease in this burden leads to a decrease in the subjective assessment of the risk of losing the ability to repay the loan. Among those who assessed the risk associated with a mortgage as high, borrowers whose loan installment exceeds half of their household's monthly income predominate, with 66% of them indicating that the risk is somewhat high and 17% as high. On the other hand, people for whom the loan payment is not a major burden on their budget and does not constitute a significant portion of their income are more likely to assess the risk as low. Borrowers whose loan payment accounts for less than 10% of their income rated the risk as "rather low" (28%) and "low" (36%).

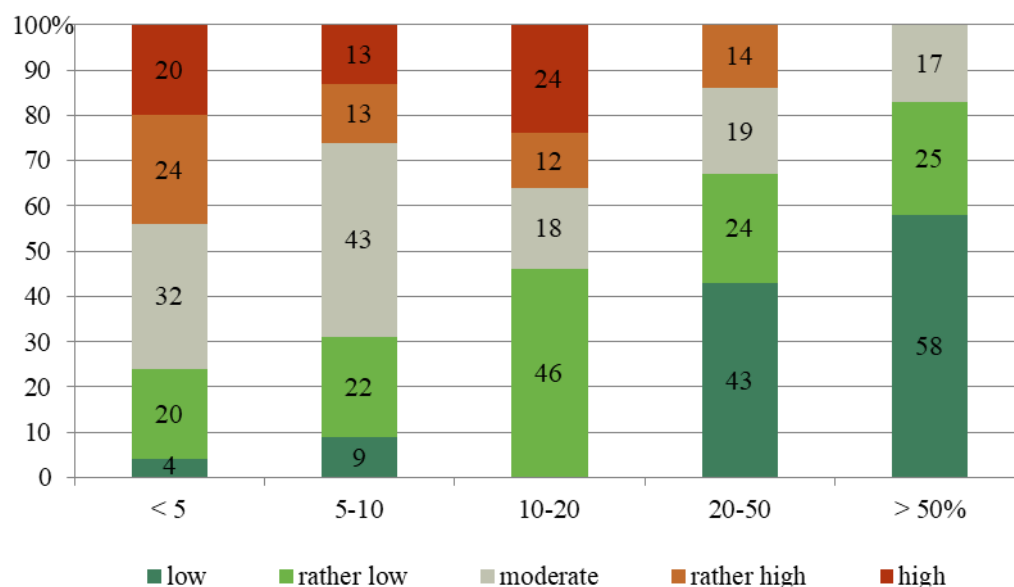


**Fig 2. The proportion of income allocated to loan payments versus the subjective assessment of the risk of default, in % (N=330 respondents)**

Source: Compiled by the author based on survey results.

These observations should be considered in relation to the average DStI ratio in the banking sector. The maximum monthly payment a borrower may incur during the loan repayment period is regulated by the guidelines contained in Recommendation S. According to data from the Polish Financial Supervision Authority (KNF), as of the end of 2024, the average DStI ratio—weighted by the gross book value of residential loans at each bank—stood at 34.2% for the banking sector (UKNF, 2025). This means that in 2023, monthly mortgage installments accounted for an average of 35% of borrowers’ net income. Similarly, in the survey conducted, the share of mortgage payments in the household budget most often amounted to a maximum of 30%. As many as 71% of respondents reported this share of loan payments in their budget. The remaining 29% of respondents indicated a higher share of loan payments—over 30%. It is precisely these individuals who are particularly at risk due to the significant increase in loan burdens. The rise in loan costs could significantly impact their financial capacity and place an even greater burden on their budget. This is all the more true given that the majority of respondents indicated they are not in the final phase of loan repayment but still face a long-term prospect of continued payments.

Consumers’ perception of the risk of repaying a loan also depends on the amount of their savings relative to the outstanding loan balance. Individuals whose savings exceed 50% of their debt are more likely to assess the risk as low, with 25% of them indicating it is somewhat low and 58% as low (Figure 3). In contrast, individuals whose savings do not allow them to repay a large portion of the loan amount are more likely to assess the risk as high. Borrowers whose savings amount to less than 5% of the outstanding balance rated the risk as somewhat high (24%) and high (20%).



**Fig 3. Amount of savings relative to the outstanding loan balance and subjective assessment of the risk of losing the ability to repay the loan in % (N=270 respondents)**

*Source: Compiled by the author based on survey results.*

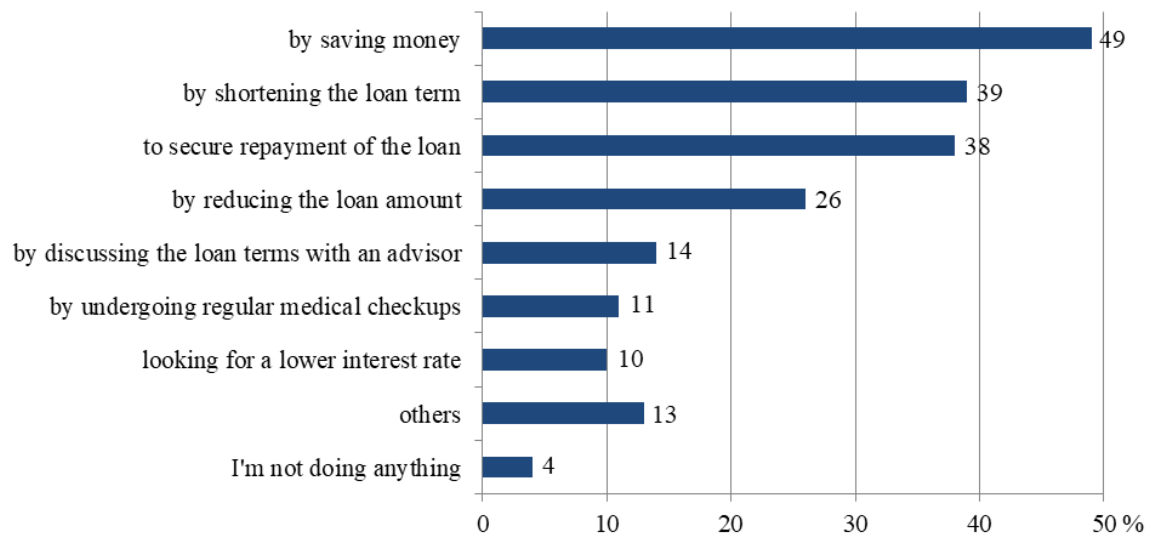
\*a total of 330 respondents participated in the survey. Since some of them did not report having savings, the analysis was conducted on a sample of 270 people who reported having savings.

The study shows that the level of risk perceived by consumers varies depending on the household’s financial situation. The study then examined the preferred measures for mitigating the risk of defaulting on a loan and its negative consequences.

### **Preferred measures to mitigate the risk of default on a mortgage and its negative consequences**

Given the numerous risks that may arise during the repayment of a loan, borrowers, if they are aware of them, have a range of tools at their disposal through various risk management methods. To this end, respondents were asked how they try to mitigate the risks associated with their loan.

The largest group of respondents, nearly 50%, cited savings (Figure 4). Among the other main methods for mitigating the risk of default, 39% of respondents cited shortening the loan term and loan repayment insurance (38%). Under the “other” category (13%), respondents indicated that they mitigate risk by making extra principal payments or increasing their income.



**Fig 4. Measures to mitigate the risk of default on a mortgage loan, in % (N=330 respondents)**

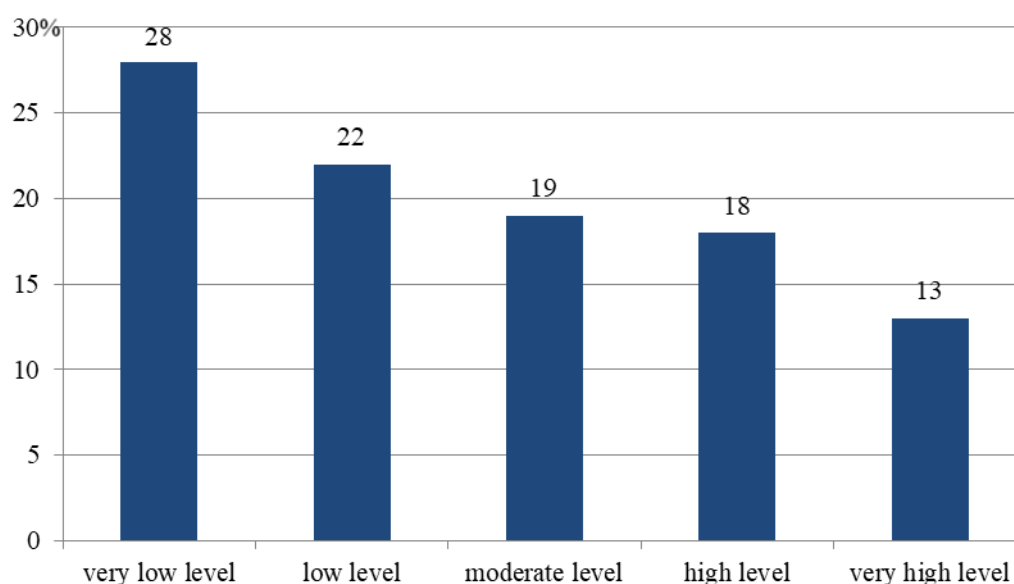
Source: *Compiled by the author based on survey results.*

\* The percentages do not add up to 100% because respondents could select more than one option.

The above results show that savings play a primary role in mitigating loan repayment risk. This means that the borrower is responsible for covering any current difficulties in repaying the loan. The literature on the subject emphasizes that risk management methods involving self-financing of the consequences can only be applied when the potential severity of the loss is low. When analyzing the nature of the risk under study, it is difficult to conclude that the danger of defaulting on a loan carries minor consequences for the consumer, particularly in the initial repayment phase. Furthermore, the effectiveness of this method will be determined by the level of financial resources available. Therefore, the survey participants were next asked to what extent their accumulated savings would allow them to repay the loan (Figure 5). For this purpose, the following savings categories were adopted:

- very low level: less than 5% of the outstanding loan amount;
- low level: 5–10% of the outstanding loan amount;
- medium level: 10–20% of the outstanding loan amount;
- high level: 20–50% of the outstanding loan amount;
- very high level: more than 50% of the outstanding loan balance.

When analyzing the ratio of savings to the outstanding loan balance, the highest percentage of respondents (28%) believe that their savings amount to less than 5% of the outstanding loan balance. In contrast, for 22% of respondents, their savings would allow them to repay 5–10% of their outstanding debt, which is a low level. The survey results show that a total of 50% of respondents report savings at a very low or low level relative to the outstanding loan balance. These two categories are dominated by borrowers who took out a loan relatively recently and are in the early stages of repayment, which explains the low savings-to-debt ratio. In contrast, a high level of savings was reported by 31% of respondents, of whom 18% had savings at a high level of 20–50% of the debt amount, and for 13% of borrowers, the amount of savings allows for repayment of over 50% of the loan amount, i.e., at a very high level. The remaining 19% of respondents indicated that their savings provide them with moderate security and allow them to repay 10–20% of their debt.



**Fig 5. Ratio of savings to the outstanding loan amount in % (N=270 respondents)**

*Source: Compiled by the author based on survey results.*

\*a total of 330 respondents participated in the survey. Since some of them did not report having savings, the analysis was conducted on a sample of 270 people who reported having savings.

Borrowers report having low levels of savings. In many cases, their accumulated savings are insufficient to repay all or a significant portion of their debt. Therefore, it may become necessary to explore other ways of managing risk, including, for example, the sale of the mortgaged property.

## Willingness to sell the property

One potential way to mitigate the risk of borrowers defaulting on a mortgage is the option to sell the mortgaged property. This solution allows for the repayment of all or part of the debt and frees the borrower from debt. However, a borrower's willingness to sell the property depends on a number of factors, both economic and non-economic. Among the most significant of these are the purpose for which the mortgage was taken out, the borrower's assets, family relationships, and their attitude toward home ownership.

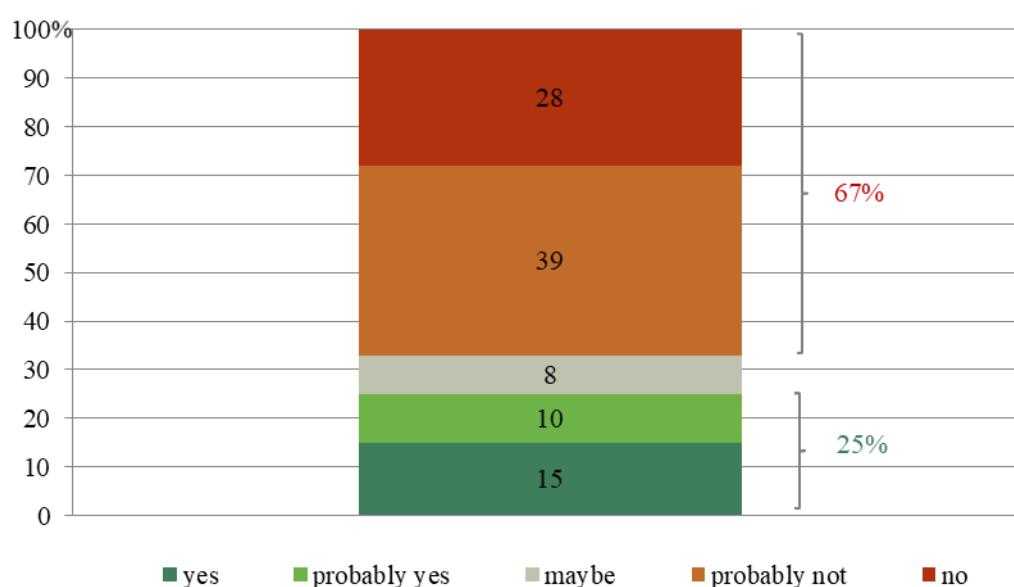
The strong attachment Poles have to home ownership is evidenced by the results of existing empirical studies on preferences regarding the fulfillment of housing needs. According to the PIU report "*Polish Risk Map: How Insurers Respond to Society's Needs*" (2021), as many as 96% of respondents rated owning their own apartment or house as important. This approach to meeting housing needs is also confirmed by other available studies. According to data from the report "*There's No Place Like Home: How Poles Live*," prepared by ECHO Investment (2022), in 2022, 66% of respondents said they lived in their own apartment, while only 10% lived in a rented unit. More people over the age of 35 (about 75%) own their own apartment or house than those in the 18–34 age group, who rent apartments more often than those over 35. However, even though the percentage of renters is higher in the 18–34 age group compared to other age groups, those who own their own homes still dominate among people in this age group. Nearly 40% of people aged 18–34 own their own homes, while 22% rent.

The ECHO Investment report also shows that Poles decide to buy their own home because it gives them independence (45%) and serves as a safeguard for their future (37%). In contrast, the majority of people living in rented housing (as many as 67%) indicated that they do not own their own home because they cannot afford to buy one. Consequently, the decision to rent an apartment is largely not a matter of choice but of economic necessity. Tenants are people who lack creditworthiness or the down payment required by lenders (Andrzejewski et. al, 2011). Poles view renting primarily as a temporary way to meet their housing needs (Rubaszka and Czerniak, 2017).

Eurostat statistics illustrate how Poles view home ownership compared to other EU countries (2021). According to data from 2021, the vast majority of the population in Poland—86.8%—lives in their own homes or apartments, while only 13.2% rent. The dominance of homeownership stems from the state’s housing policy, transaction costs, rent prices relative to mortgage payments, the level of development of the rental market in terms of supply and institutional framework, as well as the public’s mindset.

Poles’ attitude toward home ownership and their strong desire to own a home determine the purpose of taking out mortgage loans. In the survey, as many as 90% of respondents indicated that they had taken out a mortgage to purchase a property to meet their own housing needs. Only 10% of respondents indicated that they purchased an apartment for investment purposes.

Poles’ attitude toward home ownership influences their decision regarding the possibility of selling their home if they become unable to repay their mortgage. In our own survey, as many as 67% of respondents do not consider the possibility of selling the mortgaged property in the event of repayment difficulties (Figure 6). A shift in attitude toward one’s home—treating it as an ordinary asset, just like any other—would allow consumers to realistically mitigate the risk of loan repayment. For most borrowers, however, this would be an extremely difficult situation, both emotionally and financially. Selling the property would allow them to free themselves from debt, but at the enormous cost of losing their own home. Hence, mortgage loans are likely among the financial obligations that are managed with the greatest discipline.



**Fig 6. Borrowers’ stated willingness to sell the mortgaged property, in % (N=330 respondents)**

Source: *Compiled by the author based on survey results.*

An analysis of the responses, based on chi-square tests and Cramer’s V and Pearson’s C measures of association, suggests that the sociodemographic profile of the respondents significantly influenced their propensity to sell real estate (see Table 1).

For the purpose of hypothesis testing, a significance level of  $\alpha = 0.05$  was adopted in the study. For each independence test, the test statistic (p) was calculated. The resulting p-values were then compared with the adopted significance level ( $\alpha = 0.05$ ). The hypotheses were tested according to the following rule:

- if  $p \leq \alpha$ , then  $H_0$ , stating the independence of the individual variables, should be rejected and  $H_1$  accepted. This means that there is a relationship between the variables;
- if  $p > \alpha$ , then there is no basis for rejecting  $H_0$  and accepting  $H_1$ . This means that there is no relationship between the variables.

In particular, the following relationships were found to be statistically significant (at a significance level of  $\alpha < 0.05$ ):

- younger people are more likely than older people to be willing to sell their property. The greater willingness among younger people to sell mortgaged property can be explained, among other things, by their lesser attachment to the property, the early stage of their family life cycle, and the fact that borrowers of this age are generally in the early stages of repaying their mortgage;
  - the level of income earned influences the likelihood of selling a property. As income increases, the percentage of people who say they would be willing to sell their mortgaged property if they had trouble making mortgage payments decreases. The higher the level of monthly income, the lower the willingness to sell the mortgaged property. The reason why people with higher monthly incomes are less likely to sell their mortgaged property likely lies in their greater ability to generate savings;
  - people living in large cities are more likely to sell a property purchased with a mortgage than those living in rural areas. This greater propensity to sell among borrowers living in large cities may stem from the relative ease of finding a buyer or from the greater availability of alternative housing options (such as renting).
- At the same time, no significant impact of gender on the distribution of responses was observed.

**Table 1. Propensity to sell mortgaged real estate and selected socioeconomic characteristics**

| willingness to sell real estate | gender                                                         | age           | income        | place of residence |
|---------------------------------|----------------------------------------------------------------|---------------|---------------|--------------------|
| $\chi^2$ statistic              | 7.283                                                          | <b>19.013</b> | <b>35.847</b> | <b>25.976</b>      |
| critical p-value                | 0.1216                                                         | <b>0.0148</b> | <b>0.0003</b> | <b>0.0011</b>      |
| decision at $\alpha = 0.05$     | do not reject                                                  | reject        | reject        | reject             |
| Cramer's V                      | Since no correlation was found. the measure was not calculated | 0.18          | 0.19          | 0.2                |
| Pearson's C                     |                                                                | 0.23          | 0.31          | 0.27               |

Source: Compiled by the author based on survey results.

## Summary

Our own study showed that the majority of surveyed borrowers rated the risk associated with their loan as low or somewhat low (40%), although a relatively large group of borrowers rated this risk as moderate (39%). A clear minority were those who rated it as high or somewhat high (21%). In light of the above, it can be assumed that the survey participants did not perceive the risk of repaying their mortgage as a problem and that it was not of significant concern to them. This attitude toward risk seems partially justified given the low DStI ratio (the monthly installments of the surveyed borrowers fell within the guidelines of Recommendation S) and the stable source of income of the respondents (75% of respondents were employed under permanent employment contracts). On the other hand, the long remaining loan term (in the survey, the average remaining loan repayment period is 19 years) and low savings levels objectively create a high degree of risk. On this basis, one can formulate the thesis that, in the short term, the respondents' attitude toward risk is well-grounded in their current high incomes, good DStI ratio, and form of employment. In the long term, however, there are reasons for concern due to the relatively low level of savings and the remaining loan repayment period.

Respondents' subjective assessment of risk depends primarily on two financial factors: the amount of the loan installment and the amount of their savings relative to the outstanding loan balance. Both factors determine an individual's financial capacity and influence how borrowers perceive risk.

When faced with the inability to repay a loan, respondents primarily rely on their own savings. However, the survey results show that a total of 50% of respondents report savings at a very low or low level relative to the outstanding loan balance. The low level of savings is a consequence of the age structure of the sample, in which the largest cohort consisted of people aged 25–34.

Respondents' attitudes toward the possibility of selling their apartment to repay a mortgage are "set in stone"—the majority of respondents rule out this possibility (67%). This is understandable given the nature of the housing model in Poland, which is based on home ownership, and the composition of the sample, in which 90% were people who took out a mortgage to live in the home rather than to invest their savings. Furthermore, the reluctance to sell a mortgaged property expressed in the survey may also stem from the fact that borrowers do not fully realize the risks that may arise during the repayment of the debt and their consequences.

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